

# Monthly Performance Report

August 2019

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

**CH2MHILL**  
Plateau Remediation Company

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

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**APPROVED**  
*By Janis D. Aardal at 3:48 pm, Sep 19, 2019*

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Release Approval

Date

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**CH2MHILL**  
Plateau Remediation Company



L. Ty Blackford  
President and Chief  
Executive Officer

# Monthly Performance Report

U.S. Department of Energy Contract,  
DE-AC06-08RL14788  
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August 2019  
CHPRC-2019-08, Revision 0

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## EXECUTIVE SUMMARY

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

- Plutonium Finishing Plant (PFP) Closure Project:** The PFP Closure Project team successfully closed all prestart findings identified in the high-risk work resumption Management Assessment, and received authorization from RL to proceed with the 234-5Z and 236-Z higher-risk work as outlined in the PFP Work Resumption Plan. The team continued low-risk work, completing demolition and debris disposition of 234-5Z Core Stability zones 4.1 and 7. Demolition was completed on the second floor and duct level on the east side of the facility from columns 8 to 9. All aerosol testing and gauge connections were completed for the air movers needed for A and C line demolition. Sixty-seven containers of low-risk demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal.
- Waste and Fuels Management Project:** At the Waste Encapsulation Storage Facility (WESF), the W-135 Management of the Cesium (Cs) and Strontium (Sr) Capsules Project issued the request for proposal for the subcontract to construct the capsule storage area. At WESF, crews successfully performed critical lifts using the 15-ton canyon crane to remove the overweight canyon truckport cover plate and install new cover plates with weight that was within the limits of the crane. At T Plant, crews completed the change out of the 2706T ACT I and ACT II high-efficiency particulate air filters. The Transuranic (TRU) Program finished efforts on the enhancement of acceptable knowledge on two TRU waste streams, increasing the number of waste streams to seven of 10, with documented acceptable knowledge. The sludge receipt team continued to receive sludge transport and storage containers (STSCs) from the 100K West Reactor Basin for interim storage at T Plant. STSC 18 was received on August 8, 2019, and STSC 19 was received on August 21, 2019.
- Soil and Groundwater Remediation Project (S&GRP):** In August, Pump and Treat (P&T) operations completed the associated fiscal year (FY) 2019 performance measure by exceeding 2.2 billion gallons of contaminated groundwater treated fiscal year-to-date. The installation of the 200W P&T bypass line was completed and then used to demonstrate stable operation of the plant at its' maximum design flow rate of 2,500 gpm. The bids for the procurement of an additional air stripper tower were received in August; the installation of an additional air stripper tower is crucial to the out-year goal to achieve a flow rate of 3,750 gallons per minute at the 200W P&T Facility. Drilling crews completed six wells in August. The last two of 21 Engineering Evaluation Reports (EERs) required to support the Resource Conservation and Recovery Act Revision 9 permit modification were completed, certified, and transmitted to RL, and the 200-DV-1 Operable Unit Laboratory Treatability Study Test Plan, Revision 0, was issued.
- K Basins Operations:** At the Sludge Removal Project, STSC 18 and STSC 19 were filled with sludge from the 100K West Reactor Basin and shipped to T Plant for placement into interim storage. At the 100K Closure Project, the contract for the fabrication of the vertical pipe casing system debris washing station was awarded with equipment delivery scheduled for December 16, 2019. The deactivation and demolition team completed



CPRM crews continued to safely remove 18-inch steam lines from the Integrated Disposal Facility loop to the 200 East Powerhouse Pad.

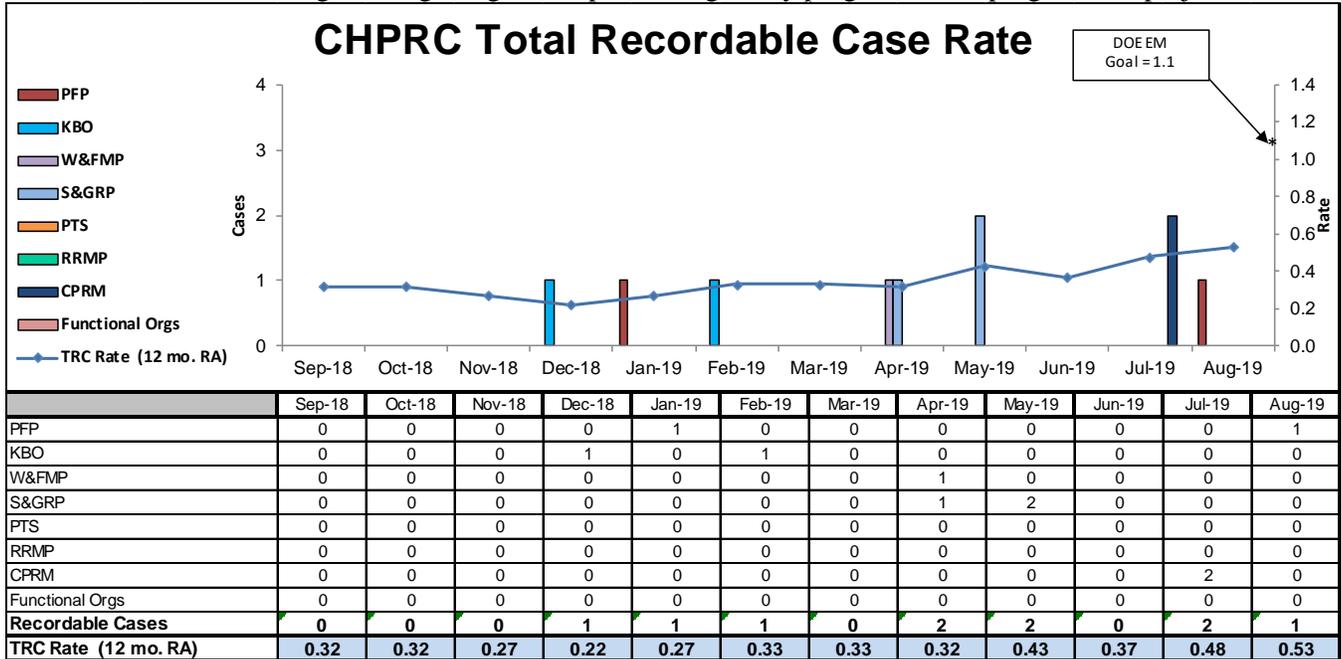
demolition and removal of the 166KE materials storage building and started removal of oily water from the 166-AKE fuel storage basin in preparation for removal of the bunker.

- **River Risk Management Project:** 324 Facility preparations, in support of remediation of the 300-296 Waste Site remediation, included installation of the D Cell snorkel and filter, the installation of the final remote excavator arm (REA) through support assembly in the B Cell wall, allowing the REA to be positioned in any of the four corners of B Cell, and the construction of a north waste storage yard. In support of structural modifications, the crews demolished the stem wall of the former maintenance shop to prepare for the injection of soil stabilization grout adjacent to B Cell. The project made its third shipment of B Cell waste bins to ERDF on August 18, 2019. The fourth and fifth shipment of B Cell waste bins are loaded and awaiting shipment to ERDF. Drilling of pilot holes required for input to structural design resumed. A floor-scraping implement was deployed in B Cell and work crews began cleaning the floor to allow future floor saw deployment. At the B Cell mockup, a demonstration of workers safely and compliantly deploying the floor saw umbilical through a B Cell split plug was successfully performed.
- **Central Plateau Risk Management (CPRM) Project:** Facility demolition and placement of the cover cap at the 242-B/BL site was successfully completed. Crews initiated work to perform the clean closure of 276-BA. At the Reduction and Oxidation Facility (REDOX), low-hazard mechanical isolations commenced and fixative was applied to the west end of the north sample gallery for contamination control to allow for non-destructive assay characterization. The waste crew trailer, bathroom trailer, container transfer area, and haul road were installed at REDOX. CPRM crews made three successful entries into the Plutonium Uranium Extraction Plant Canyon; the first entries in over 20 years. Personnel eclipsed 12,700 linear feet of steam line asbestos abatement in the 200 West Area. Finally, the radiation area remedial action team completed their final tri-annual surveillances of the inactive waste sites in the 200 West Area.

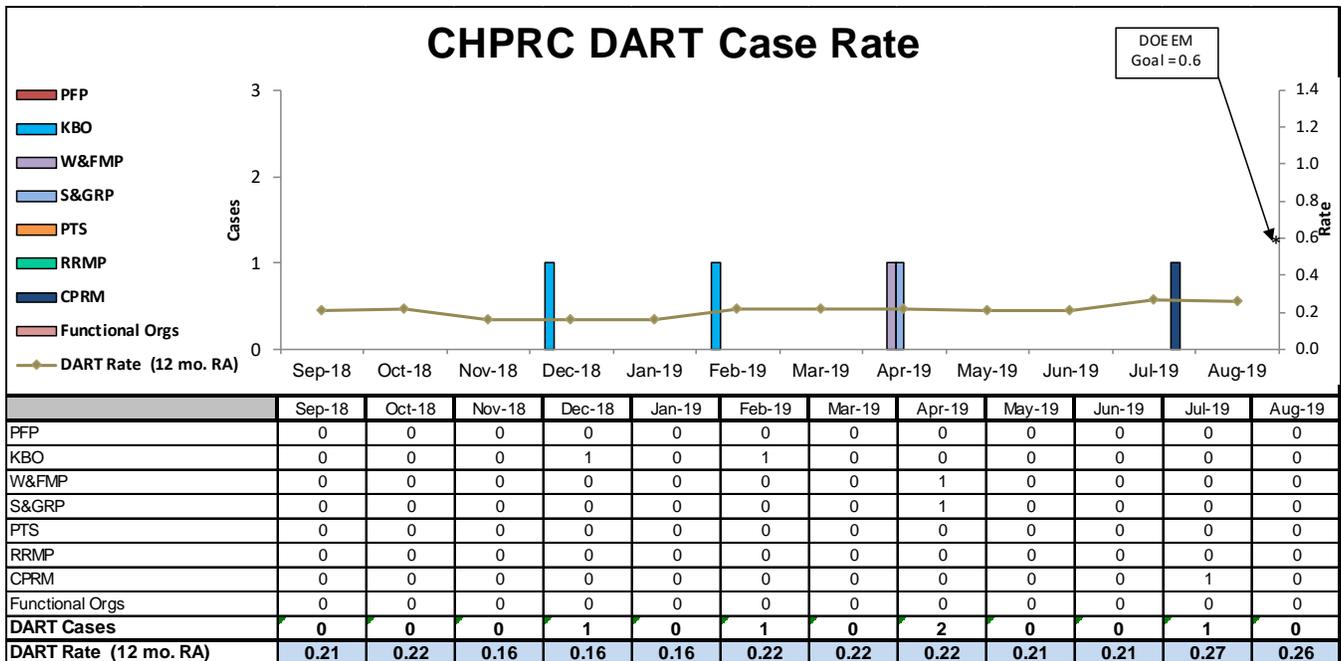
- The President’s Zero Accident Council (PZAC) meeting for August was hosted by S&GRP. The three main ideas were:
  - o School Zone Safety.
  - o Drug Use Symptoms and Paraphernalia.
  - o Opioid Crisis.
- Four “*Thinking Target Zero*” bulletins were published to convey important occupational, safety, health, and environmental messages:
  - o Heat & Hydration.
  - o Managing Stress.
  - o Water Conservation.
  - o Safe Driving 24/7.
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
  - o Lessons Learned
    - OPEXShare: 2019-RRMP-0001, Thorough Industrial Hygiene Hazard Analysis Leads to Selecting the Proper Controls for Worker Protection.
    - OPEXShare: 24590-WTP-LL-MGT-18-0074, Worker Safety and Health Integration in the Engineering Design Process (offsite).
    - OPEXShare: PNNL-28158, Time Pressure and a Lack of Hazard Recognition Contribute to Broken Overhead Light Tube.
    - OPEXShare: 2019-SGRP-0003, Eye Irritations Can Become Reportable Injuries Without Immediate Medical Care.
  - o Injuries.
  - o Weekly Ethics Moments.
  - o Vehicle Events.
  - o Hanford Site Traffic Safety.
  - o Pedestrian Safety Reminder.
  - o Report Unsafe Driving.
  - o Medication at Work.
  - o Mobile Device Use.
  - o Pre-holiday SAFETY focus.
  - o Safe Driving Reminder.
  - o PZAC Takeaways.
  - o Summer Safety 2019.

## TARGET ZERO PERFORMANCE

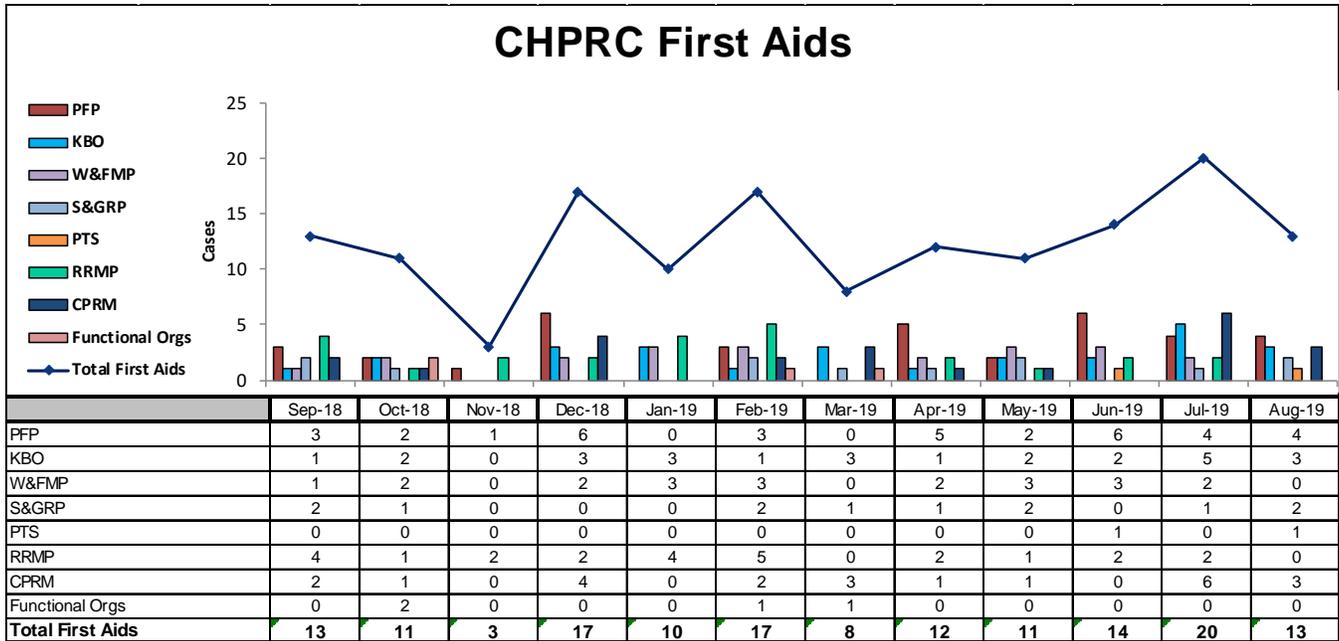
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.53 is based on a total of ten Recordable injuries. August had one reported Recordable case.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.26 is based upon a total of five Days Away cases. August had no reported DART cases.



First Aid case summary: CHPRC reported 13 first aid cases in August. The contributors were five abrasions/bruises/contusions, three sprains/strains/pains, three miscellaneous (burns, rashes, repetitive motion, etc.), one cut/laceration/puncture, and one undescribed/precautionary injury. There were three self-treat cases reported in August.

## KEY ACCOMPLISHMENTS

### Projects

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

### Project Services and Support

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

## MAJOR ISSUES

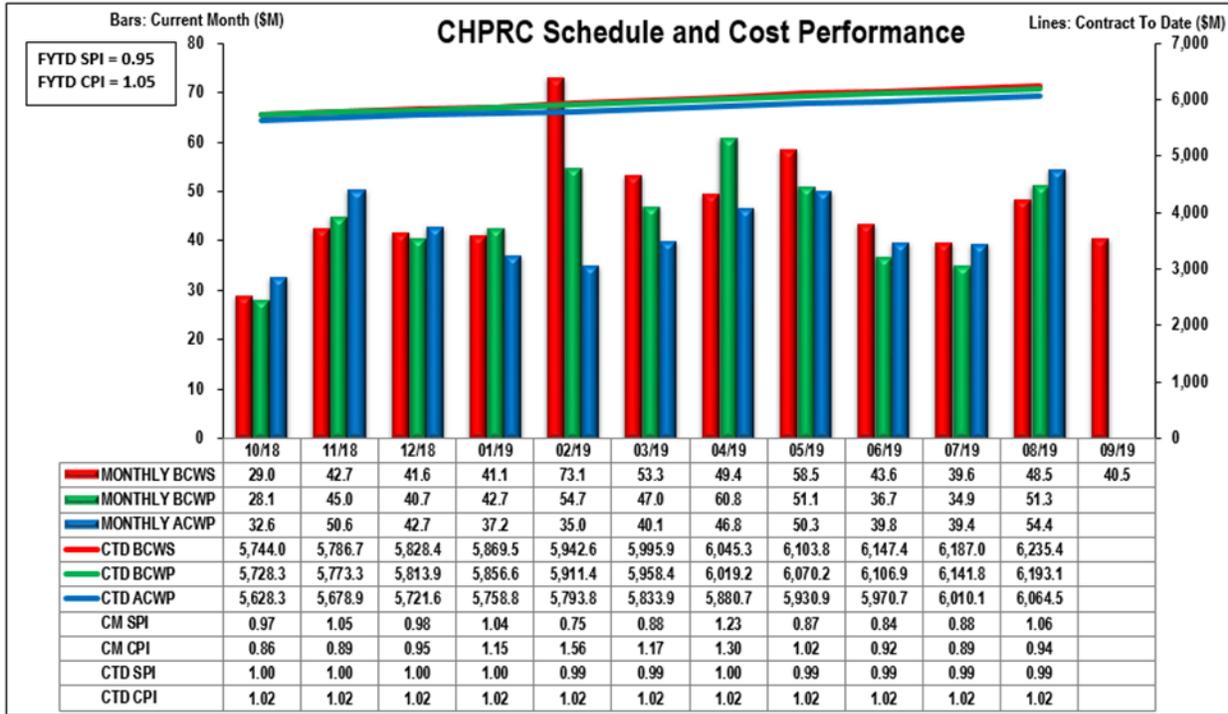
### Projects

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

### Project Services and Support

- No major issues to report for current month.

### EARNED VALUE MANAGEMENT



	Budgeted Cost		Actual Cost	Variance		Budgeted Cost		Actual Cost	Variance		BAC	EAC	Variance	
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost				
RL-0011 - Nuclear Materials Stab & Disp PFP	16.9	16.2	6.4	(0.7)	9.8	1121.3	1105.5	1196.9	(15.9)	(91.5)	1,138.8	1,230.7	(91.9)	
RL-0012 - SNF Stabilization & Disposition	(0.2)	0.4	1.8	0.6	(1.3)	757.4	757.3	728.9	(0.1)	28.4	759.4	730.1	29.3	
RL-0013 - Solid Waste Stab & Disposition	7.3	6.4	15.0	(0.8)	(8.6)	1462.6	1457.7	1375.0	(4.9)	82.8	1,476.2	1,393.6	82.7	
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	3.6	1.1	11.0	(2.5)	(9.9)	1626.4	1619.9	1570.8	(6.5)	49.1	1,633.5	1,583.4	50.1	
RL-0040 - Nuc Fac D&D - Remainder	7.8	11.4	5.7	3.5	5.7	555.4	552.0	529.8	(3.3)	22.2	563.1	544.1	19.0	
RL-0041 - Nuc Fac D&D - RC Closure Project	12.5	15.3	14.4	2.8	0.9	684.0	672.2	639.5	(11.8)	32.7	693.0	664.1	28.9	
RL-0042 - Nuc Fac D&D - FFTF Project	0.5	0.5	0.2	(0.0)	0.3	28.3	28.3	23.6	(0.0)	4.7	28.7	24.0	4.7	
(Values are rounded to the nearest \$0.1M)	<b>Total</b>	<b>48.5</b>	<b>51.3</b>	<b>54.4</b>	<b>2.8</b>	<b>(3.1)</b>	<b>6,235.4</b>	<b>6,193.1</b>	<b>6,064.5</b>	<b>(42.4)</b>	<b>128.5</b>	<b>6,292.7</b>	<b>6,169.9</b>	<b>122.8</b>
(Values do not have UB breakout)														

## Performance Summary

CHPRC continues to track completion of the contract within budget and is currently projecting a variance at completion of \$122.8 million, with \$50.3 million of management reserve (MR), for a total positive variance of \$173.1 million. For August, the project was 5.8 percent ahead of schedule and 6.1 percent over planned cost. For the contract to date, the project was 0.7 percent behind schedule and 2.1 percent under planned cost.

The positive current month (CM) schedule variance is primarily due to the implementation of contract Modification 707, Correspondence 1902536, dated June 27, 2019. The modification aligned the FY 2019 Performance Measurement Baseline (PMB) schedule with the negotiated FY2019 Plateau Remediation Contract total contract cost and revised baseline schedule. The implementation of Modification 707 adjusted the planned value of FY2019 activities to align with negotiated contract cost values, based on the sum of actual costs of work performed to date through March 2019 and the forecast costs to complete the remaining planned work, which was less than originally planned. The overall negative adjustment to planned value was implemented adjusting earned value downwards in the current period by less than the reduction in the planned value generating a positive schedule variance. As activities are completed, the schedule variance will return to zero.

The negative CM cost variance is primarily due to the implementation of contract Modification 707. The negotiated FY2019 total contract cost was based on actual costs through March 2019 plus the estimate to complete for the remainder of the FY. Actual costs experienced were lower than budgeted resulting in a decrease in the current period to the FY budgeted cost of work performed generating a negative cost variance. This variance was partially offset by the implementation of budgeted cost of work scheduled from the management reserve for realized PFP risks related to weather and work controls. The performance was claimed in the current month while the risks were realized in prior periods creating a positive cost variance.

## FUNDING ANALYSIS

### Fiscal Year (FY) 2019 Funds vs. Fiscal Year Spend Forecast (\$M)

PBS	Project	FY2019		Variance
		Projected Funding	Spending Forecast	
<b>Estimate at Complete</b>				
<b>RL-0011</b>	Nuclear Materials Stabilization and Disposition	70.0	63.2	6.8
<b>RL-0012</b>	Spent Nuclear Fuel Stabilization and Disposition	20.1	16.8	3.3
<b>RL-0012</b>	15-D-401 Sludge Retrieval Project	0.0	0.0	0.0
<b>RL-0013</b>	Waste and Fuels Management Project	178.4	149.4	29.0
<b>RL-0013</b>	Management of Cesium and Strontium Capsules	3.8	3.3	0.5
<b>RL-0030</b>	Soil, Groundwater and Vadose Zone Remediation	132.9	112.8	20.1
<b>RL-0040</b>	Nuclear Facility D&D, Remainder of Hanford	81.8	73.8	7.9
<b>RL-0041</b>	Nuclear Facility D&D, River Corridor	148.3	129.4	19.0
<b>RL-0042</b>	Fast Flux Test Facility Closure	3.3	2.0	1.3
<b>Total Estimate at Complete</b>		<b>638.7</b>	<b>550.6</b>	<b>88.0</b>
<b>Scope Pending Change Management</b>				
<b>RL-0013</b>	Waste and Fuels Management Project	0.0	0.2	(0.2)
<b>RL-0030</b>	Soil, Groundwater and Vadose Zone Remediation	0.0	0.1	(0.1)
<b>RL-0040</b>	Nuclear Facility D&D, Remainder of Hanford	0.0	0.0	0.0
<b>RL-0041</b>	Nuclear Facility D&D, River Corridor	0.0	0.0	0.0
<b>Total Incremental Work Scope</b>		<b>0.0</b>	<b>0.3</b>	<b>(0.3)</b>
<b>Total Fiscal Year Spend Forecast</b>				
<b>RL-0011</b>	Nuclear Materials Stabilization and Disposition	70.0	63.2	6.8
<b>RL-0012</b>	Spent Nuclear Fuel Stabilization and Disposition	20.1	16.8	3.3
<b>RL-0012</b>	15-D-401 Sludge Retrieval Project	0.0	0.0	0.0
<b>RL-0013</b>	Waste and Fuels Management Project	178.4	149.6	28.8
<b>RL-0013</b>	Management of Cesium and Strontium Capsules	3.8	3.3	0.5
<b>RL-0030</b>	Soil, Groundwater and Vadose Zone Remediation	132.9	113.0	19.9
<b>RL-0040</b>	Nuclear Facility D&D, Remainder of Hanford	81.8	73.8	7.9
<b>RL-0041</b>	Nuclear Facility D&D, River Corridor	148.3	129.4	19.0
<b>RL-0042</b>	Fast Flux Test Facility Closure	3.3	2.0	1.3
<b>Total</b>		<b>638.7</b>	<b>551.0</b>	<b>87.7</b>

#### Funds/Variance Analysis

For August, there was no change to FY2019 projected funding and remains at \$638.7 million. The spending forecast increased \$3.0 million from July.

## BASELINE CHANGE REQUESTS

In August, CHPRC approved and implemented 15 BCRs into the PMB budget. Twelve of the 15 BCRs impacted the PMB. Each change request is identified in the tables below:

Change Request #	Title	PBS	Summary of Change
BCR-000-19-005R0	<i>Mod 707 Implementation – Indirect Accounts</i>	000	This BCR implemented the definitization of Change Proposal (CP) ALL PRC 1710 with Modification 707 into the indirect accounts. This BCR decreased the PMB by \$4,096K.
BCR-011-19-004R0	<i>Mod 707 Implementation – RL-0011 OA</i>	RL-0011	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0011 OA. This BCR increased the PMB by \$2,931K.
BCR-011C-19-005R0	<i>PBS RL-0011 CAP 2 Project MR Draw – Summer Weather and Conservative Demolition Approach for Worker Safety</i>	RL-0011	This BCR drew management reserve cost and schedule margin to address summer weather and conservative demolition approach for worker Safety. This BCR increased the PMB by \$12,962K.
BCR-012-19-001R0	<i>Mod 707 Implementation – RL-0012 OA</i>	RL-0012	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0012 OA. This BCR decreased the PMB by \$1,744K.
BCR-013-19-010R0	<i>Mod 707 Implementation – RL-0013 W&amp;F</i>	RL-0013	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0013 W&F. This BCR decreased the PMB by \$9,537K.
BCR-013-19-011R0	<i>Mod 707 Implementation – RL-0013 W-135</i>	RL-0013	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0013 W-135. This BCR increased the PMB by \$2,108K.
BCR-013-19-012R0	<i>Mod 707 Implementation – RL-0013 ERDF-IDF</i>	RL-0013	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0013 ERDF-IDF. This BCR decreased the PMB by \$1,977K.
BCR-013-19-013R0	<i>W-135 WBS Realignment</i>	RL-0013	This BCR modified the current WBS structure for the W-135 Capsule Extended Storage Project. This BCR did not change the PMB value.
BCR-030-19-009R0	<i>Mod 707 Implementation – RL-0030 OA</i>	RL-0030	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0030 OA. This BCR decreased the PMB by \$13,156K.
BCR-040-19-005R0	<i>Mod 707 Implementation – RL-0040 OA</i>	RL-0040	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0040 OA. This BCR increased the PMB by \$7,326K.
BCR-041-19-010R0	<i>Mod 707 Implementation – RL-0041 100K</i>	RL-0041	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0041 100K. This BCR decreased the PMB by \$4,009K.
BCR-041-19-011R0	<i>Mod 707 Implementation – RL-0041 324 Project</i>	RL-0041	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0041 324 Project. This BCR increased the PMB by \$60K.
BCR-042-19-001R0	<i>Mod 707 Implementation – RL-0042 OA</i>	RL-0042	This BCR implemented the definitization of CP ALL PRC 1710 with Modification 707 into RL-0042 OA. This BCR increased the PMB by \$587K.
BCRA-PRC-19-019R0	<i>HPIC Updates August 2019</i>	000s RL-0030, RL-0040, RL-0041, RL-0042	This BCR incorporated August FY2019 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

There was no change to allocated (distributed) budget in July.

**Undistributed Budget (UB) Activity**

BCR Number	Title	PBS	Fiscal Year	UB
N/A	N/A	N/A	2019	\$0

There was no change to UB in August.

**Management Reserve Activity**

BCR Number	Title	PBS	Fiscal Year	MR
BCR-011C-19-005R0	<i>PBS RL-0011 CAP 2 Project MR Draw – Summer Weather and Conservative Demolition Approach for Worker Safety</i>	RL-0011	2019	-\$12,962K

The MR decreased by \$12,962K in August.

**Fee Activity**

BCR Number	Title	PBS	Fiscal Year	Fee
BCR-PRC-19-018R0	<i>Mod 707 Implementation – Fee Adjustment</i>	N/A	2019	\$23,300K

The fee increased by \$23,300K in August.

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 fiscal year. The PMB values of change requests are summarized by fiscal year in the following tables (dollars in thousands).

**August 2019 Summary of Changes (\$M)**

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	FY2020	Contract Period Total	Total PMB
<b>July 2019 Estimate</b>											
PMB	3,391.48	391.65	471.32	504.83	485.03	470.65	2,323.48	574.87	7.32	6,297.14	6,297.14
MR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.28	0.00	63.28	63.28
Fee	155.50	14.32	14.50	27.80	10.61	18.86	86.10	13.17	0.00	254.77	254.77
<b>Total</b>	<b>3,546.98</b>	<b>405.98</b>	<b>485.82</b>	<b>532.63</b>	<b>495.64</b>	<b>489.51</b>	<b>2,409.58</b>	<b>651.31</b>	<b>7.32</b>	<b>6,615.19</b>	<b>6,615.19</b>
<b>August 2019 Change</b>											
<b>PMB</b>											
Change to PMB	0	0	0	0	0	0	0	-13.93	9.48	-4.4486	-4.45
<b>MR</b>											
Change to MR	0	0	0	0	0	0	0	-12.96	0	-12.96	-12.96
<b>Fee</b>											
Change to Fee	0	0	0	0	0	0	0	23.30	0	23.30	23.30
<b>Total Change</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-3.59</b>	<b>9.48</b>	<b>5.89</b>	<b>5.89</b>
<b>August 2019 Estimate</b>											
PMB	3,391.48	391.65	471.32	504.83	485.03	470.65	2,323.48	560.94	16.80	6,292.69	6,292.69
MR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.32	0.00	50.32	50.32
Fee	155.50	14.32	14.50	27.80	10.61	18.86	86.10	36.47	0.00	278.07	278.07
<b>Total</b>	<b>3,546.98</b>	<b>405.98</b>	<b>485.82</b>	<b>532.63</b>	<b>495.64</b>	<b>489.51</b>	<b>2,409.58</b>	<b>647.72</b>	<b>16.80</b>	<b>6,621.08</b>	<b>6,621.08</b>

**Changes to/Utilization of Management Reserve in August 2019 (\$M)**

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	FY2019	Total
<b>July 2019 MR Totals</b>									
RL-0011	0	0	0	0	0	0	0	15.93	15.93
RL-0012	0	0	0	0	0	0	0	8.16	8.16
RL-0013	0	0	0	0	0	0	0	6.18	6.18
RL-0030	0	0	0	0	0	0	0	7.76	7.76
RL-0040	0	0	0	0	0	0	0	8.70	8.70
RL-0041	0	0	0	0	0	0	0	16.35	16.35
RL-0042	0	0	0	0	0	0	0	0.19	0.19
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>63.28</b>	<b>63.28</b>
<b>August 2019 MR Changes/Utilization</b>									
RL-0011	0	0	0	0	0	0	0	(12.96)	-12.96
RL-0012	0	0	0	0	0	0	0	0	0
RL-0013	0	0	0	0	0	0	0	0	0
RL-0030	0	0	0	0	0	0	0	0	0
RL-0040	0	0	0	0	0	0	0	0	0
RL-0041	0	0	0	0	0	0	0	0	0
RL-0042	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-12.96</b>	<b>-12.96</b>
<b>August 2019 MR Totals</b>									
RL-0011	0	0	0	0	0	0	0	2.97	2.97
RL-0012	0	0	0	0	0	0	0	8.16	8.16
RL-0013	0	0	0	0	0	0	0	6.18	6.18
RL-0030	0	0	0	0	0	0	0	7.76	7.76
RL-0040	0	0	0	0	0	0	0	8.70	8.70
RL-0041	0	0	0	0	0	0	0	16.35	16.35
RL-0042	0	0	0	0	0	0	0	0.19	0.19
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50.32</b>	<b>50.32</b>

## SELF-PERFORMED WORK

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

Contract-to-Date Actual Awards & Mods 10/1/2008 - 8/25/2019					
Reporting Category					
	\$ Value	%	Goal %		
SB	\$1,624.83	56.06%	49.3%	PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
SDB	\$299.36	10.33%	8.2%		
SWOB	\$298.54	10.30%	7.5%	CHPRC Contract Value:	\$6,596.68
HUB	\$92.42	3.19%	2.2%	SB actual:	\$1,624.83
VOSB	\$246.20	8.49%	3.5%	SB Performed %:	24.63%
SDVO	\$154.99	5.35%	1.3%	PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed	
NAB	\$87.77	3.03%	N/A		
Large	\$771.41	26.62%	N/A	CHPRC Contract Value:	\$6,596.68
GOVT	\$5.27	0.18%	N/A	CHPRC Self Performed:	\$3,988.08
GOVT CONT	\$483.22	16.67%	N/A	CHPRC Self Performed %:	60.46%
EDUCATION	\$0.17	0.01%	N/A		
NONPROFIT_	\$4.39	0.15%	N/A		
FOREIGN	\$9.02	0.31%	N/A		
<b>Total</b>	<b>\$2,898.30</b>	<b>100.00%</b>	<b>N/A</b>		

**Notes:**

1. Since the contract award in October 2008, CHPRC has subcontracted more than \$2.8 billion in goods and services, with more than 56 percent going to small businesses. All subcontracting goals have been exceeded.
2. Approximately 91 percent of the total dollars arise from service and staffing contracts and contract amendments, with six percent of the remaining expenditures arising from PCard purchases and three percent from the balance in purchase orders for materials and equipment.
3. Data are 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
J.12/C.2.2, C.2.3	<p>PBS-11, <i>Plutonium Finishing Plant Closure Project</i></p> <p>PBS-13, <i>Solid and Liquid Waste Treatment and Disposal</i></p>	<p>Offsite Transportation of Radioactive Material: U.S. Department of Energy (DOE), Richland Operations Office (RL) provides equipment and government drivers to transport transuranic (TRU) materials outbound/inbound between the Hanford Site and Perma-Fix Northwest locations. RL is the authorized shipper, acts as signatory on the shipping papers and ensures compliance with DOE Manual 460.2-1. RL arranges for Commercial Motor Vehicle Safety Alliance Level VI Vehicle Inspections and verifies that the government drivers meet the applicable U.S. 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 requirements.</p>	Ongoing.
J.12/C.2.3.6	PBS-13, <i>Transuranic Waste Certification</i>	<p>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-Headquarters on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office.</p>	No WIPP shipments are planned within the remaining contract period of performance.

### DOE ACTIONS/DECISIONS

Refer to Sections A through G and Appendix C of this report for the project specific DOE actions/decisions.

# Section A

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

**CH2MHILL**  
Plateau Remediation Company



J. L. Casper  
Vice President for  
Plutonium Finishing Plant  
Closure Project

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

In August, the Plutonium Finishing Plant (PFP) Closure Project team successfully closed all prestart findings identified in the high-risk work resumption Management Assessment, and accordingly received authorization from U.S. Department of Energy, Richland Operations Office (RL) to proceed with the 234-5Z and 236-Z higher-risk work as outlined in the PFP Work Resumption Plan. The team continued low-risk work, completing demolition and debris disposition of 234-5Z Core Stability Zone (CSZ) 4.1 and Zone 7. Demolition was completed on the second floor and duct level on the east side of the facility from columns 8 to 9. All aerosol testing and gauge connections were completed for the air movers needed for A and C line demolition. Sixty-seven containers of low-risk demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal.

### 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 Removed	0	35,827
<b>COMPLETE</b> Process Vacuum Piping Dispositioned	0	7,231 feet
<b>COMPLETE</b> Process Transfer Line Dispositioned	0	1,525 feet
<b>COMPLETE</b> Pencil Tank Units Removed (Shipped)	0	196 pencil tank units
<b>COMPLETE</b> Buildings Ready for Demo	0	68 structures
Buildings Demolished or Removed	0	63 structures
Non-radioactive Waste Shipped	0	89.8 m <sup>3</sup>
Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped	0	5,014 m <sup>3</sup>
LLW/MLLW Shipped	469 m <sup>3</sup>	20,434 m <sup>3</sup>

### EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-PFP-OBJI-P1	Improve compliance, Environmental Management System (EMS) awareness, employee involvement	A minimum of four EMS presentations; involve one to two employees in compliance review; facility walk-downs	9/30/19	100%

## 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	1	2	8/15/2019 - While exiting out of a passenger van, an employee stepped on an uneven surface and rolled the right ankle, fell to the ground, and landed on the right elbow and back of the head. The employee was taken to HPMC Corporation (HPMC) for medical evaluation and treatment, then sent to Physicians Immediate Care in Richland for stitches to the right elbow and X-rays of the right elbow and ankle. Physicians Immediate Care and HPMC released the employee back to work without restriction. (25308)
First Aid Cases	4	37	<p>8/7/2019 – An employee reported an itch to the right eye when transitioning from MO6108 to 2754W. The employee was taken to HPMC where the eye was flushed with water. The employee was returned to work without restriction. (25296)</p> <p>8/8/2019 – An employee identified rough patches on both heels at the end of their shift. The next morning, the issue was reported to the Field Work Supervisor, who transported the employee to HPMC. The employee returned to work and was instructed to limit walking to what could be tolerated. (25300)</p> <p>8/14/2019 – An employee injured the right hand while tarping an ERDF can. The employee lost grip of the tarp with the left hand, causing the bungee cord to retract, forcing the back of the employee's right hand to strike a hook on the ERDF container. The employee was taken to HPMC for evaluation and released without restriction. (25310)</p> <p>8/29/2019 – An employee was struck by a spool of mule tape when a knot fastening the spool in place broke loose. The spool dropped, striking the employee in the nose/forehead area. The employee was transported to HPMC and returned to work with a restriction not to lift/carry/push/pull over 25 pounds. (25338)</p>
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0011 Accomplishments:

- Completed demolition and debris load out of 234-5Z CSZ 4.1 and Zone 7.
- Continued demolition on the second floor and duct levels of zones 4, 5, and 6.
- Completed expansion of the PFP ERDF container area to allow more efficient demolition waste loading and shipping.
- Completed aerosol testing of the exhausters to be used during high-risk demolition and installed truck scales for the Plutonium Reclamation Facility weight restricted waste shipments to ERDF.
- Shipped 67 containers of low-level demolition debris to ERDF.

## MAJOR ISSUES

None currently identified.

## 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-0011/WBS-011.OA</b>																			
<b>Explanation of major changes to the project monthly stoplight chart:</b> No major changes to the stoplight chart in August.																			
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>																			
PFP-P3-003: <i>Weather Impacts During 234-5Z Demolition</i>	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms, will result in in-scope unplanned work and schedule impacts to the project.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Very Likely (>90%) <b>Worst Case Impacts:</b> \$0, 20 days	<span style="color: red; font-size: 1.5em;">●</span>	<span style="color: blue; font-size: 1.5em;">↑</span>	<b>Risk Event:</b> Summer weather brought high temperatures and wind speeds greater than 30 miles per hour (mph) with gusts above 40 mph that limited outside fieldwork. These events impacted demolition status, and the project moved to a tropical shift schedule to reduce potential impacts. Productivity has been impacted by the weather events and resulting shift change.  <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr style="background-color: #e6e6e6;"> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Move workforce to "tropical" shift schedule</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <b>Risk Action Assessment:</b> This risk was realized in July 2019. Although wind impacted demolition progress, surveys are now conducted more efficiently, resulting in less recovery time and allowing work to resume sooner following an event. The tropical shift allows work crews to make early morning zone entry to avoid heat impact. A Baseline Change Request (BCR) was processed in August to draw down management reserve (MR) and schedule margin and incorporate them into the baseline to address high heat weather impacts. All recovery actions for this risk event are complete, and this risk will be moved from the realized risks to the risk triggers to track mitigation actions for cold weather impacts this winter.	Risk Recovery Action(s)	FC Date	%	Move workforce to "tropical" shift schedule	Complete	100									
Risk Recovery Action(s)	FC Date	%																	
Move workforce to "tropical" shift schedule	Complete	100																	
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)</b>																			
No critical risks identified in August.																			
<b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b>																			
No high risk threat values identified in August.																			
<b>FY2019 Risk Triggers (Risk could be realized in FY2019)</b>																			
PFP-P-004: <i>Stop Work From Concerned Workers</i>	Concerned workers result in a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$0, 52 days	<span style="color: green; font-size: 1.5em;">●</span>	<span style="color: black; font-size: 1.5em;">↔</span>	<b>Risk Trigger:</b> During PFP demolition activities, an increase in stop works could result in delays.  <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr style="background-color: #e6e6e6;"> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No major changes in August. In July, the risk occurrence probability level was decreased from very likely to likely, and the confidence trend increased as the ongoing mitigation actions are improving morale and worker understanding of the scope of work. Increased communication and worker involvement to avoid confusion and concern in an effort to minimize stop works have continued; stop works may impact the project schedule going forward.	Mitigation Action(s)	FC Date	%	Update communications as positions change.	Ongoing	N/A	Provide new maps with entry/exit instructions when boundaries are revised.	Ongoing	N/A	Encourage additional worker involvement.	Ongoing	N/A	Increase frequency of post-job reviews.	Ongoing	N/A
Mitigation Action(s)	FC Date	%																	
Update communications as positions change.	Ongoing	N/A																	
Provide new maps with entry/exit instructions when boundaries are revised.	Ongoing	N/A																	
Encourage additional worker involvement.	Ongoing	N/A																	
Increase frequency of post-job reviews.	Ongoing	N/A																	

Unmitigated Risk Impacts	Assessment		Comments						
	Month	Trend							
<b>RL-0011/WBS-011.OA</b>									
<p>PFP-P-007: <i>Demolition Equipment Reliability and Modification</i></p> <p>Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment impact PFP demolition. Equipment modification, leasing, or replacement will be required, resulting in cost and schedule impacts.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Very Likely (&gt;90%) <b>Worst Case Impacts:</b> \$1.0M, 48 days</p>	●	↑	<p><b>Risk Trigger:</b> Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment impact PFP demolition. Equipment modification, leasing, or replacement would be required, resulting in cost and schedule impacts.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Negotiate buy-out of leased equipment</td> <td>Complete</td> <td>100%</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> This item was added to the stoplight chart as a risk trigger in July. Additional leased equipment that was contaminated in the December 2017 event has been identified. <b>Based on negotiations for the buy-out of leased equipment, the project has determined that there is no significant impact to the project and this risk will be removed from the stoplight report before September reporting and will continue to be monitored internally throughout the remainder of its lifecycle.</b></p>	Mitigation Action(s)	FC Date	%	Negotiate buy-out of leased equipment	Complete	100%
Mitigation Action(s)	FC Date	%							
Negotiate buy-out of leased equipment	Complete	100%							
<p>PFP-P5-006: <i>Additional Soil Removal is Required</i></p> <p>Prior to the placement of the cover cap, the additional soil added for contamination control is required to be dispositioned, resulting in cost and schedule delays to the project.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$0, 54 days</p>	●	↔	<p><b>Risk Trigger:</b> Additional soil above planned value is required to be removed due to contamination or regulatory concerns.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Engage early with the U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in August. CHPRC drafted a white paper in August supporting no additional excavation and soil removal above currently planned quantities is required. RL is reviewing options with regulators to determine a path forward.</p>	Mitigation action(s)	FC Date	%	Engage early with the U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.	Complete	100
Mitigation action(s)	FC Date	%							
Engage early with the U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.	Complete	100							
<b>Unassigned Risks (Pending ownership of identified threats/opportunities)</b>									
No unassigned risks identified in August.									

## PROJECT BASELINE PERFORMANCE Current Month (CM) (\$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	16.9	16.2	6.4	(0.7)	-4.2%	9.8	60.8%

Numbers are rounded to the nearest \$0.1 million.

**CM Schedule Variance: (-\$0.7M/-4.2%)**

The CM schedule variance is within threshold.

**CM Cost Variance: (\$9.8M/60.8%)**

The favorable current month cost variance is due to implementation of BCR-011-19-004R0, Mod 707 Implementation - RL-0011 OA that aligned the fiscal year (FY) 2019 Performance Measurement Baseline (PMB) budget with the negotiated FY2019 Plateau Remediation Contract total contract cost documented by Modification 707, Correspondence No. 1902536, dated June 27, 2019. The negotiated FY2019 total contract cost was based on actual cost through March 2019, plus the estimate to complete for the remainder of the FY. Actual costs experienced in this account were higher than budgeted, resulting in an

increase to FY budgeted cost of work scheduled (BCWS)/budgeted cost of work performed (BCWP) in the August reporting period.

Also supporting the favorable current month cost variance was the implementation of BCR-011C-19-005R0, PBS RL-0011 CAP 2 Project MR Draw – Summer Weather and Conservative Demolition Approach for Worker Safety, which drew MR cost and schedule margin to address the impact of high summer temperatures on demolition activities and the implementation of conservative demolition work controls. The impacts delayed the project a total of 54 days in FY2019. The schedule effect from the impacts was spread across three months to allow for the necessary extension of work into FY2020. Taking 100 percent performance for 52 days of these activities accounted for the additional earnings taken in August.

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

WBS 011/ RL-0011 Nuclear Matl & 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	1,121.3	1,105.5	1,196.9	(15.9)	-1.4%	(91.5)	-8.3%	1,138.8	1,230.7	33.8	(91.9)

Numbers are rounded to the nearest \$0.1 million

### CTD Schedule Variance: (-\$15.9M/-1.4%)

The CTD schedule variance is within threshold.

### CTD Cost Variance: (-\$91.5M/-8.3%)

The negative CTD cost variance is primarily a result of unplanned costs to support implementation of PFP schedule efficiency initiatives (i.e., foaming, Perma-Fix Northwest [PFNW] size reduction support, PremAire Breathing System); increased training costs of additional PFP radiological control technicians (RCTs) and D&D workers; additional resources to recover schedule from asbestos removal activities and support the unplanned asbestos removal (about 10,000 feet); unplanned shipping materials (waste shipping containers TL-1800s, SLB2s, IP-1 bags, etc.) required to support loadout activities for transuranic (TRU) waste disposition efforts; and unplanned work to reconfigure the high-density polyethylene (HDPE) water loop to support the new radiological boundaries.

Contributors to the negative cost variance include resumption actions associated with the December 2017 contamination event encompassing fixative applications, performing radiological surveys, revising radiological postings, infrastructure modifications, and stabilization activities. Reassignment of CHPRC personnel to support the radiological control area and programmatic assessments also contributed to the variance.

After resumption activities were completed, a deliberate approach has resulted in slower progress on demolition, size reduction, and waste loadout. Process improvements, planning, and training activities to replenish D&D and RCT staffing support have additionally increased costs.

The negative cost variance is partially offset by the use of fewer breathing air suits (three per day versus five) and fewer hoses than originally planned for 242-Z entries. These reductions were the result of fewer fieldwork team members required to perform hands-on work in 242-Z due to the confined space.

In addition, recognized efficiencies contributed to the negative variance offset, including crews completing process vacuum removal in 291-Z with reduced effort; characterization results indicating lower levels of hold-up, allowing for accelerated piping removal; isolations performed more efficiently by disconnecting the main electrical power from outside the 291-Z Facility versus individual isolations from within; hazardous material removal, stabilization, and decontamination more resourceful than anticipated (i.e., powerful fans used with vertical fixative flow up the stack); and additional efficiencies associated with 242-Z, 291-Z, and 234-5ZA demolition.

#### **Variance at Completion (VAC): (-\$91.9M/-8.1%)**

The unfavorable VAC reflects extended hotel load and field resource costs due to delays in demolition-ready and demolition activities, as well as resumption actions associated with the December 2017 contamination event encompassing fixative applications, performing radiological surveys, revising radiological postings, infrastructure modifications, and stabilization activities. Reassignment of CHPRC personnel to support the radiological control area and programmatic assessments also contributed to the variance.

Overtime used to ready the 234-5Z Facility for demolition by September 2017 and unplanned work on the HDPE water loop also contributed to the unfavorable variance, which was partially offset by recognized efficiencies due to characterization data in 234-5Z, allowing piping and ducting to be left in place for demolition.

In February 2019, BCR-011C-18-005R2, PFP CAP 2 Project Completion was issued to implement the RL-approved revised scope, cost, and schedule baseline for RL-0011.C2 project completion. The BCR set the remaining historical BCWS equal to the BCWP as of June 24, 2018, consistent with DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, and the RL approving authorities' determination to establish a new performance baseline as documented in 18-AMRP-0062, *Performance Baseline Deviation Notification of Plutonium Finishing Plant (PFP) Demolition Project – RL-0011.C2*, dated February 27, 2018.

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

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

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	FY2019		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	70.0	63.2	6.8
RL-0011 - Total	70.0	63.2	6.8

Numbers are rounded to the nearest \$0.1 million

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

FY2019 spending forecast for project baseline summary RL-0011 is \$63.2 million for the continuation of demolition activities to achieve slab-on-grade. Projected funding is \$70.0 million.

#### **Critical Path Analysis**

The PFP critical path schedule begins with demolition completion of the second floor and duct levels

CSZ 6.1, 6.2, and Zone 6 followed by CSZ 4.2, 4.3, and Zone 4. After completion of 234-5Z low-risk demolition and the associated formal post-job and lessons learned, activities will begin for remote mechanical C and A process line demolition and debris disposition, as well as loadout of glovebox HA-46. The 236-Z Canyon demolition will also resume with completion anticipated by January 15, 2020, meeting the requirements for the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-083-00A, "Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities." Demolition completion will be followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities completing by April 2020.

## MILESTONE STATUS

The following table is a one-year look ahead to PBS RL-0011 Tri-Party Agreement enforceable milestones, non-enforceable target due dates, and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/Comment
M-083-00A	"Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities"	9/30/2017		1/15/2020	The project realized a four week slip to the 12/17/2019 forecast date reported in July as a result of weather, dense building debris, and a conservative pace taken for size reduction and debris load out.

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

Contract Section	Project	GFS/I	Status
J.12/C.2.2, C.2.3	PBS RL-0011, PFP 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, acts as signatory on the shipping papers, and ensures compliance with DOE Manual 460.2-1A, <i>Radioactive Material Transportation Practices Manual</i> . RL arranges for Commercial Motor Vehicle Safety Alliance Level VI vehicle inspections and verifies that the government drivers meet the applicable U.S. 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 requirements.	Ongoing

## DOE ACTIONS/DECISIONS

DOE activities supporting the approval of ancillary facility status change forms are complete to date. Upcoming DOE approval for the completion of 234-5Z will initiate a new facility status change form.

# Section B

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

**CH2MHILL**  
Plateau Remediation Company



R. M. Geimer  
Vice President for  
K Basin Operations

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

In August, Sludge Transport and Storage Container (STSC) 18 was filled with engineered container (EC) sludge from the 105KW fuel storage basin and shipped to T Plant on August 5, 2019. STSC 19 was filled with EC sludge from the 105KW fuel storage basin and shipped to T Plant on August 19, 2019. STSC 20 is forecasted to be shipped to T Plant on September 9, 2019.

## EMS OBJECTIVES AND TARGET STATUS

None currently identified.

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	2	19	8/19/19 - Employee felt knee and back pain after a chair wheel locked and the chair tipped over. The employee was evaluated at HPM Corporation (HPMC) and released to work without restriction. (25309)  8/20/19 - An employee fell, scraping left knee. The employee was evaluated at HPMC and returned to work without restriction. (25320)
Near Misses	0	1	N/A

## KEY ACCOMPLISHMENTS

### KW Basin Sludge Removal

- The 100K Area operations group performed preventive maintenance and calibrations on both engineered container retrieval and transfer system (ECRTS) and annex utility system components.
- STSC 18 was filled with sludge from the 105KW fuel storage basin and shipped to T Plant for placement into interim storage on August 5, 2019.
- STSC 19 was filled with sludge from the 105KW fuel storage basin and shipped to T Plant for placement into interim storage on August 19, 2019.

## MAJOR ISSUES

None currently identified.

## RISK MANAGEMENT STATUS

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

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

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

	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
<b>RL-0012/WBS-012</b>																						
<b>Explanation of major changes to the project monthly stoplight chart:</b> No major changes for August																						
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)																						
No realized risks identified in August.																						
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																						
No critical risks identified in August.																						
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																						
No high threat value risks identified in August.																						
<b>FY2019 Risk Triggers</b> (Risk could be realized in FY2019)																						
<p><i>STP-073-C: Processing Efficiency - Retrieval &amp; Shipping</i></p>	<p>The realized processing efficiency associated with sludge retrieval and shipping operations does not match the baseline plan.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Medium (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$0, 54 days</p>	<span style="color: yellow;">●</span>	<span style="color: blue;">↑</span>	<p><b>Risk Triggers:</b> Actual processing efficiency associated with sludge retrieval and shipping operations does not match baseline assumptions. This risk will continue in FY2019 during operations campaign.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <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>Establish a production control center to facilitate maximum efficiency integrating SRP operations and maintenance activities.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Review operations and maintenance activities required to produce each sludge STSC and establish a "typical" schedule integrating all activities in the most efficient sequence possible.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Revise plan to establish the appropriate campaign schedule.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> The revised campaign schedule has accelerated retrieval efforts. Sludge retrieval is scheduled to complete in early September with fewer than forecasted STSCs. All mitigation actions have been completed; therefore, this risk will be removed from the stoplight chart in the September reporting period.</p>	Mitigation Action(s)	FC Date	%	Establish a production control center to facilitate maximum efficiency integrating SRP operations and maintenance activities.	Complete	100	Review operations and maintenance activities required to produce each sludge STSC and establish a "typical" schedule integrating all activities in the most efficient sequence possible.	Complete	100	Revise plan to establish the appropriate campaign schedule.	Complete	100						
Mitigation Action(s)	FC Date	%																				
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Revise plan to establish the appropriate campaign schedule.	Complete	100																				
<p><i>STP-108: STP Annex Equipment and ECRTS/Ancillary System Reliability</i></p>	<p>Required corrective maintenance on the STP annex and the ECRTS equipment is higher than planned due to unique system design or sludge characteristics, resulting in cost and schedule impacts.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Low (10% to 25%)</p> <p><b>Worst Case Impacts:</b> \$400K, 66 days</p>	<span style="color: yellow;">●</span>	<span style="color: blue;">↑</span>	<p><b>Risk Triggers:</b> Required corrective maintenance on the SRP and ancillary equipment is higher than planned.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <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 full-scale testing at the Maintenance and Storage Facility to determine baseline for Corrective Maintenance and Preventative Maintenance program.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>The project will provide spare parts for critical or long-lead components.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Develop PM activities prior to construction completion to optimize maintenance costs.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform reliability, availability, and maintainability analysis.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Modifications to skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90076, 86, and 91)</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in August. Due to ion exchange module (IXM) system challenges (potential unavailability), an alternate water supply modification has been generated and hardware fabricated. Plans have been developed to install this modification in the future if necessary to mitigate any major issues encountered. The facility IXM system continues to be reliable and the modification would impact processing efficiency; therefore, fieldwork is suspended pending a major system failure.</p>	Mitigation Action(s)	FC Date	%	Conduct full-scale testing at the Maintenance and Storage Facility to determine baseline for Corrective Maintenance and Preventative Maintenance program.	Complete	100	The project will provide spare parts for critical or long-lead components.	Complete	100	Develop PM activities prior to construction completion to optimize maintenance costs.	Complete	100	Perform reliability, availability, and maintainability analysis.	Complete	100	Modifications to skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90076, 86, and 91)	Complete	100
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Unmitigated Risk Impacts	Assessment		Comments																					
	Month	Trend																						
<b>RL-0012/WBS-012</b>																								
<p>STP-153: <i>Sludge Engineered Container End Point Criteria</i></p> <p>ECF-100KR2-12-0040, <i>Calculation for 105-KW Basin Substructure Demolition Rubble ERDF Compliance</i>, specifies the volume of residual sludge that is acceptable to leave in ECs following sludge removal operations. It is possible that the end point criteria cannot be achieved without extensive cost and schedule implications.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Medium (26% to 74%)  <b>Worst Case Impacts:</b> \$200K, 64 days</p>			<p><b>Risk Triggers:</b> During execution of the sludge removal campaign, personnel understand that standard methods of sludge removal are unable to achieve EC sludge end point criteria efficiently.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform periodic video camera inspections throughout the sludge removal campaign to plan retrieval strategies.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Develop and submit Documented Safety Analysis/Technical Safety Requirement revisions that facilitate layering KW sludge (SCS-CON-210/220) with KE sludge (SCS-CON-240/250/260).</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Consider sampling heels in ECs to facilitate achieving end point criteria using more accurate source term.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Use EC-250 as proof of process to ensure that end point criteria can be achieved.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Update and submit a revised Environmental Restoration Disposal Facility (ERDF) compliance calculation.</td> <td>9/30/19</td> <td>25</td> </tr> </tbody> </table> <p><b>Risk Recovery Assessment:</b> The majority of the identified risk recovery actions have been completed. Continued discussion between 100K Closure, U.S. Department of Energy, Richland Operations Office (RL), and the U.S. Environmental Protection Agency are ongoing to confirm the end point criteria for the ECs in the basin. An updated ERDF compliance calculation will be required to document the revision of the end point criteria to perform final validation.</p>	Risk Recovery Action(s)	FC Date	%	Perform periodic video camera inspections throughout the sludge removal campaign to plan retrieval strategies.	Ongoing	N/A	Develop and submit Documented Safety Analysis/Technical Safety Requirement revisions that facilitate layering KW sludge (SCS-CON-210/220) with KE sludge (SCS-CON-240/250/260).	Complete	100	Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)	Complete	100	Consider sampling heels in ECs to facilitate achieving end point criteria using more accurate source term.	Complete	100	Use EC-250 as proof of process to ensure that end point criteria can be achieved.	Complete	100	Update and submit a revised Environmental Restoration Disposal Facility (ERDF) compliance calculation.	9/30/19	25
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Update and submit a revised Environmental Restoration Disposal Facility (ERDF) compliance calculation.	9/30/19	25																						
<b>Unassigned Risks (Pending ownership of identified threats/opportunities)</b>																								
No unassigned risks identified in August.																								

## PROJECT BASELINE PERFORMANCE

### Current Month (CM)

(\$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	(0.2)	0.4	1.8	0.6	-313.3%	-1.3	-329.5%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (+\$0.6M/-313.3%)

Negative budgeted cost of work scheduled is due to implementation of BCR-012-19-001R0, Mod 707 Implementation - RL-0012 OA, that aligned the fiscal year (FY) 2019 Performance Measurement Baseline (PMB) budget with the negotiated FY2019 Plateau Remediation Contract (PRC) total contract cost documented by Modification 707, Correspondence 1902536, dated June 27, 2019. The negotiated FY2019 total contract cost was based on actual cost through March 2019, plus the estimate to complete for the remainder of the FY. Actual costs experienced in this account were lower than originally budgeted resulting in a decrease to FY budgeted cost of work scheduled (BCWS) in the August reporting period.

#### CM Cost Performance (-\$1.3M/-329.5%)

The negative current month cost variance is due to implementation of BCR-012-19-001R0 that aligned the FY2019 PMB budget with the negotiated FY2019 PRC total contract cost documented by Modification 707, Correspondence 1902536, dated June 27, 2019. The negotiated FY2019 total contract cost was based on actual cost through March 2019, plus the estimate to complete for the remainder of the FY. Actual costs experienced in this account were lower than budgeted, resulting in a decrease to FY BCWS/budgeted cost of work performed in the August reporting period.

## Contract-to-Date (CTD)

(\$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	757.4	757.3	728.9	(0.1)	0.0%	28.4	3.8%	759.4	730.1	1.2	29.3

Numbers are rounded to the nearest \$0.1 million

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

The variance is within reporting thresholds.

#### CTD Cost Performance (+\$28.4M/+3.8%)

The variance is within reporting thresholds.

#### Variance at Completion (+\$29.3M/+1.2%)

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	FY2019		Variance
	Projected Funding	Spending Forecast	
Expense – Spending Forecast	20.1	16.8	3.3
Incremental Scope Pending Change Management	0.0	0.0	0.0
<b>RL-0012 – Total</b>	20.1	16.8	3.3

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

FY2019 funding for project breakdown structure (PBS) RL-0012 is \$20.1 million. FY2019 funding aligns with the RL Integrated Priority List. Variance to funding is due to efficient use of resources and early completion of sludge removal.

### Critical Path Analysis

The project critical path schedule runs through completion of retrieval operations, including the filling of STSCs with sludge and their transporting to the T Plant canyon for interim storage. The project is on schedule to complete Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-016-176, “Complete Sludge Removal from 105-KW Fuel Storage Basin,” ahead of the December 31, 2019, due date.

## MILESTONE STATUS

The following table is a one-year look ahead of PBS RL-0012 Tri-Party Agreement enforceable milestones, non-enforceable target due dates, and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-176	Complete Sludge Removal	12/31/2019		09/12/2019	Ahead of schedule based on progress in August, the forecast completion date for has been accelerated 18 days from the July forecast completion date.

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

None currently identified.

## DOE ACTIONS/DECISIONS

None currently identified.

# Section C

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

**CH2MHILL**  
Plateau Remediation Company



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

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

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

M. A. Wright  
Vice President for Project  
Technical Services

## PROJECT SUMMARY

In the August reporting period (July 22, 2019 – August 25, 2019), the Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. The River Risk Management Project continued to operate the Environmental Restoration Disposal Facility (ERDF) in a safe and compliant condition and continued document preparation for the Integrated Disposal Facility (IDF) regulatory permits.

The following items were accomplished this month:

- At the Waste Encapsulation Storage Facility (WESF), the W-135 Management of the Cesium (Cs) and Strontium (Sr) Capsules Project, the CH2M HILL Plateau Remediation Company (CHPRC) Supply Chain organization issued the request for proposal (RFP) for the subcontract to construct the capsule storage area (CSA).
- The sludge receipt team continues to receive sludge transport and storage containers (STSC) from the 100K West Reactor Basin for interim storage at T Plant. STSC 18 was received on August 5, 2019, and STSC 19 was received on August 19, 2019.

### EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-WFMP-OBJ1-P1	Receive 10 STSC sludge shipments at T Plant.	T Plant Complex will receive 10 STSC sludge shipments.	9/30/2019	100%
19-EMS-WFMP-OBJ2-P1	Complete and issue the Preoperational Environmental CSA.	Perform sampling and analysis, if needed, as determined by U.S. Department of Energy (DOE) to support the preparation and issuance of the preoperational environmental survey for the CSA. Complete and issue the Preoperational Environmental Survey Report for the CSA.	9/30/2019	100%
19-EMS-WFMP-OBJ3-P1	Complete the Canister Storage Building Programmable Logic Controller (PLC) Upgrade project to avoid exceedance of the air operating permit limits.	Complete PLC Upgrade project fieldwork, test report, and final documentation.	9/30/2019	100%
19-ERDF-OBJ1-P1	Track maintenance recycling activities at ERDF.	Monitor and evaluate ERDF maintenance recycling activities for compliance with CHPRC procedures and complete annual review of recycling activities.	9/30/2019	65%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred (DART)	0	1*	*1 DART, PTS in support of RL-0013.
Total Recordable Injuries	0	0	
First Aid Cases	0	28	N/A
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### Waste and Fuels Management Project

#### 13.01 Project Management

- Transmitted the revised CSA permit application and responses to state of Washington, Department of Ecology (Ecology) comments to U.S. Department of Energy Richland Operations Office (RL) on August 1, 2019.
- Transmitted the Resource Conservation and Recovery Act (RCRA) Permit Revision 9, Green Islands security and training addenda to RL for review on August 7, 2019.
- Transmitted the revised training addenda for low-level burial grounds Trenches 31-34-94, Central Waste Complex (CWC)-Waste Receiving and Processing Facility (WRAP), and T Plant in support of the Solid Waste Operations Complex (SWOC) Part B Permit Application to RL on August 14, 2019.

#### 13.02 Capsule Storage and Disposition

- Completed two operational drills at WESF.
- Continued canyon entries in support of the W-135 project. The WESF crew successfully performed critical lifts to remove the truckport cover blocks and installed the new cover plate in support of the 15-ton canyon crane.
- Completed 48 preventative maintenance (PM) packages.

#### 13.03 Canister Storage Building (CSB)

- Completed one operational drill at CSB.
- Completed dry air system replacement and run-in.
- Completed 23 PM packages.

#### 13.06 Transuranic (TRU) Repackaging

- Completed repackaging of 86.9m<sup>3</sup> of transuranic mixed (TRUM) and TRU waste in July, for a total of 517.2 m<sup>3</sup> fiscal year to date (FYTD).

#### M-091-52

- Twelve of 20 containers have been removed from the Outside Storage Areas A/B in support of the fiscal year (FY) 2020 commitment.

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

- Completed one-year calibration of the stack isolation monitors, emergency lights and exit signs (inspect, test, and repair), ignitable/reactive waste inspection, 2336-W one-year stack flow, and the 3M exhaust fan 202A inspections.
- Completed 234 surveillances and 17 PM packages.

**13.08 T Plant**

- Completed change out of the 2706T ACT I and ACT II high-efficiency particulate air filters.
- Completed 461 surveillances and 33 PM packages.

**Sludge Receipt**

- Received STSC 18 on August 5, 2019 and STSC 19 on August 19, 2019, from 105KW. Both STSCs were placed into interim storage in the T Plant Canyon.

**13.09 Central Waste Complex (CWC) and Low-Level Burial Ground**

- Received nine standard waste boxes from Perma-Fix Northwest (PFNW) into CWC in two shipments.
- Shipped two Super 7A from CWC to PFNW in two shipments.
- Completed 351 surveillances and 24 PM packages.

**13.15 TRU Disposition**

- Continued enhancement of acceptable knowledge on TRU waste streams. Completed the sixth and seventh waste streams out of 10.

**13.16 Offsite Spent Nuclear Fuel Disposition**

- Maintained coordination of offsite spent nuclear fuel disposition.

**13.21 Mixed Waste Disposal Trenches**

- Completed 145 surveillances.
- Received 27 boxes from PFNW into Mixed Waste Trench 31 in five shipments.

**13.24 Management of Cesium and Strontium Capsules Project****13.25 Capsules Interim Storage Operations**

- The RFP for construction of the CSA was issued on August 6, 2019.

**River Risk Management Project****13.10 Environmental Restoration Disposal Facility (ERDF)**

- Received 15,766 tons of waste for disposal in August.
- Received 132,676 tons of waste for disposal FYTD. Any corrections in previous months are reflected in this total.
- Received 82 shipments (1,053 tons) of Plutonium Finishing Plant (PFP) waste using the enhanced radiological controls during disposal operations.

**13.12 Integrated Disposal Facility (IDF)**

- Care and Custody
  - Completed August monthly inspections.
  - Completed annual motor control center and control panels inspections and cleaning.
  - Completed four significant storm event inspections.
- IDF Operational Readiness
  - Issued construction procurement and mobile office packages for bid.
  - Completed the final design for infrastructure improvements.
  - Completed pre-excavation radiological surveys and geophysical mapping to support earthwork activities.
- Resource Conservation and Recovery Act (RCRA) Permit Modifications
  - Participated in comment resolution workshops with the Ecology for the following draft RCRA Permit Addenda: Addendum A, Part A; Addendum B, Waste Analysis Plan; Addendum D, Groundwater Monitoring Plan; Addendum E, Security; Addendum G, Training; Addendum H, Closure Plan; Addendum I, Inspection; and Addendum K, Post-Closure.
  - Revising the addenda based on the comments and preparing review/comment resolution responses for Ecology acceptance.

- Preparing for comment resolution workshop with Ecology Addendum C, Process Information, and Addendum F, Preparedness and Prevention.
- Reviewing the RCRA permit conditions for IDF to ensure they are consistent with the IDF addenda.

## **Project Technical Services Support**

### **Project Delivery**

- W-135 Construction
  - Issued Addendum 3 to RFP for criticality safety analysis. Bid date moved to September 11, 2019.
  - Commenced work planning for the installation of temporary power.
  - Issued RFP for mobile office procurements in support of the W-135 Project.
  - Started drafting scope of work (SOW) for WESF truckport utility relocation.
- T Plant West Face Exterior Stairs and Firestop Wall Repair
  - Completed core drilling at fan number 3.
  - Completed installation of eco block retaining wall.
  - Completed final anchor bolt installations for landings at H-3, H-5, and H-7.
- WESF Metal Shed and Kitchen Remodel
  - Completed installation of concrete strip foundation.
  - Demolished existing kitchen cabinets and countertops.
  - Completed asbestos abatement of kitchen tiles.
- IDF Infrastructure
  - Recommend award for the procurement for the mobile office trailers.
  - Commenced work planning for earthworks scope.
  - Finalized draft of balance of work SOW and issued it for functional review.
  - Completed field survey staking and site ground-penetrating radar scans.

## **MAJOR ISSUES**

### **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 issue the permit with the design information that is available at the time of permit issuance.

### **Status**

The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information as agreed in the permitting plan. Ecology's completeness review for the WESF permit modification request was received on February 5, 2018. Ecology's completeness review for the Capsule Interim Storage permit application was received on February 13, 2018. Ecology concluded that the permit applications were incomplete. Additional information to address the completeness review was transmitted to Ecology on May 8, 2018, and on January 31, 2019, Ecology issued a completeness determination for the CSA permit application and determined the permit application is complete. In conjunction with the letter, Ecology provided formal copies of the technical comments on the addenda. W&FMP resolved the technical comments and prepared the revised documents. The *Capsule Storage Area Final Design Report* was provided to Ecology on May 2, 2019. Ecology has tentatively approved the comment responses, and CHPRC anticipates that additional design detail will not be needed to support issuance of the draft permit for public comment.

**Issue**

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

**Corrective Action**

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

**Status**

Continuing to use the best-demonstrated available technology to provide adequate configuration and minimize the potential for contamination spread during long-term storage (i.e., protecting boxes with tarps or protective shoring; over-packing drums). Streamlined and consolidated container management procedures. RL authorized additional FY2019 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue throughout the year.

**Issue**

It was determined by dynamometer that the WESF truckport cover block is 30,900 pounds, three percent higher than the historical baseline documents. This weight exceeds the rated capacity of the WESF Canyon crane by 900 pounds (three percent).

**Corrective Action**

Agreed with RL to perform a planned engineering lift in accordance with ASME B30.2-2016. Additionally, RL requested that CHPRC have a discussion with the crane vendor to determine if vulnerabilities or lessons learned associated with this vintage/model of crane exist.

**Status**

A contract was placed with a recognized crane vendor and additional discussions have taken place. These discussions resulted in the vendor suggesting a visual inspection of the gearbox gears, final drive gear, and pinion gear. On June 11, 2019, the recommended visual inspection was conducted by CHPRC and the vendor representative. The inspection did identify some minor wear and pitting on the final drive gear, which was expected due to the age of the crane. Considering the inspection results, the vendor concurred that placing the crane back in service after completion of the other in-progress maintenance activities would be appropriate. The crane has been reassembled, new wire rope installed, annual inspection completed, and the load test using the truckport cover block and new ventilation cover has been performed. Work document review for closure is in progress. This will no longer be reported as a major issue and will be removed from future reports.

**Issue**

On August 14, 2018, notification was received (18-AMRP-0151) informing CHPRC that RL supports enhancing the operating margin for the Cs salt-metal interface temperature by increasing the number of casks (as appropriate, up to 24 casks) to reduce the heat load in each individual cask to bound the range of uncertainty.

**Corrective Action**

CHPRC transmitted a response letter to RL in October 2018. CHPRC will revise the Hastelloy emissivity for the strontium cask and evaluate increasing the operating margin for the Cs casks. Results of the emissivity change will be incorporated into the final design and analysis of increasing the operating margin will be completed after the Cask Storage System (CSS) final design has been approved.

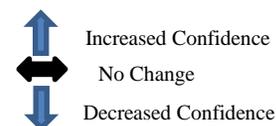
**Status**

Analysis of the Hastelloy emissivity has been completed and resulted in one additional strontium cask. Analysis for increasing the Cs thermal storage margin indicates three additional Cs casks will be required to reduce the salt-metal interface temperature to 269 degrees. CHPRC submitted a letter to RL on June 20, 2019, with the preliminary results and requested direction to implement the new operating temperature. RL provided formal response on August 26, 2019, indicating that: “The U.S. Department of Energy Richland Operations Office (RL) has concluded that the minimal reduction in risk associated with reducing the salt interface temperature does not warrant the projected \$7.7 million cost and six additional months of operations needed to procure and load three additional cask. Therefore, additional storage containers for the purpose of reducing the capsule temperatures during dry storage are not necessary at this time.” This will no longer be reported as a major issue and will be removed from future reports.

**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> There are no major changes to the stoplight chart in August.										
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>										
13-RCRA-REV9-001: RL-13 - Additional dangerous waste management units (DWMUs )	Unplanned DWMUs are added to the scope requiring additional document support, impacting the project in both cost and schedule.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Very likely (>90%) <b>Worst Case Impacts:</b> \$0, 48 days			<p><b>Risk Event:</b> Ecology provided technical comments on the permit addendum, expanding the number of DWMUs.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Incorporating changes to respond to comments.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> No significant changes in August. The impacts associated with the realization of this risk are ongoing. As such, this risk will continue to be reported for visibility until it no longer poses a threat to the project.</p>	Risk Recovery Action(s)	FC Date	%	Incorporating changes to respond to comments.	Ongoing	N/A
Risk Recovery Action(s)	FC Date	%								
Incorporating changes to respond to comments.	Ongoing	N/A								
13-RCRA-REV9-003: RL-13 - Ecology Delays	Scope supported by Ecology is impacted by delays in Ecology review time that do not align with the Permit Management Schedule. This issue requires that the project take recovery actions that result in schedule impacts.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Very likely (>90%) <b>Worst Case Impacts:</b> \$0, 96 days			<p><b>Risk Event:</b> Ecology’s review time is impacting the Permit Management Schedule.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> No significant changes in August. Select appropriate staff are prepared to respond to comments when they are received. The impacts associated with the realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project.</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								
WSD-138: Regulatory document (closure plan with Ecology) results in significant comments from the regulator	Significant comments from the regulator on closure plans submitted for approval results in non-approval of the permit or rework, causing schedule impacts to the project.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Very likely (>90%) <b>Worst Case Impacts:</b> \$0, 96 days			<p><b>Risk Event:</b> Eight closure plans were formally resubmitted to Ecology in August 2018 and November 2018. In January 2019, Ecology provided additional comments changing the closure strategy for several units.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> No significant changes in August. RL informed Ecology that additional document revisions would not be completed at this time. The impacts associated with the realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project.</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								

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0013/WBS-013</b>																
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in <b>August</b> .																
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																
WSD-013B: TRU Waste Volumes or Characteristics - Processing	TRU waste not identified in records or higher-than-planned volumes due to inaccurate records or unexpected soil contamination impacts TRU processing. This waste is derived from retrieval of waste; non-compliant newly generated waste received from generators; TRU waste that is determined to be low-level and requires further treatment; or more waste is generated than in the plan, resulting in unplanned in-scope cost impacts.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$500K, 0 days	●	↔	<p><b>Risk Trigger Metric:</b> A significant volume of newly generated waste is received or nonconforming waste results in the need for new capabilities.</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>August</b>. The destruction of two drums with oil from large box shipment TC158 was not performed at the offsite processing facility due to backlog. An exception to 0063 and a waste profile was approved to store the waste temporarily at CWC until the offsite facility is ready to treat the waste. <b>Based on the current risk assessment, it was determined that this risk no longer carries a critical risk value. As such, it will be removed from the stoplight chart prior to September reporting. This risk will continue to be monitored internally throughout the remainder of its lifecycle.</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														
WSD-097: Major Equipment Failure – T Plant	T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3M, 96 days	●	↔	<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 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 critical spare parts for the T Plant crane.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Implement aggressive CM/PM program.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in <b>August</b>. The project has put into place mitigating strategies (i.e., aggressive surveillance and maintenance activities) to help reduce this risk. Mechanical maintenance on the canyon crane was completed in November. The annual electrical crane maintenance, including the camera cable, was completed in February. The canyon crane is currently operational, and spare parts have been procured for most critical spares.</p>	Mitigation Action(s)	FC Date	%	Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A	Implement aggressive CM/PM program.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%														
Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A														
Implement aggressive CM/PM program.	Ongoing	N/A														
WSD-136: CWC/WRAP Components Fail	CWC facilities and components may reach their end of life. These items will need to be replaced and/or repaired outside of planned funding profiles, resulting in cost impacts.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$2M, 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, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct fieldwork for 2727W deactivation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Conducting doorframe replacements and electrical equipment repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in <b>August</b>. The WRAP roof was analyzed for structural integrity following water intrusion. There was insufficient basis for the roof's integrity, which will lead to an eventual roof replacement planned for FY2020-2021, pending weather conditions. The MDSA container stacking requirements are complete. Maintenance work at CWC will be scheduled based on facility work priorities. Additional fire alarm control unit spare parts were obtained from the deactivation of 2727W.</p>	Mitigation Action(s)	FC Date	%	Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A	Conduct fieldwork for 2727W deactivation.	Complete	100	Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A
Mitigation Action(s)	FC Date	%														
Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A														
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Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
<b>RL-0013/WBS-013</b>																						
WSD-CSA-006: Ecology Temporary Authorization contingent on 90% Design for CSA RCRA Permit Application	As a pre-condition to approve the temporary authorization (TA) for CSA construction, Ecology will require that the CSA 90 percent detailed design package be incorporated into the CSA RCRA permit application (to issue for public comment), thereby delaying the TA and impacting the CSA construction schedule.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Very Likely (>90%) <b>Worst Case Impacts:</b> \$0, 96 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>August</b>. The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. The project received a determination of incompleteness on February 13, 2018, primarily associated with the need for additional design information. CHPRC/RL submitted supplemental design information for the WESF modifications and CSA to RL in May 2018. Ecology has determined that the permit application is now complete. Ecology is reviewing the 90 percent design package that was submitted on May 2, 2019. CHPRC is currently resolving Ecology comments on the Part B permit application. CHPRC is preparing the TA to begin CSA construction ahead of the full permit approval because it will not be issued before planned start of CSA construction in <b>January 2020</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>FY2019 Risk Triggers (Risk could be realized in FY2019)</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> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 0 days			<p><b>Risk Trigger Metric:</b> Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procuring stainless steel 85-gallon over-packs for alternative storage of containers that show signs of degradation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>FY2019 over-packs planned: 200</td> <td>9/25/2019</td> <td>75</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in <b>August</b>. The project continued to perform container surveillances to identify container and container cover abnormalities. RL authorized additional FY2019 TRU commercial repacking, allowing shipments to PFNW for repackaging to continue. The remaining containers will continue to require surveillance and enhanced monitoring.</p>	Mitigation Action(s)	FC Date	%	Perform daily/weekly waste container surveillances to identify container abnormalities.	Ongoing	N/A	Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.	Ongoing	N/A	Process waste packages at a rate funded by RL.	Ongoing	N/A	Procuring stainless steel 85-gallon over-packs for alternative storage of containers that show signs of degradation.	Complete	100	FY2019 over-packs planned: 200	9/25/2019	75
Mitigation Action(s)	FC Date	%																				
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Procuring stainless steel 85-gallon over-packs for alternative storage of containers that show signs of degradation.	Complete	100																				
FY2019 over-packs planned: 200	9/25/2019	75																				
WSD-W135-19: Unexpected Contamination is Found in the WESF Facility	More contamination is found at WESF, resulting in the need to clean it up to reduce worker exposure or requiring more worker protection.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$2K, 32 days			<p><b>Risk Trigger Metric:</b> During WESF preparations for equipment installation (in G Cell, the canyon, or the truckport), contamination is found that requires decontamination. During equipment installation, contamination is encountered that requires cleanup (e.g., anchoring of equipment inside WESF causes release of contamination).</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Implement lessons learned.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Continuously use respiratory protection.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in <b>August</b>. Waste packaging in the canyon is substantially complete; however, waste removal is impacted by WESF canyon crane and truckport cover block weight issues. To date, no excessive contamination has been discovered in the canyon. Decontamination efforts in G Cell are complete.</p>	Mitigation Action(s)	FC Date	%	Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.	Ongoing	N/A	Implement lessons learned.	Ongoing	N/A	Continuously use respiratory protection.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%																				
Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.	Ongoing	N/A																				
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
<b>RL-0013/WBS-013</b>																			
WSD-W135-31: Canyon Crane non-functional/not Serviceable	<p>The WESF crane is put back into limited usage for the W-130 Project; however, the crane is found to be unserviceable or fails during the W-135 operational activities.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Medium (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$300K, 96 days</p>	●	↑	<p><b>Risk Trigger Metric:</b> The canyon crane fails during use or cannot be returned to service after maintenance.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure new crane hook and block.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform preventive/corrective maintenance procedures (i.e., replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.</td> <td>9/30/19</td> <td>80</td> </tr> <tr> <td>Refurbish current crane block.</td> <td>9/30/20</td> <td>0</td> </tr> <tr> <td>Procure critical spares.</td> <td>9/30/21</td> <td>0</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in August. Performance of the full annual preventive maintenance package is complete. As part of mitigation actions for the canyon crane capacity issue, the manufacturer was consulted to gain insight on any issues with this make/model of crane. The manufacturer does not have data on the WESF crane but recommended inspection of the gears for stress fractures. A contract was placed for technical support for the inspections. Inspection of the crane gearbox is complete and found no evidence of stress fractures. Wire rope removal is complete; installation of the new wire rope is complete; installation of the new truckport cover block is complete, and a post-lift engineering inspection will be performed.</p>	Mitigation Action(s)	FC Date	%	Procure new crane hook and block.	Complete	100	Perform preventive/corrective maintenance procedures (i.e., replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.	9/30/19	80	Refurbish current crane block.	9/30/20	0	Procure critical spares.	9/30/21	0
Mitigation Action(s)	FC Date	%																	
Procure new crane hook and block.	Complete	100																	
Perform preventive/corrective maintenance procedures (i.e., replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.	9/30/19	80																	
Refurbish current crane block.	9/30/20	0																	
Procure critical spares.	9/30/21	0																	
WSD-CSS-002: Subcontractor Change Orders and Claims	<p>The CSS construction contractor submits excessive change orders and claims, resulting in schedule delays and increased subcontractor cost.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><b>Worst Case Impacts:</b> \$2.9K, 24 days</p>	●	↔	<p><b>Risk Event:</b> The CSS construction contractor will fabricate CSS equipment under a fixed price contract. If changes to the design are found to be necessary during fabrication, change orders may be submitted by the fabricator.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contract award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure that scope is understood and estimated correctly.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>The scope of each task will be reviewed prior to initiation to ensure that the contractor is aligned for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for in-person interface meetings.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in August. CSS final design has been issued. The contractor has obtained fixed price bids for fabrication and has submitted a proposal for fabrication and variance analysis currently under CHPRC review. Contract award for CSS equipment fabrication will require CHPRC technical review, independent third party audit, and RL consent. Submittal of a consent package to DOE is planned for September. Fabrication of CSS equipment is not planned until FY2020.</p>	Mitigation Action(s)	FC Date	%	Contract award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure that scope is understood and estimated correctly.	Complete	100	The scope of each task will be reviewed prior to initiation to ensure that the contractor is aligned for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for in-person interface meetings.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%																	
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The scope of each task will be reviewed prior to initiation to ensure that the contractor is aligned for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for in-person interface meetings.	Ongoing	N/A																	

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
<b>RL-0013/WBS-013</b>													
WSD-CSA-015: PDSA Comments Result in Schedule Delays	<p>Comments on the Preliminary Documented Safety Analysis (PDSA) received from RL are not able to be resolved within the allotted time frame provided in the baseline schedule or impact design aspects of the CSS, resulting in cost and schedule delays.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><b>Worst Case Impacts:</b> \$200K, 48 days</p>	●	↓	<p><b>Risk Trigger Metric:</b> CHPRC receives DOE comments on the CSA PDSA that requires additional analysis to the CSS final design. Depending on the results of the analysis, the CSS final design may need to be modified.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct working meetings with RL to work through CSA PDSA comments quickly and identify needs for additional analysis early.</td> <td>9/30/19</td> <td>50</td> </tr> <tr> <td>Work with RL to resolve critical comments to CSA PDSA such that approval, which allows completion of additional analysis prior to submittal of final Documented Safety Analysis (DSA), can be provided.</td> <td>12/15/19</td> <td>50</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> Progress has been made to resolve RL and EA-31 comments in August. The project team continues participating in regular meetings with RL and EA-31 nuclear safety to understand comments and agree on a path forward. Current forecast for a Safety Evaluation Report does not support the September 12, 2019, scheduled completion. The forecast date to resolve design comments slipped 76 days from the September 30, 2019, forecast date reported in July 2019. CHPRC received from RL 100 comments, some of which require extensive discussions to resolve. Due to the difficulty of resolving a majority of the comments, our forecast date of September 30, 2019, has slipped to December 15, 2019. Because of this slip, the notice to proceed for fabrication and construction of the CSS has slipped a minimum of the corresponding period. The final impact cannot be determined until the impact of the resolution of RL and EA-31 comments on the current CSS design can be determined and a plan developed to address them.</p>	Mitigation Action(s)	FC Date	%	Conduct working meetings with RL to work through CSA PDSA comments quickly and identify needs for additional analysis early.	9/30/19	50	Work with RL to resolve critical comments to CSA PDSA such that approval, which allows completion of additional analysis prior to submittal of final Documented Safety Analysis (DSA), can be provided.	12/15/19	50
Mitigation Action(s)	FC Date	%											
Conduct working meetings with RL to work through CSA PDSA comments quickly and identify needs for additional analysis early.	9/30/19	50											
Work with RL to resolve critical comments to CSA PDSA such that approval, which allows completion of additional analysis prior to submittal of final Documented Safety Analysis (DSA), can be provided.	12/15/19	50											
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)													
No unassigned risks identified in August.													

## PROJECT BASELINE PERFORMANCE

### Current Month (CM)

(\$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	7.3	6.4	15.0	(0.8)	-11.6%	(8.6)	-134.1%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (-\$0.8M/-11.6%)

The CM negative schedule variance is a result of the following:

- Delay in award of the mockup design contract, as well as delay in completion of the final mockup structure design, has caused a ripple effect in awarding the mockup construction contract, mobilization of the construction contractor, and start of construction.
- The WESF preparations were caused by delays in completing the crane wire rope replacement, canyon decontamination, and the painting of the walls and floors, which were planned in the current period. These activities were delayed because of the inability to complete crane preventative maintenance until several issues were resolved surrounding the crane (such as an overweight truckport cover block, crane integrity due to lifting the overweight cover block during the many years of WESF operations, as well as the Potential Inadequacy in the Safety Analysis for lifting of the cover block over the pool cells).

- Schedule recovery from large box TRUM shipments that were originally scheduled in previous periods. The PFP TRU shipments had previously been delayed due to early shipments of PFP 1800TLs that were shipped, processed, and returned in prior periods.
- Implementation of BCR-013-19-012R0, Mod 707 Implementation - RL-0013 ERDF-IDF that aligned the FY2019 Performance Measurement Baseline (PMB) budget with the negotiated FY2019 Plateau Remediation Contract (PRC) total contract cost documented by Modification 707, Correspondence 1902536, dated June 27, 2019. For RL-0013, implementation of BCR-013-19-010R0, Mod 707 Implementation - RL-0013 W&F adjusted the planned value of FY2019 activities to align with negotiated contract cost values, based on the sum of actual costs of work performed (ACWP) to date through March and the forecast costs to complete the remaining planned work, which was less than originally planned. The overall negative adjustment to planned value was implemented, adjusting earned value downward in the current period by less than the planned value generating a negative schedule variance.

### CM Cost Performance (-\$8.6M/-134.1%)

The CM negative cost variance is a result of the following:

- Due to efforts to perform additional activities to resolve issues with the crane, (truckport cover block overweight, crane integrity due to lifting overweight cover block) it caused an increase in labor efforts and overtime hours worked to recover the schedule.
- Implementation of BCR-013-19-012R0 that aligned the FY2019 PMB budget with the negotiated FY2019 PRC total contract cost documented by Modification 707, Correspondence No. 1902536, dated June 27, 2019. The negotiated FY2019 total contract cost was based on actual cost through March 2019, plus the estimate to complete for the remainder of the FY. Actual costs experienced were lower than budgeted resulting in a decrease to fiscal year budget cost of work performed in the current reporting period.

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

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,462.6	1,457.7	1,375.0	(4.9)	-0.3%	83.0	5.7%	1,476.2	1,393.6	18.6	82.7

Numbers are rounded to the nearest \$0.1 million

### CTD Schedule Performance (-\$4.9M/-0.3%)

The CTD schedule variance is within threshold.

### CTD Cost Performance (+\$83.0/+5.7%)

The CTD favorable cost variance is a result of 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&FMP; 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 (RAM) and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of PM activities; increasing shared resources across all of SWOC; reducing dedicated resources for the Corrective Action System (CAS) and using project-wide support; optimizing maintenance scheduling and execution reducing operations fieldwork supervision; increasing emphasis on managing planned absence

coverage within existing resources; simplifying and optimizing acquisition and procurement management within W&FMP; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and the Solid Waste Inventory Tracking System (SWITS). The cumulative positive cost variance reduced substantially between July and August due to the implementation of Modification 707, which adjusted the planned value of FY2019 activities to align with negotiated contract cost values, based on the sum of ACWP to date through March and the forecast costs to complete the remaining planned work, which was less than originally planned. The overall negative adjustment to planned value was implemented adjusting earned value downward in the current period.

#### Variance at Completion (+\$82.7M/+5.6%)

The favorable VAC is a result of 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&FMP; 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 PM activities; increasing shared resources across all of the SWOC; reducing dedicated resources for CAS and using project-wide support; optimizing maintenance scheduling and execution; reducing operations fieldwork supervision; increasing emphasis on managing planned absence coverage within existing resources; simplifying and optimizing acquisition and procurement management within W&FMP; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and SWITS. The positive variance at complete reduced substantially between July and August due to the implementation of Modification 707, which adjusted the planned value of FY2019 activities to align with negotiated contract cost values, based on the sum of ACWP to date through March and the forecast costs to complete the remaining planned work, which was less than originally planned. The overall negative adjustment to planned value was implemented in the current period, adjusting the budget at completion downward.

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

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

WBS 013/RL-0013	FY2019		
	Projected Funding	Spending Forecast	Variance
Waste Stabilization and Disposition	178.4	149.4	29.0
Management of Cesium and Strontium Capsules (Line Item)	3.8	3.3	0.5
Incremental Scope Pending Change Management	0.0	0.2	(0.2)
RL-0013 – Total	182.3	152.9	29.4

Numbers are rounded to the nearest \$0.1 million.

#### Funds/Variance Analysis

The FY2019 projected funding level for project baseline summary RL-0013 of \$182.3 million is based on revised guidance provided by RL following additional funding for Certificate of Compliance scope and a reduction of funding for the Management of Cesium and Strontium Capsules (Line Item). The FY spending forecast of \$152.9 million reflects FYTD efficiencies and the current cost projection as of August for work to be completed in FY2019.

**Critical Path Analysis**

Critical path analysis will be provided upon request.

**MILESTONE STATUS**

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-53	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste	6/30/2019		TBD	In abeyance.

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

Contract Section	Project	GFS/I	Status
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 compliance with DOE Manual 460.2-1. RL arranges for Commercial Motor Vehicle Safety Alliance Level VI vehicle inspections and verifies that the government drivers meet the applicable U.S. 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 treatment, storage, and disposal requirements.	Ongoing
J.12/C.2.3.6	PBS-RL-0013, Transuranic Waste Certification	WIPP provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable, and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office.	No WIPP shipments are planned within the remaining contract period of performance.

**DOE ACTIONS/DECISIONS**

Description	CHPRC Delivery Date	Expected RL Due Date
CSB – Obtain RL DSA Approval	1/31/2018 (A)	6/24/2019 (A)
CSA CD2/3 – RL: Review/Approve PDSA (1 <sup>st</sup> FY)	5/16/2019 (A)	12/15/2019
RL Review IDF DSA	7/19/2019 (A)	11/25/2019
RL Final IDF DSA Review and Safety Evaluation Report (SER) Prep	12/10/2019	12/30/2019

# Section D

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

**CH2MHILL**  
Plateau Remediation Company



W. F. Barrett  
Vice President and  
Project Manager for  
Soil and Groundwater  
Remediation Project

M. A. Wright  
Vice President for  
Project Technical  
Services

August 2019  
CHPRC-2019-08, 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

In August, Pump and Treat (P&T) operations continued making progress on the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 remedial process documentation for the River Corridor and Central Plateau. Groundwater treatment completed during this month 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	32.7	302.3	2.2	25.2						
HX P&T	26.6	248.2	3.7	24.7						
KR-4 P&T	11.6	123.3	0.3	1.7						
KW P&T	12.8	133.1	2.2	14.9						
KX P&T	40.4	430.6	2.5	24.9						
200 West P&T	88.8	998.9	8.6	83.6	153	1,813	1.36×10 <sup>11</sup>	1.86×10 <sup>12</sup>	8.3	80.6
<b>Combined</b>	<b>212.8</b>	<b>2,236.2</b>	<b>19.4</b>	<b>174.9</b>	<b>153</b>	<b>1,813</b>	<b>1.36×10<sup>11</sup></b>	<b>1.86×10<sup>12</sup></b>	<b>8.3</b>	<b>80.6</b>
<b>FY2019 KPG</b>	<b>--</b>	<b>1,800.0</b>	<b>--</b>	<b>N/A</b>	<b>--</b>	<b>N/A</b>	<b>--</b>	<b>N/A</b>	<b>--</b>	<b>N/A</b>

Well Drilling Completion by Area*	Fiscal Year (FY)2019 Planned	Current Calendar Month	FY2019 Cumulative
100-KR-4	2	0	2
100-HR-3	10	0	10
200-BP-5	4	0	1
200-UP-1	3	1	2
200-ZP-1	5	0	3
M-24 Milestone	7	1	3
100-F/IU	6	4	6
<b>Total Wells</b>	<b>37</b>	<b>6</b>	<b>27</b>
<b>Site Wide Boreholes</b>	<b>9</b>	<b>0</b>	<b>9</b>

\*Well drilling "completion" indicates achieving all drilling activities (drill, construct, develop, complete).

## EMS Objectives and Target Status

Objective Action Plan #	Objective	Due Date	Status
19-EMS-SGRP-OBJ1-P1	Reduce adverse environmental impact to health and the environment by monitoring and confirming low-carbon tetrachloride emissions at the 200 West P&T Facility. Evaluate treated off-gas analytical results from compliance sampling and process sampling each quarter.	7/31/2019	100%
19-EMS-SGRP-OBJ2-P1	Installation and testing of a high-density polyethylene (HDPE) pipeline between Modular Storage Units (MSU) and the 200 West P&T. Objective will eliminate the need to truck the MSU water to the P&T, thereby reducing greenhouse gas emissions and other waste production from vehicle use.	12/31/2018	100%
19-EMS-SGRP-OBJ3-P1	Use of electronically completed Groundwater Sampling Reports (GSR) in Field Logging & Electronic Data Gathering FLEDG 3.0. This will lead to a reduction in paper use and waste through completion and record storage of GSRs electronically.	9/30/2019	90%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	2	N/A
First Aid Cases	2	12	<p>8/7/2019 – Employee bumped left knee on the metal bracket under the desk attached to the adjustable keyboard tray. That evening at home, the employee began to experience more pain and swelling of the left knee. The employee iced the knee for the remainder of the evening before going to bed. Employee texted the manager in the morning stating they had hurt their knee and would not be able to make it into work. Upon further questioning, it was determined the injury had happened at their workstation. The manager requested the employee to meet them at HPM Corporation (HPMC). Employee was evaluated at HPMC and returned to work with a restriction of “limited use of stairs to not more than 6 steps”. (25297)</p> <p>8/13/2019 - Employee was accessing an office trailer when the foot was caught on the top step of the stairway, causing twisting and fall to knee, landing on their side on the top landing. The employee cannot recall if they were using the handrail as they ascended the stairs. The employee entered the trailer and informed the manager that they had fallen. At that time, the employee was not experiencing pain but thought something might have been pulled/strained in their left leg. Employee was taken to HPMC and released to work without restriction. (25302)</p>
Near-Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### Environmental Integration

Completed Cumulative Impact Evaluation (CIE) vadose zone demonstration model runs for the “no further action” waste site disposition scenario. The no further action case is one of two scenarios (model runs for the “action case” were completed in July) that will be used to demonstrate the capabilities of the CIE toolset in an informational briefing to RL in September 2019.

### River Corridor

#### 300-FF-5 Operable Unit (OU)

- Completed construction of (M24) Well 699-S6-E3B at the former 618-10 Burial Ground on August 20, 2019.

#### 100-FR-3 OU

- Completed drilling on August 20, 2019, the remaining groundwater monitoring wells planned in fiscal year (FY) 2019: 699-71-24, 699-71-30B, 699-60-27, and 699-77-34B. These new wells will allow for further delineation and interpretation of the nitrate plume.

**100-HR-3 OU**

- Completed water level measurements for 19 wells in the Ringold Upper Mud (RUM) during the week of July 22, 2019. This information will support development of the RUM plume map.

**100-KR-4 OU**

- Continue surface infiltration of the K West soil flushing treatability test through August 11, 2019. On August 12, 2019, surface infiltration was shut off to evaluate system response for a period of approximately 30 days. Re-start of the surface infiltration is expected to begin in mid-September.

**100-NR-2 OU**

- Submitted the Draft A Bioventing Characterization Sampling Analysis Plan (SAP) to RL, which was then provided to Ecology for review on August 25, 2019.
- Completed final disposition and incorporation of RL comments on August 25, 2019, for the Remedial Investigation (RI) chapters of the Draft B RI/Feasibility Study.

**Central Plateau****200-BP-5 and 200-PO-1 OUs**

- Resolved Ecology's comments on the Draft A 200-BP-5/PO-1 Proposed Plan on August 20, 2019.
- Completed basalt coring for monitoring Well 699-47-55 on August 9, 2019, and monitoring Well 699-47-53B on August 15, 2019; data continues to be collected and evaluated to support RL's interest in basalt flow top.

**200-UP-1 OU**

- Completed construction for monitoring Well 299-W20-1 on August 6, 2019. This is one of the two wells planned to characterize the uranium plume in the groundwater near U Plant.

**200-ZP-1 OU**

- Resolved RL's comments on the 200-ZP-1 Optimization Study Plan.

**200-DV-1 OU**

- Issued the 200-DV-1 Treatability Test Plan Revision 0.

**200-WA-1 OU**

- Completed the performance of the electrical resistance tomography geophysical survey near the 216-U-5 and 216-U-6 waste sites on August 3, 2019, and initiated the preparation of an internal report summarizing the collected data.

**Central Plateau Closure Plans**

- Resolved the revised text regarding the identification of regulated constituents and performance standards for the remaining closure plans in response to comments from Ecology. This will allow completion of the 216-S-10 and 241-CX tanks closure plans during the August through September 2019 timeframe.

## Groundwater Sciences

- The last two of 21 Engineering Evaluation Reports required to support the Resource Conservation and Recovery Act (RCRA) Revision 9 permit modification were completed, certified, and transmitted to RL.

## Project Technical Services Support

- Training and Procedures presented Nuclear Chemical Operator (NCO) Continuing Training on Shift Routines and Rounds to River Corridor personnel. This helped ensure all P&T staff members are aware of the project requirements and expectations.

## Groundwater P&T Facilities

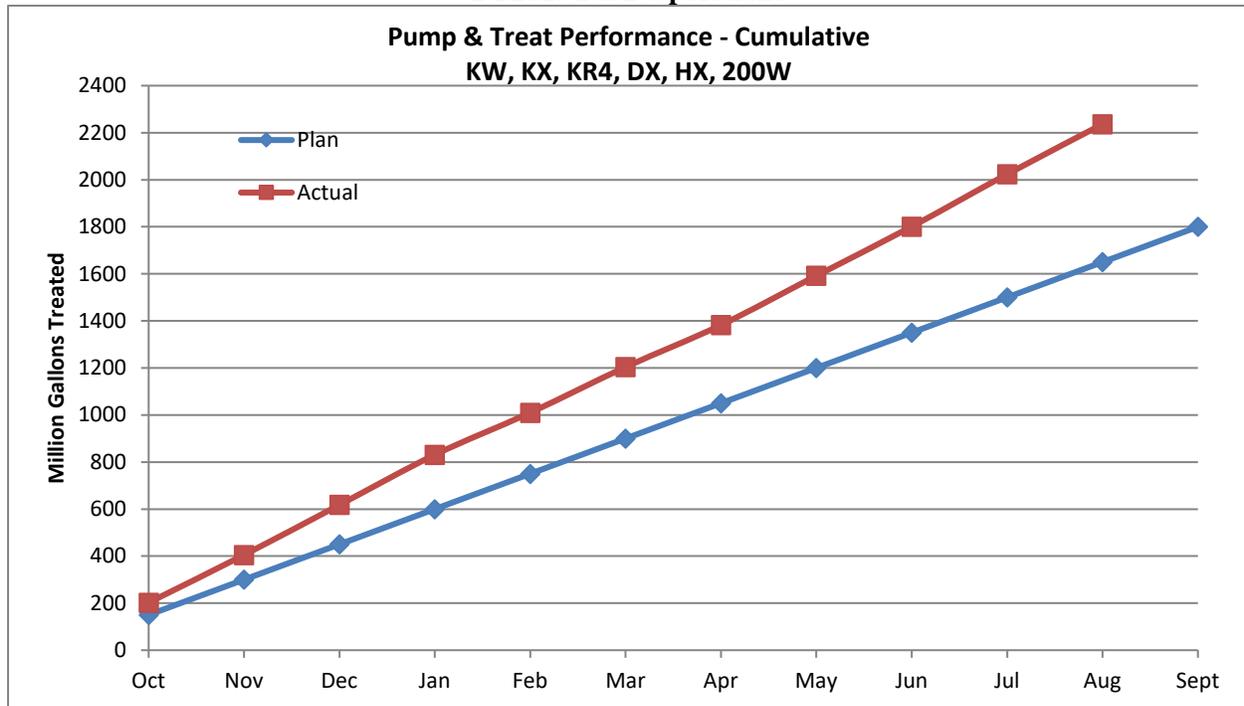
### 200 West P&T

- Completed installation of the 200 West P&T bypass line, which demonstrated stable plant operation at maximum design flow rate of 2,500 gallons per minute (gpm).
- Operated the 200 West P&T at an average of 1,988 gpm in August.
- Received bids for the procurement of an additional air stripper tower for the 200W P&T Facility.

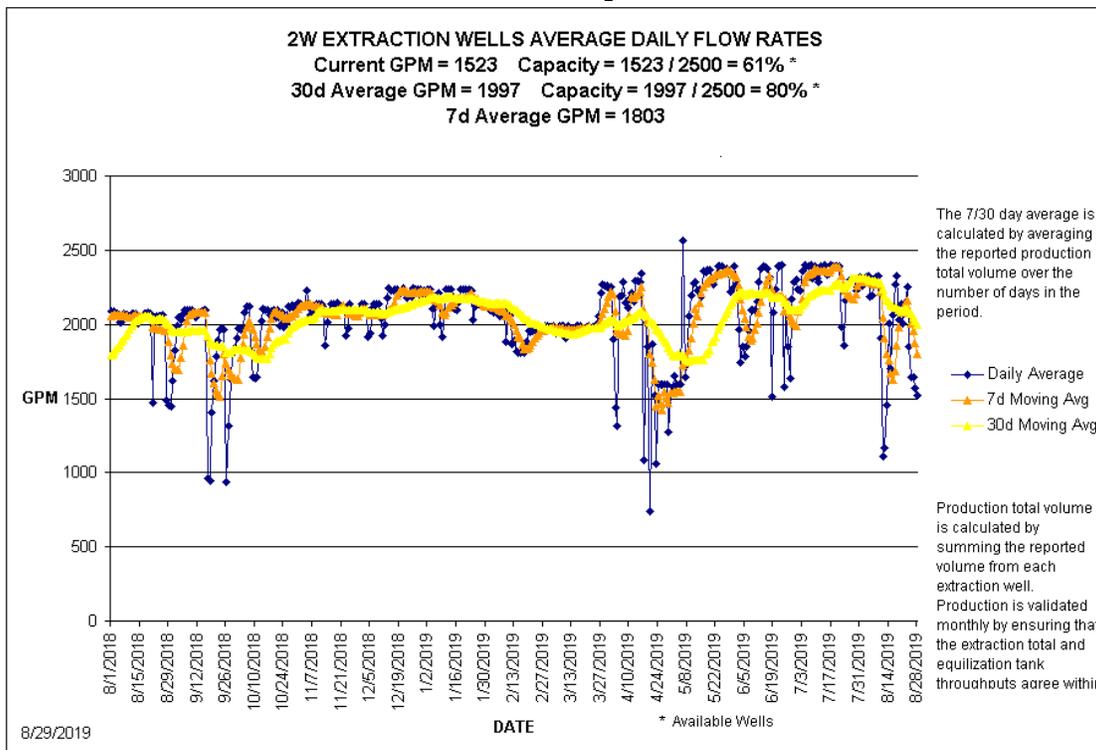
### 100 Area P&Ts

- Operated the DX P&T at 732 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 261 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 287 gpm, below the facility capacity of 330 gpm. Continued operation of the soil infiltration gallery through August 11, 2019.
- Operated the KX P&T at 904 gpm, above the facility capacity of 900 gpm.
- Operated the HX P&T at 595 gpm, below the facility capacity of 900 gpm. Completed construction and operations acceptance testing of new injection wells 699-97-47C and 199-H1-12 (well connections).
- P&T operations exceeded 2.2 billion gallons of contaminated groundwater treated fiscal-year-to-date in August, achieving FY2019 performance measure PM-30-1-19, Treat 2.2 billion gallons of contaminated groundwater.
- Overall, the P&T systems operated above the targets as depicted in the following P&T performance graphs.

### FY2019 P&T Operations



### 200 West P&T Operations



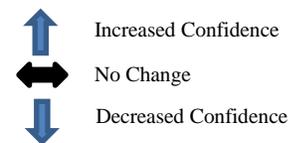
## MAJOR ISSUES

No major issues identified.

## RISK MANAGEMENT STATUS

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

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0030/WBS-030</b>										
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risk SGW-BC5-01: BC5 – Greater Than Expected Comments from RL or Regulators was removed from the spotlight chart. Risk SGW-KR4-01: KR4 - Greater Than Expected Comments from RL or Regulators was added to the realized risk section associated with a future MR draw down.										
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>										
SGW-KR4-01: KR4 - Greater Than Expected Comments from RL or Regulators	Comments from RL or other regulators on the RI/FS submitted for review/approval are atypical, are global in nature, causing both cost and schedule impacts to the project.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$120K, 64 days			<b>Risk Event:</b> EPA review of the 100-KR-4 OU Remedial Investigation (RI) and Feasibility Study (FS) resulted in the removal of the N Plume from K Reactor activities, and be addressed in its current geographical location. This requires rework of the RI/FS effort and report.  <table border="1" style="width: 100%;"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Issue a Baseline Change Request (BCR) to draw down management reserve (MR) for in-scope, unplanned work associated with the realization of risk SGW-KR4-01.</td> <td>9/30/19</td> <td>0</td> </tr> </tbody> </table> <b>Recovery Assessment:</b> The BCR will be issued in fiscal month September for the BCWS associated with in-scope, unplanned work.	Recovery Action(s)	FC Date	%	Issue a Baseline Change Request (BCR) to draw down management reserve (MR) for in-scope, unplanned work associated with the realization of risk SGW-KR4-01.	9/30/19	0
Recovery Action(s)	FC Date	%								
Issue a Baseline Change Request (BCR) to draw down management reserve (MR) for in-scope, unplanned work associated with the realization of risk SGW-KR4-01.	9/30/19	0								
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>										
No critical risk identified in August.										
<b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b>										
No high threat risks identified in August.										
<b>FY2019 Risk Triggers (Risk could be realized in FY2019)</b>										
No FY2019 risk triggers identified in August.										
<b>Unassigned Risks (Pending ownership of identified risks/opportunities)</b>										
No unassigned risks identified in August.										

## PROJECT BASELINE PERFORMANCE

### Current Month (CM)

(\$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	3.6	1.1	11.0	(2.5)	-69.2%	(9.9)	-890.3%

Numbers are rounded to the nearest \$0.1 million.

#### CM Schedule Performance (-\$2.5M/-69.2%)

The primary driver of the current month schedule variance (SV) is the implementation of BCR-030-19-009R0, Mod 707 Implementation – RL-0030 OA, which aligned the FY2019 Performance Measurement Baseline (PMB) schedule and budget with the negotiated FY2019 Plateau Remediation Contract (PRC) total contract cost and revised baseline schedule, documented by Modification 707, Correspondence No. 1902536, dated June 27, 2019. For RL-0030, the implementation of Modification 707 adjusted the planned value of FY2019 activities to align with negotiated contract cost values, based on the sum of actual costs of work performed (ACWP) to date through March and the forecast costs to complete the remaining planned work, which was less than originally planned. Including scope removals, the overall negative adjustment to planned value was implemented adjusting earned value downwards in the current period by less than the planned value generating a negative schedule variance. As FY2019 activities are completed, the SV will return to zero.

Additional contributors to the negative current period SV include:

- Delays in the 200-BP-5 and 200-ZP-1 well drilling campaigns.
  - At 200-BP-5, the campaign was delayed earlier in the year due to the late arrival of equipment to site. The delay was compounded when RL requested more diagnostics than were assumed in the SAP, and in the field, one of the wells required re-drilling when sand was stuck in the well. The campaign is currently on hold, pending the results of geophysical logging tests, additional sampling, video camera surveys, and slug test. Once these diagnostics are completed, the well designs may be approved by Ecology and material purchasing for construction of the wells may commence. The delays have caused completion of the campaign to slip into FY2020.
  - At 200-ZP-1, the drilling subcontractor experienced delays earlier in the year when re-tooling was required to transition from the monitoring well campaign to the injection/extraction campaign, and was further delayed in August when the extraction well casing was stuck, requiring re-drilling. The associated sampling during drilling, sample analysis, and well connection have also been delayed, and completion of the injection well and closeout activities have slipped into FY2020.
- 100-HR-3 Well realignments and 200-ZP-1 hypochlorite injection system construction were performed early. August planned activities were completed in prior periods; the SV is returning to zero.

These negative variances are partially offset by:

- The M-24-00 Well drilling campaign began to recover SV in August after experiencing a late start when the drilling subcontractor submitted an amended drilling schedule with a later start date than planned (for convenience), resulting in the delay of mobilization and drilling. Although drilling is forecast to complete within FY2019, the delay has resulted in closeout activities being deferred into FY2020.

- The 200-UP-1 drilling campaign is recovering SV in August after a slow start due to lack of subcontractor availability, and the work being performed with only one drill rig causing it to take longer than the baseline schedule, which assumed quicker performance using two drill rigs.
- CIE modeling activities began to recover SV in August after experiencing a late start due to a delay in the procurement process early in the year.

### CM Cost Performance (-\$9.9M/-890.3%)

The primary driver of the negative current month cost variance (CV) is the implementation of BCR-030-19-009R0, which aligned the FY2019 PMB budget with the negotiated FY2019 PRC total contract cost. BCR-030-19-009R0 adjusted the planned value (budgeted cost of work scheduled) of FY2019 activities to align with negotiated contract cost values, based on the sum of ACWP to date through March 2019 and the estimate to complete the remaining planned work. Actual costs experienced were lower than budgeted, resulting in a decrease to fiscal year budgeted cost of work performed in the current reporting period, generating a negative cost variance.

The negative CV is partially offset by continued efficiencies at the 200 West P&T where less preventative and corrective maintenance has been required than was planned, due to return on investment in prior year facility upgrades, and 100 Area well realignments where well locations were closer to the facilities than planned, eliminating the need for road crossings and requiring less labor, materials, and subcontracts than were planned.

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

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,626.4	1,619.9	1,570.8	(6.5)	-0.4%	49.1	3.0%	1,633.5	1,583.4	12.6	50.1

Numbers are rounded to the nearest \$0.1 million.

### CTD Schedule Performance (-\$6.5M/-0.4%)

The CTD negative schedule variance is within reporting thresholds.

### CTD Cost Performance (+\$49.1M/+3.0%)

The CTD positive cost variance is within reporting thresholds.

### Variance at Completion (+\$50.1M/+3.1%)

The variance at completion is within reporting thresholds.

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

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

RL-0030 Soil and Groundwater Remediation	FY2019		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	132.9	112.8	20.1
Incremental Scope Change Pending Change Management	0.0	0.1	(0.1)
RL-0030 - Total	132.9	113.0	19.9

Numbers are rounded to the nearest \$0.1 million

### Funds/Variance Analysis

The FY2019 projected funding for project breakdown structure (PBS) RL-0030 is \$132.9 million. The spend forecast value includes cost and fee.

### Critical Path Analysis

Critical path analysis will be provided upon request.

## MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/Comment
<b>Milestones at Risk</b>					
M-015-93C	Initiate Characterization Field Work for 200-SW-2 Operable Unit Landfills	9/30/2018		TBD	In Dispute Resolution
M-015-98	Complete Remedial Investigation of U Plant Related Waste Sites located in 200-WA-1	6/30/2019		TBD	In Dispute Resolution
M-085-70	Submit to Ecology a Remedial Investigation/Feasibility Study Work Package for 200-CB-1	9/30/2019		TBD	In Dispute Resolution

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

None currently identified.

## DOE ACTIONS / DECISIONS\*

Description	CHPRC Delivery Date	Expected RL Due Date
RL Transmit Draft A 200-UP-1 Performance Monitoring Plan (PMP) Revision 1 to Regulators for Review	6/7/2019 (A)	9/30/2019
RL Review Revision 1 Decisional Draft 200-BP-5 Groundwater Monitoring Plan	8/12/2019 (A)	9/30/2019
RL Transmit Draft A Ringold A Data Quality Objectives/SAP for Regulator Review	8/27/2019	9/3/2019
RL Review of 100-NR Biovent Characterization Revised Final Cultural Resource Review	8/30/2019	9/5/2019
RL Transmit Revision 0 200-DV-1 Treatability Test Evaluation Report to Ecology	9/9/2019	9/12/2019
RL Transmit Revision 1 Draft A 200-ZP-1 RD-RAWP to EPA	9/11/2019	9/24/2019
RL Submit Revision 0 100-BC-5 Proposed Plan to Regulators	9/11/2019	9/25/2019
RL Review of 100-NR Biovent Characterization Memorandum of Agreement (MOA)	9/12/2019	9/13/2019
RL Transmit Revision 0 216-A-36B Crib Engineering Evaluation Report to Ecology	9/17/2019	9/30/2019
RL Transmit Revision 0 LLBG WMA-1 Engineering Evaluation Report to Ecology	9/17/2019	9/30/2019
RL Transmit Revision 0 216-A-29 Ditch Groundwater Monitoring Plan to Ecology	9/19/2019	9/28/2019
RL Transmit of 100-NR Biovent Characterization MOA to State Historic Preservation Office/Tribes	9/19/2019	9/20/2019
RL Transmit Draft Revision 0 200-BP-5 Proposed Plan to Regulator for Approval	9/20/2019	9/22/2019

\*This table identifies key DOE actions/decisions only.

# Section E

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

**CH2MHILL**  
Plateau Remediation Company



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

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

Central Plateau Risk Management (CPRM) personnel successfully completed facility demolition and placement of the cover cap at the 242-B/BL site. Crews initiated work to perform the clean closure of 276-BA. At the Reduction and Oxidation (REDOX) Facility, low-hazard mechanical isolations commenced and fixative was applied to the west end of the north sample gallery for contamination control to allow for non-destructive assay (NDA) characterization. The waste crew trailer, bathroom trailer, Container Transfer Area, and haul road were installed at REDOX. CPRM crews made three successful entries into the Plutonium Uranium Reduction Extraction (PUREX) Canyon; the first entries in over 20 years. Personnel eclipsed 12,700 linear feet of steam line asbestos abatement in the 200 West area. Finally, the Radiation Area Remedial Action team completed their final tri-annual surveillances of the Inactive Waste Sites in the 200 West area.

## EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-CPRM-OBJ-P1	Increase Environmental Management System (EMS) awareness	Present or facilitate a discussion of EMS topics to personnel on a minimum of four different occasions in fiscal year (FY) 2019 and recruit personnel (other than environmental) to participate in at least two compliance review/programmatic walk downs.	9/30/2019	100%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
<b>Days Away, Restricted or Transferred</b>	0	1	N/A
<b>Total Recordable Injuries</b>	0	1	N/A
<b>First Aid Cases</b>	3	23	<p>8/5/19 – Employee was entering a truck and struck the right elbow on a t-post, resulting in scrapes on the right elbow. The employee was taken to HPM Corporation (HPMC), received wound care and released to work without restrictions. (25288)</p> <p>8/10/19 – Employee was using bolt cutters to cut rebar during overtime activities on the weekend. Four days later, the employee reported discomfort in both shoulders. Employee was taken to HPMC and released without restrictions. (25305)</p> <p>8/14/19 – While doing maintenance work on the PUREX facility stack spider lift, employee experienced a strain in left shoulder. Employee was taken to HPMC, given over-the-counter medication and released without restrictions. (25307)</p>

	Current Month	Rolling 12 Month	Comment
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0040 Accomplishments

#### CPRM Surveillance and Maintenance

- Performed two PUREX Canyon entries into the Crane Cab Gallery. This is the first time in over 20 years entering the PUREX Canyon.
- Completed PUREX entry to clean-up battery corrosion from a scissor lift in the Plutonium Recovery Room.
- Performed radioactive material area (RMA) reduction efforts at B Plant and 293-A areas, eliminating RMA B-Plant-010.
- Obtained Tank 191 water level at REDOX.
- Performed surveillance entry into 293-A to visually observe conditions of Tank V11-10-1.

#### REDOX Canyon Risk Mitigation

- Completed mercury characterization in REDOX with the exception of the seventh-floor operating gallery.
- Completed a fixative application work package to support characterization efforts in high contamination areas.
- Applied fixative west of the north sample gallery (NSG) to support characterization efforts.
- Completed a work package to allow NDA to begin on lines entering the Plutonium Loadout Hood and process piping lines L16-H4.
- Completed waste profile for process piping line L16-H4.
- Updated employee job task analysis to include mercury for all personnel that could enter 202-S.
- Awarded a contract for the design and fabrication of the temporary ventilation system.
- Completed cleanup of water intrusion in NSG.
- Completed engineering evaluations on newly discovered roof leaks on the annex portions of 202-S.
- Initiated low-hazard mechanical isolations to support cold and dark.
- Completed new four-wide trailer installation, bathroom trailer, and haul/access road at REDOX.
- Measured recommended heavy equipment stand-off boundaries for 291-S as identified in recent structural integrity analysis. Determined that existing perimeter fencing adequately achieves recommended boundaries.

#### 276-BA Closure

- Initiated planning for the clean closure of 276-BA.
- Completed ground scans on corner points of the 276-BA slab.

#### PUREX

- The six-wide modular trailer being installed to house personnel to support PUREX risk reduction efforts was delivered to the site north of PUREX. The shower trailer is scheduled to be delivered the last week of August.

### Steam Line Removal

- Completed asbestos insulation abatement of 200 West steam line sections seven and eight.
- Completed final processing and loadout of debris for 200 West steam line sections six and eight.
- Completed mobilization for the removal of the steam line at the 200 East Area Integrated Disposal Facility (IDF) site.
- Completed initial asbestos insulation abatement for the 200 East Area IDF steam line expansion loop.
- Initiated processing waste concrete from 200 East area IDF steam line expansion loop stanchion removal.
- Initiated asbestos insulation abatement for the west section of the 200 East area IDF steam line.

## MAJOR ISSUES

### Issue

Upon initial entry into the seventh floor of the REDOX silo, vials of mercury were found on a maintenance cart. Within that same time period, monitoring readings above the worker protection “step back” value for mercury (based on the personal protection equipment [PPE] in use) was observed at the floor drain of the seventh floor.

### Corrective Action

Develop a detailed monitoring plan, including adjustment of the PPE and the use of personal sampling. In addition, develop a plan to remove the vials for future disposition as well as isolate the floor drain to address the mercury concerns at that location, and perform mercury sampling throughout REDOX. Based on both direct reading and time-weighted average mercury monitoring on the seventh floor sample gallery, a mercury remediation strategy will need to be developed.

### Status

Completed corporate reach back to Oak Ridge, Tennessee, in regards to mercury remedial expertise. Seventh floor sample gallery is not in near term scope, and remediation has been deferred until a later date. Issue considered closed.

### Issue

On January 11, 2018, the state of Washington, Department of Ecology (Ecology) Nuclear Waste Program performed a Dangerous Waste Compliance Inspection at B Plant. During review of the “2017 B Plant Complex Annual Surveillance Issue List,” Ecology noted in the B Plant 221-B “Issue” column, “[w]hite residue on the floor (not new)” and “[e]xpansion joint crack, white residue on floor.” As a result of these observations, Ecology requested designation results of the white residue on the floor of the Canyon Building, 221-B pipe, and operating gallery be submitted within 90 days of receipt of the compliance report.

### Corrective Action

U.S. Department of Energy, Richland Operations Office (RL) and CH2M HILL Plateau Remediation Company (CHPRC), with legal representation, have met to establish a path forward as follows:

1. Perform a records search to determine when the white powder was first identified.
2. During upcoming entries as part of the annual surveillance, obtain and evaluate data (photos and description of surroundings) to determine if the evidence is sufficient to support designation based on process knowledge.
3. Use actual cost information associated with sampling and analysis of the white powder at PUREX to develop a cost estimate for sampling and analysis of the white powder at B Plant.

4. Revise the PUREX sample analysis plan to support sampling and analysis of the B Plant white powder in the event that it is determined as part of item number two that process knowledge is not sufficient to support designation.
5. If sampling is required to support designation, determine if designation can be accomplished in the required 90-day period, and notify RL if an extension is needed.

**Status**

Continued efforts on environmental documentation are currently focused on dispositioning public comments on the draft Engineering Evaluation/Cost Analysis (EE/CA) document. Additionally, RL has notified the Washington State Department of Ecology (WDOE) that white powders will be cleaned up within 45 days of approving the action memorandum rather than tying to a fiscal year.

**Issue**

On September 25, 2018, an entry into the REDOX canyon was performed for the first time since 1997. During the entry, significant combustible loading (liquid and solid) was discovered throughout the canyon.

**Corrective Action**

Fire Protection Engineering will evaluate as-found condition against National Fire Protection Association (NFPA) requirements for combustible material loading. Fire Protection Engineering determined the hazardous combustible materials required packaging and removal from the REDOX Canyon in order to comply with current NFPA standards.

**Status**

Entries into the REDOX Canyon have been performed, and more hazardous combustible material has been discovered. Waste loadout continues and preparation of the work package for large items requiring size reduction is nearing completion.

**Issue**

Over the past six months, the rate of liquid accumulation in the PUREX deep bed filter condensate tank (V11-10-1) has exceeded historical trends. Significant liquid accumulation in this tank indicates that there is water intrusion through the deep bed filter structure. Water intrusion to the deep bed filter structure poses at least three risks: radiological contamination spread, wetting of filter media, and structure erosion.

**Corrective Action**

Structural integrity analysis is being performed as part of determining remediation path alternatives to water intrusion.

**Status**

A draft structural integrity analysis indicates that a 24-foot heavy equipment standoff is required that will complicate the effort to seal the filter housing. The project continues to track the water level in a catch tank; current water level tracks are consistent with rainfall. Physical surveillance of the entry was performed in August to visually identify conditions of tank level. The determination was made that tank will be pumped in September to mitigate current water level.

## RISK MANAGEMENT STATUS

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

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

- Increased Confidence
- No Change
- Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0040/WBS-040</b>																
<b>Explanation of major changes to the project monthly stoplight chart:</b> Risk STM-004, <i>Unexpected Radiological Contamination Discovered</i> , was added as a realized risk.																
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)																
REDOX-01: Resource Availability	Higher CHPRC priority work results in reallocation of resources. Improving job markets result in competition for key resources. In addition, higher-than-anticipated attrition impacts project cost.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$90K, 48 days	<span style="color: yellow; font-size: 20px;">●</span>	<span style="color: blue; font-size: 20px;">↑</span>	<b>Risk Event:</b> Other Hanford contractors (OHC) and higher CHPRC priority work has impacted the resource availability for REDOX. OHCs impacted work through the labor asset management program taking skilled and trained decontamination and decommissioning (D&D) workers.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Identify and hire temporary employees (D&amp;D, asbestos workers, Radiological Control Technicians) early in the FY.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Meet with other CHPRC projects in attempts to spread resources appropriately between projects.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct ongoing full time equivalent analyses to ensure staffing is adequate.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Risk Action Assessment:</b> No major changes in August. D&D workers were hired in late January and completed the required training at the HAMMER Federal Training Center in Richland. It has been determined that, through ongoing mitigation activities and the hiring of new employees, this risk is no longer being realized and does not pose a substantial threat to the project. As such, it will be removed from the stoplight chart before September reporting and monitored internally throughout the remainder of its lifecycle.	Risk Recovery Action(s)	FC Date	%	Identify and hire temporary employees (D&D, asbestos workers, Radiological Control Technicians) early in the FY.	Complete	100	Meet with other CHPRC projects in attempts to spread resources appropriately between projects.	Ongoing	N/A	Conduct ongoing full time equivalent analyses to ensure staffing is adequate.	Ongoing	N/A
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Meet with other CHPRC projects in attempts to spread resources appropriately between projects.	Ongoing	N/A														
Conduct ongoing full time equivalent analyses to ensure staffing is adequate.	Ongoing	N/A														
REDOX-06: Impacted by OHC (Other Hanford Contractors) or Other CHPRC Projects	Delays by OHCs or other CHPRC projects impacts the schedule and technical approach due to inconsistencies with CHPRC execution, resulting in recovery actions and causing unplanned, in-scope work and impacting the schedule.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$100K, 24 days	<span style="color: red; font-size: 20px;">●</span>	<span style="color: blue; font-size: 20px;">↑</span>	<b>Risk Event:</b> Impacts from OHC would impact the ability for work to progress at REDOX due to conflicts with close neighbors (222-S Lab).  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communication plan and outreach efforts will be developed and executed throughout the project.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Establish north side road parking lot and trailer access to avoid interferences with Mission Support Alliance and Washington River Protection Solutions work to the south.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <b>Risk Action Assessment:</b> Progress in August included the installation of the waste crew trailer, bathroom trailer, Container Transfer Area, and a haul road were installed at REDOX. This risk is no longer being realized because the north side road parking lot and trailer access have been established, and mitigation actions, including communication and outreach, continue. This risk will be removed from the stoplight chart prior to September reporting and monitored internally throughout the remainder of its lifecycle.	Risk Recovery Action(s)	FC Date	%	Communication plan and outreach efforts will be developed and executed throughout the project.	Ongoing	N/A	Establish north side road parking lot and trailer access to avoid interferences with Mission Support Alliance and Washington River Protection Solutions work to the south.	Complete	100			
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Communication plan and outreach efforts will be developed and executed throughout the project.	Ongoing	N/A														
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REDOX-07: Building Accessibility due to Water Intrusion	Extensive leaks are experienced in the galleries due to the current state of the annex areas and silo roof, resulting in schedule delays to the project.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$0, 32 days	<span style="color: red; font-size: 20px;">●</span>	<span style="color: blue; font-size: 20px;">↔</span>	<b>Risk Event:</b> Leaking roofs have allowed water to accumulate in limited access areas of the facility. Due to electrical concerns, personnel at REDOX have not been able to access the west end of the North Sample Gallery.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Spray roof with engineered roofing sealant prior to the rainy season in an effort to minimize leaks.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Patch existing roof vulnerabilities.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Evaluate path forward regarding new leak.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Risk Action Assessment:</b> Progress in August included completion of engineering evaluations of the newly discovered roof leaks on the annex portions of 202-S. Work plans are underway to allow appropriate personnel to enter the North Sample Gallery to collect samples of the accumulated water. Work packages are being modified and hazard identifications are being worked to address the water issue. The project continues to repair minor roof defects. A new leak was discovered and the project is currently evaluating a path forward.	Risk Recovery Action(s)	FC Date	%	Spray roof with engineered roofing sealant prior to the rainy season in an effort to minimize leaks.	Complete	100	Patch existing roof vulnerabilities.	Complete	100	Evaluate path forward regarding new leak.	Ongoing	N/A
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
<b>RL-0040/WBS-040</b>																						
REDOX-11: Unexpected Discovery - Hazmat	<p>Unexpected or late discovery of hazardous material is discovered during deactivation and decommissioning of 202-S REDOX.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><b>Worst Case Impacts:</b> \$11K, 48 days</p>	●	↔	<p><b>Risk Event:</b> During deactivation and decommissioning activities, there is an unexpected discovery of hazardous material.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform investigative entries into silo, North Sample Gallery, and canyon.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Characterization in progress.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Innovative methods (i.e., robots) to further understand conditions.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> No major changes in <b>August</b>. Investigative entries and characterizations are furthering the understanding of the current conditions of REDOX.</p>	Risk Recovery Action(s)	FC Date	%	Perform investigative entries into silo, North Sample Gallery, and canyon.	Ongoing	N/A	Characterization in progress.	Ongoing	N/A	Innovative methods (i.e., robots) to further understand conditions.	Ongoing	N/A						
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Characterization in progress.	Ongoing	N/A																				
Innovative methods (i.e., robots) to further understand conditions.	Ongoing	N/A																				
REDOX-16: Facility Integrity	<p>Problems with aging building systems/components such as roofing and overall structure result in inoperability or require unscheduled maintenance/outages impacting planned D&amp;D activities, resulting in schedule delays and cost impacts.</p> <p><b>Risk Handling Strategy:</b> Transfer</p> <p><b>Probability:</b> Medium (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$0, 0 day</p>	●	↔	<p><b>Risk Event:</b> Leaking roof results in unsafe working conditions for personnel.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform cold and dark activities to shut off building power.</td> <td>Sept 2019</td> <td>35</td> </tr> <tr> <td>Repair minor roof defects.</td> <td>Sept 2019</td> <td>50</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> No major changes in <b>August</b>. Integrity failures could lead to water issues within radiological contaminated areas, causing a hazard to personnel. Going cold and dark will minimize the risk for electrical shock due to water. <b>The project continues to perform cold and dark activities to shut off building power.</b> Minor repairs to leaking parts of the roof can significantly reduce water intrusion, <b>and the project continues to repair minor roof defects.</b></p>	Risk Recovery Action(s)	FC Date	%	Perform cold and dark activities to shut off building power.	Sept 2019	35	Repair minor roof defects.	Sept 2019	50									
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STM-004: Unexpected Radiological Contamination Discovered	<p>Unexpected discovery of radiological contamination outside of posted controlled radiological areas from legacy or biovector spreads result in necessary recover actions.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Medium (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$150K, 16 day</p>	●	↓	<p><b>Risk Event:</b> Contamination was discovered on a leased shear used on an excavator after use to remove of a steam line stanchion in 200 West area near an underground radiological material area (URMA).</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Purchase shear to keep as regulated equipment</td> <td>9/30/19</td> <td>10</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> The project received the estimate to purchase the contaminated shear.</p>	Risk Recovery Action(s)	FC Date	%	Purchase shear to keep as regulated equipment	9/30/19	10												
Risk Recovery Action(s)	FC Date	%																				
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<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>																						
REDOX-05: Collapse of Sand Filter	<p>Due to the close proximity of equipment in operation (cranes, forklifts used for waste load out and steam lines and steam line stanchion removal activities) and building age and structural integrity, a collapse of a REDOX ventilation system sand filter is experienced, resulting in cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Very Low (&lt;10%)</p> <p><b>Worst Case Impacts:</b> \$260K, 48 days</p>	●	↔	<p><b>Risk Triggers:</b> Due to the close proximity of equipment in operation (cranes, forklifts used for waste loadout, and steam line and steam line stanchion removal activities) and building age and structural integrity, a collapse of a REDOX ventilation system sand filter is experienced.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish sand filter access boundary.</td> <td>Sept 2019</td> <td>50</td> </tr> <tr> <td>Use bracing when digging.</td> <td>Sept 2019</td> <td>5</td> </tr> <tr> <td>Implement communication plan between OHC and other CHPRC projects.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct structural integrity and equipment stand-off evaluations.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Follow the critical lift process, and hoisting and rigging manual.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> The project is working to ensure that the steam line removal efforts consider the location of the REDOX ventilation system sand filters while planning. There is continued project communication with the 222-S Labs about future work scope at REDOX. Engineering has also been involved in structural evaluations, which will establish an equipment stand-off distance. Additionally, there are ongoing discussions for initial planning of the critical lift process.</p>	Mitigation Action(s)	FC Date	%	Establish sand filter access boundary.	Sept 2019	50	Use bracing when digging.	Sept 2019	5	Implement communication plan between OHC and other CHPRC projects.	Ongoing	N/A	Conduct structural integrity and equipment stand-off evaluations.	Ongoing	N/A	Follow the critical lift process, and hoisting and rigging manual.	Ongoing	N/A
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<b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b>																						
No high-risk threat value risks in <b>August</b> .																						
<b>FY2019 Risk Triggers (Risk could be realized in FY2019)</b>																						
No FY2019 risk triggers in <b>August</b> .																						
<b>Unassigned Risks (Pending ownership of identified risks/opportunities)</b>																						
No unassigned risks identified in <b>August</b> .																						

## PROJECT BASELINE PERFORMANCE

### Current Month (CM)

(\$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	7.8	11.4	5.7	3.5	45.0%	5.7	50.0%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance: (+\$3.5M/+45.0%)

The current month favorable schedule variance is due to the implementation of BCR-040-19-005R0, Mod 707 Implementation - RL-0040 OA, that aligned the FY2019 Performance Measurement Baseline (PMB) budget with the negotiated FY2019 Plateau Remediation Contract (PRC) total contract cost documented by Modification 707, Correspondence No. 1902536, dated June 27, 2019. The implementation of Modification 707 adjusted the planned value of FY2019 activities to align with negotiated contract cost values, based on the sum of actual costs of work performed to date through March and the forecast costs to complete the remaining planned work, which was greater than originally planned. The overall positive adjustment to planned value was implemented adjusting earned value upwards in the current period by more than the planned value generating a positive schedule variance. The positive schedule variance is also associated with performance of historical activities for combustible removal at REDOX. Performance was delayed due to mercury contamination recovery efforts and all budgeted cost of work scheduled (BCWS) for combustible waste removal was planned in prior fiscal months. Another contributor to the favorable schedule variance is the budgeted cost of work performed (BCWP) claimed for stand-down time for grouting PUREX Tunnel 2. A BCR was implemented recovering time lost due to weather impacts in FY2019. All contract negotiations and work on Tunnel 2 are complete, so BCWP was claimed against historical BCWS.

#### CM Cost Performance: (+\$5.7M/+50.0%)

The favorable current month cost variance is due to the implementation of BCR-040-19-005R0, Mod 707 Implementation - RL-0040 OU, that aligned the FY2019 PMB budget with the negotiated FY2019 PRC total contract cost documented by Modification 707, Correspondence No. 1902536, dated June 27, 2019. The negotiated FY2019 total contract cost was based on actual cost through March 2019 plus the estimate to complete for the remainder of the fiscal year. Actual costs experienced were greater than budgeted, resulting in an increase to fiscal year BCWP in the current reporting period.

### Contract-To-Date (CTD) (\$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	555.4	552.0	529.8	(3.3)	-0.6%	22.2	4.0%	563.1	544.1	14.3	19.0

Numbers are rounded to the nearest \$0.1 million

**CTD Schedule Performance: (-\$3.3M/-0.6%)**

The CTD schedule variance is within reporting thresholds.

**CTD Cost Performance: (+\$22.2M/+4.0%)**

The CTD cost variance is within reporting thresholds.

**Variance at Completion (+\$19.0M/+3.4%)**

The VAC is within reporting thresholds.

**Contract performance report formats are provided in Appendix A.**

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

WBS 040/RL-0040 Nuclear Facility D&D	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0040 Spending Forecast	81.8	73.8	7.9
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0040 – Total	81.8	73.8	7.9

Numbers are rounded to the nearest \$0.1 million.

**Funds/Variance Analysis**

FY2019 funding for project breakdown structure (PBS) RL-0040 is \$81.8 million. FY2019 funding aligns with the RL integrated priority list.

**Critical Path Analysis**

Critical path analysis can be provided upon request.

### MILESTONE STATUS

The following table is a one-year look ahead of PBS RL-0040 Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) enforceable milestones, non-enforceable target due dates, and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-256	Complete Removal of All Waste Sites for FY2019 as Updated/Modified in M-16-17-01.	9/30/2019		TBD	In dispute resolution. In negotiation with RL to adjust schedule to FY2020.

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

None currently identified.

### DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
Regulator Review 224-B (B Plant) Removal Action Work Plan (2017-34)	8/16/2017 (A)	10/31/2019
202-A PUREX (2016-15) Draft B Engineering Evaluation/Cost Analysis Public Review Comments	12/11/2017 (A)	9/30/2019

# Section F

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

**CH2MHILL**  
Plateau Remediation Company



R. M. Geimer  
Vice President for  
K Basin Operations

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

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

M. A. Wright  
Vice President for  
Project Technical Services

## PROJECT SUMMARY

### **K Basin Operations (KBO):**

In August, the 100-K Closure Project awarded the contract for the fabrication of the vertical pipe casing (VPC) system debris washing station with equipment delivery scheduled for December 16, 2019. The Deactivation and Demolition team completed demolition and removal of the 166-AKE structure and started removal of oily water from the 166-KE fuel storage basin in preparation for 166-KE demolition. The Interim Safe Storage (ISS) team began development of the Statement of Work for the construction of the K East Reactor Safe Shutdown Enclosure (SSE).

### **River Risk Management Project (RRMP):**

324 Facility preparations completed this period included installation of the D Cell snorkel and filter, the installation of the final remote excavator arm (REA) through support assembly (TSA) in the B Cell wall allowing the REA to be positioned in any of the four corners of B Cell. Construction of a north waste storage yard was completed. In support of structural modifications, the crews demolished the stem wall of the former maintenance shop to prepare for the injection of soil stabilization grout adjacent to B Cell. The project made its third shipment of B Cell waste bins to the Environmental Restoration Disposal Facility (ERDF) on August 18, 2019. The fourth and fifth shipment of B Cell waste bins were loaded and awaiting shipment to ERDF. A floor scraping implement was deployed in B Cell and began cleaning the floor to allow future floor saw deployment. At the mockup, a demonstration of workers safely and compliantly deploying the saw umbilical through a B Cell split plug was successfully performed.

## EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-RRMP- OBJ1-P1	Increase (EMS) awareness	Present or facilitate a discussion of EMS topics to 324 Building disposition project personnel on a minimum of five different occasions in fiscal year (FY) 2019 and recruit personnel from the 324 Building disposition project organizations (other than environmental) to participate in at least five compliance review/programmatic walk downs.	9/30/2019	100%
19-EMS-KBOPR- OBJ1-P1	Improve compliance/pollution and spill prevention	Monitor and evaluate universal waste and recycling accumulation areas for compliance with CHPRC procedures. Survey spill prevention measures.	9/30/2019	90%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	1	7	8/7/2019 - Worker experienced heat stress symptoms. The employee was reported to HPM Corporation and was released without restriction. (25295)
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### 100K Basin Operations

- 100K Closure Project:
  - o K West Basin Deactivation
    - Awarded the fabrication contract for the VPC system debris washing station. Delivery of fabricated components is scheduled for December 16, 2019.
    - Engineering completed the assessment/itemization of the pole tools and ancillary equipment necessary to support VPC debris washing and unloading evolutions.
  - o Ancillary Facility Demolition
    - Completed demolition, removal, and disposal of the 166-AKE structure.
    - Completed the work package for the 166KE fuel storage basin oily water removal, and held a vendor kick-off meeting prior to commencing work.
  - o 105-K East Reactor ISS
    - Removed select transite panels and began framing to create SSE observation windows in the outer walls of the building for use after the SSE is constructed.
    - Started removal of lead bricks, unneeded lead shielding, fluorescent light bulbs, and light ballasts along the tour path on multiple floors.

### RRMP, 324 Building Disposition Project

- Equipment Procurement and Fabrication:
  - o The design and fabrication of the following systems continued
    - Shielded cradle supporting 324 waste loadout.
    - Waste box shielding, waste bins, and waste containers.
    - B Cell 10T crane.
    - Universal cutting tool.
    - Miscellaneous items for the REAs.
    - Cell dams.
    - Modified shielded lids and frames.
    - Self-leveling lifting device.
- Facility Preparations:
  - o Completed repairs on trucklock door.
  - o Completed installation/set-up of C Gallery step-off pad (SOP) in support of room 18 egress.

- o Isolated electrical interference in Room 18.
- o Reconfigured Room 123 SOP.
- o Continued A Cell penetration sealing.
- o Installed D Cell snorkel and filter.
- o Conducted full-up operations drill.
- o Re-measured REA TSA core hole locations to confirm wall scabbling adequacy.
- o Installed northeast REA TSA (awaiting grouting).
- o Completed leveling of site in support of north storage yard construction.
- o Completed laying top course and placing ecology blocks and fencing for north storage yard construction.
- Structural Modifications:
  - o Removed and size reduced diverter rack.
  - o Continued backfill of 324 Building geoprobe north excavation location.
  - o Continued Pit 6 demobilization.
  - o Continued excavation of pit for north shoring installation
  - o Demolished hay shed north of the 324 Building and completed loadout of demolition waste in support of north shoring excavation.
  - o Demolished stem wall on former maintenance shop in support of north shoring excavation.
  - o Excavated radioactive liquid waste stream line in support of removal at north shoring excavation site.
  - o Modified grating in B Gallery to support larger diameter air conditioning hose to cool Room 18.
  - o Removed steam pipe interference from Room 18.
  - o Re-tooled Room 18 equipment with hammer drill.
  - o Continued pilot hole drilling in Room 18.
- Cell Cleanout:
  - o Continued B Cell debris loadout.
  - o Shipped roll-on/roll-off can containing operational waste to ERDF for disposal.
  - o Shipped third 955 container of B Cell waste from Container Transfer Area to ERDF.
  - o Prepared fourth and fifth 955 container of B Cell waste bins and awaiting shipment to ERDF.
  - o Placed floor scraping implement into airlock for B Cell floor cleaning.
- Mockup:
  - o Received the transfer mechanism following repairs at the manufacturer.
  - o Completed testing of new Brokk cables.
  - o Started practicing floor saw umbilical split plug pass-thru training.
  - o Conducted a performance demonstration on floor saw umbilical split plug pass-through work evolution for operations.
  - o Conducted a floor saw installation demonstration.
  - o Continued operator proficiency training.
- Tours:
  - o Hosted a tour for the U.S. Department of Energy (DOE)-Headquarters director of the office of science and chief of staff.
  - o Hosted a tour for a representative from the House Armed Services Committee and congressional liaison.
  - o Hosted a tour for representatives from the Defense Nuclear Facilities Safety Board.
  - o Hosted a tour for the DOE undersecretary and staffers.

- o Hosted a tour for the DOE Principal deputy assistant secretary for congressional and intergovernmental affairs, Washington state congressional staffers, and representatives from K&L Gates and the Tri-City Development Council.

### **Project Technical Support**

- Training and Procedures teamed with facility subject matter experts to review, approve, and implement a revision to the 300 Area Nuclear Chemical Operator Surveillance and Operations Support Qualification Training Manual. The new materials cover new waste storage areas, updates to plant configuration, updates to processes, and provide a more comprehensive overview of the 324 Building work site.
- Readiness and Preparedness conducted a full-up operational drill inside the 324 Building in preparation for readiness assessment activities. The drill was a follow-up drill from those previously ran in the mockup facility to provide actual facility response experience to the 324 Building operations personnel. These operational drills have been successful in helping the 324 Building operational teams improve their skills and confidence in reacting to emergent conditions and interfacing with emergency responders.

## **MAJOR ISSUES**

### **Issue**

The 100K Closure Project is ready to award the VPC fabrication contract as authorized in the revised FY2019 Plan. RL has an informal hold on the contract.

### **Corrective Action**

A briefing was delivered to the RL assistant manager for River and Plateau, director for Project and Facilities Division (PFD) in July regarding the efficacy of using the VPC system through execution of the K West Basin deactivation and demolition strategy as presented in the FY2020 Performance Measurement Baseline (PMB) annual update.

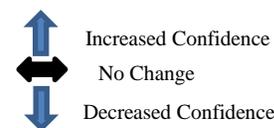
### **Status**

The RL Project and Facilities Division director approved the fabrication of the debris washing station for the VPC system. The project is still awaiting authorization to proceed with fabrication of the VPCs.

## 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-0041/WBS-041</b>																									
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risks, RCC-300-296-08: “300-296 Failure of Cell Shield Door” and RCC-300-296-7: “300-296 Failure of REC Cranes (B-Cell, C-Cell, A-Cell, A-D & Airlock, and/or CHA Cranes) were added to the <i>Realized Risks</i> section. Risk RCC-300-296-35: “300-296 Loss of Mockup During REC Cell Equipment Install, Startup or Operations” was moved from the <i>High Threat Risk Value</i> section to the <i>FY19 Risk Trigger</i> section.																									
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>																									
RCC-300-296-31: “300-296 Elevated Contamination Encountered While Performing Structural Modifications”	To validate the assumptions supporting the 324 Building structural modification design, pilot holes will be drilled into the soil beneath B Cell to collect necessary data. If data results in contamination levels that are much higher or deeper than assumed or the material encountered is different than anticipated, an alternative approach will require the development and/or fabrication of additional equipment for contamination mitigation and control. These impacts will limit progress on alternate fieldwork activities to recover.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$3,318K, 256 days	<span style="color: red;">●</span>	↑	<p><b>Risk Event:</b> Unexpected contamination was found within room 18 during pilot hole drilling activities.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>As low as reasonably achievable (ALARA) review (IPAR) evaluations</td> <td>5/13/2019</td> <td>100</td> </tr> <tr> <td>Incorporate increased personal contamination monitors (PCMs) usage and surveys to personnel exiting controlled areas.</td> <td>7/10/2019</td> <td>100</td> </tr> <tr> <td>Review Radiological Control Requirements and Monitoring Process prior to resuming pilot hole work scope within room 18.</td> <td>8/8/2019</td> <td>100</td> </tr> <tr> <td>Resume pilot hole work scope in room 18.</td> <td>8/12/2019</td> <td>100</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> ALARA review evaluations for process improvements were completed in May; however, fieldwork was placed on hold as radiological controls and thorough surveys were being enhanced to verify personnel exiting controlled areas. <b>In the current period,</b> corresponding actions related to addressing radiological control measures for pilot hole work scope was <b>completed and fieldwork resumed.</b></p>	Recovery Action(s)	FC Date	%	As low as reasonably achievable (ALARA) review (IPAR) evaluations	5/13/2019	100	Incorporate increased personal contamination monitors (PCMs) usage and surveys to personnel exiting controlled areas.	7/10/2019	100	Review Radiological Control Requirements and Monitoring Process prior to resuming pilot hole work scope within room 18.	8/8/2019	100	Resume pilot hole work scope in room 18.	8/12/2019	100						
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RCC-300-296-30: “300-296 Design Changes Result in Increased Subcontractor Change Order(s)/ Claims”	Due to the uncertainty and evolution of developments, design changes may be required upon completion of all design phases.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Very likely (>90%) <b>Worst Case Impacts:</b> \$3,318K, 136 days	<span style="color: red;">●</span>	↔	<p><b>Risk Event:</b> The verification of the final structural modification design has been delayed due to realization of other risks (see Recovery Assessment below) while performing soil verification and pilot holing, requiring additional design effort from the design subcontractor.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contractor prepare and submit structure modification design - 30 percent to 60 percent (VE2810)</td> <td>8/15/2018</td> <td>100</td> </tr> <tr> <td>Perform micropile demonstration and verification to support structural modification design (VS1220A)</td> <td>1/24/2019</td> <td>100</td> </tr> <tr> <td>Structural modifications design micro-pile comment resolution (VS1220C)</td> <td>5/13/2019</td> <td>100</td> </tr> <tr> <td>Perform pilot holing for structural mods (VS5010)</td> <td>9/3/2019</td> <td>75</td> </tr> <tr> <td>Perform Pit 6 soil verification testing/geotech (VS1220B)</td> <td>8/21/2019</td> <td>100</td> </tr> <tr> <td>Contractor prepare and submit structural modification design (VN1220)</td> <td>9/23/2019</td> <td>87</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> Delays for completing the final structural design have been incurred due to the realization of risks RCC-300-296-31: “300-296 Elevated Contamination Encountered While Performing Structural Modifications” and recently, RCC-300-296-01: “Latent Conditions Impact Facility Modifications.” The realization of these risks halted fieldwork activities supporting the completion of the final design. In the current period, <b>corresponding actions related to addressing radiological control measures for pilot hole work scope was completed and fieldwork resumed</b> to support completion of the final design.</p>	Recovery Action(s)	FC Date	%	Contractor prepare and submit structure modification design - 30 percent to 60 percent (VE2810)	8/15/2018	100	Perform micropile demonstration and verification to support structural modification design (VS1220A)	1/24/2019	100	Structural modifications design micro-pile comment resolution (VS1220C)	5/13/2019	100	Perform pilot holing for structural mods (VS5010)	9/3/2019	75	Perform Pit 6 soil verification testing/geotech (VS1220B)	8/21/2019	100	Contractor prepare and submit structural modification design (VN1220)	9/23/2019	87
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
<b>RL-0041/WBS-041</b>																			
RCC-300-296-08: "300-296 Failure of Cell Shield Door"	Failure of shield door(s) or crane shield door(s) shuts down cleanout of REC cells/airlock, penetration sealing in airlock, equipment installation, and other activities for remote soil removal. It may not be possible to repair a shield door due to radiation dose rate and location, resulting in cost and schedule delays.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$460K, 96 days			<p><b>Risk Trigger Metric:</b> In August, during operations of cleanout activities, the A-Cell Crane Door latch mechanism failed, resulting in risk being realized.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Preventative maintenance activities are being conducted</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Perform A-Cell Shield Door Survey and Repairs</td> <td>9/6/2019</td> <td>60</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> Following troubleshooting, repairs on the A-Cell Shield door were initiated and expected to be completed in the upcoming period. To assure that REC shield doors maintain operability, engineering evaluations were conducted, resulting in the implementation of monthly PMs and the procurement of spare parts.</p>	Mitigation Action(s)	FC Date	%	Preventative maintenance activities are being conducted	Ongoing	N/A	Perform A-Cell Shield Door Survey and Repairs	9/6/2019	60						
Mitigation Action(s)	FC Date	%																	
Preventative maintenance activities are being conducted	Ongoing	N/A																	
Perform A-Cell Shield Door Survey and Repairs	9/6/2019	60																	
RCC-300-296-07: "300-296 Failure of a REC Cranes (B-Cell, A-Cell, A-D & Airlock, and/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> \$1,561K, 208 days			<p><b>Risk Trigger Metric:</b> In August, the Radiochemical Engineering Cells (REC) A-D Crane failed during operations.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Determine B Cell replacement crane options</td> <td>3/19/2019</td> <td>100</td> </tr> <tr> <td>Award contract – B-Cell 10T crane – 324</td> <td>6/20/2019</td> <td>100</td> </tr> <tr> <td>Perform A-D Crane Survey/Investigation</td> <td>9/11/2019</td> <td>5</td> </tr> <tr> <td>Procure A-D Crane Parts and Repair Crane</td> <td>9/30/2019</td> <td>-</td> </tr> </tbody> </table>	Mitigation Action(s)	FC Date	%	Determine B Cell replacement crane options	3/19/2019	100	Award contract – B-Cell 10T crane – 324	6/20/2019	100	Perform A-D Crane Survey/Investigation	9/11/2019	5	Procure A-D Crane Parts and Repair Crane	9/30/2019	-
Mitigation Action(s)	FC Date	%																	
Determine B Cell replacement crane options	3/19/2019	100																	
Award contract – B-Cell 10T crane – 324	6/20/2019	100																	
Perform A-D Crane Survey/Investigation	9/11/2019	5																	
Procure A-D Crane Parts and Repair Crane	9/30/2019	-																	
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
No critical risks identified in August.																			
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																			
RCC-300-296-15: "300-296 Cell Sealing, Interference Removal and/or Core Drilling Takes Longer Than Planned"	Unexpected field conditions encountered during interference removal, sealing of cell penetrations, and/or core drilling work scope. The unexpected field conditions subsequently cause in-scope unplanned work and result in schedule impacts to the project.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$145.8K, 90 days			<p><b>Risk Trigger Metric:</b> The project experiences unexpected field conditions outside their control that make cell sealing, interference removal, and core drilling more difficult than planned.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform core drilling and shield plug installation (VN1200)</td> <td>3/28/2019</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in August. A majority of core drilling interferences have been identified as the project progresses with drilling necessary at the 324 Building in advance of installing soil remediation equipment. The remainder of the known core drilling efforts were completed in the period. These mitigation efforts have reduced the probability of risk occurrence from likely to medium. However, due to the uniqueness involved with work scope, there exists the potential for unexpected delays and additional core drilling efforts.</p>	Mitigation Action(s)	FC Date	%	Perform core drilling and shield plug installation (VN1200)	3/28/2019	100									
Mitigation Action(s)	FC Date	%																	
Perform core drilling and shield plug installation (VN1200)	3/28/2019	100																	
RCC-300-296-03: "300-296 Mockup Testing and Qualification of Remote Equipment/ Process Identifies Major Modification Requirements"	Issues such as equipment interferences, differing as-found conditions than planned, equipment reliability, etc., arise prior to or during mockup testing, leading to re-design of equipment and resulting in cost and schedule delays.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$773K, 80 days			<p><b>Risk Event:</b> During vendor factory acceptance test and/or mockup, testing, issues and conditions were identified with mockup equipment, resulting in additional re-design, materials, and/or fabrication efforts greater than planned. Remote equipment procurements that have resulted in cost and/or schedule impacts include the Remote Excavation Arm (REA) system components (through supports and dummy post assemblies), transfer mechanism (electrical components), and floor saw (gear mechanism).</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install radiological assay system and perform Construction Acceptance Test (CAT) at mockup</td> <td>3/14/2019</td> <td>100</td> </tr> <tr> <td>Install floor saw and support system at mockup (VN1020)</td> <td>4/23/2019</td> <td>100</td> </tr> <tr> <td>Conduct proficiency training at the mockup (VN1700)</td> <td>1/8/2020</td> <td>55</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> Integration with remotely operated equipment through testing and training at the mockup will continue with preparations for 324 Building equipment. Impacts continue to be incorporated into the project schedule, along with the estimate to complete, to reflect further impacts of risk being realized. The forecasted completion for proficiency training at the mockup was delayed 16 days since reported in July due to resequencing alternate work scope to perform essential A-D Crane repairs. A-D Crane repair is necessary to support 324 floor saw installation efforts.</p>	Recovery Action(s)	FC Date	%	Install radiological assay system and perform Construction Acceptance Test (CAT) at mockup	3/14/2019	100	Install floor saw and support system at mockup (VN1020)	4/23/2019	100	Conduct proficiency training at the mockup (VN1700)	1/8/2020	55			
Recovery Action(s)	FC Date	%																	
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0041/WBS-041</b>																
RCC-300-296-36: "Contamination Experienced During REC Cell Operations"	During REC cell cleanout (e.g. soil/debris removal, waste handling, facility modifications) the CHA, truck lock, or other support area becomes contaminated or background dose is elevated to a level that operations cannot continue as currently planned. Significant cost and schedule impacts are incurred.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Very Likely (>90%) <b>Worst Case Impacts:</b> \$225K, 70 Days	●	↔	<p><b>Risk Event:</b> Background radiation levels impact the use of PCMs in SMF during waste box load out to a level that operations cannot continue as currently planned requiring fabrication of additional shielding and structures. Significant cost and schedule impacts are incurred.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform CHA floor scabbling and apply epoxy floor coating</td> <td>7/17/2019</td> <td>100</td> </tr> <tr> <td>Floor scabbling, when necessary</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Floor coating applications, where necessary</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> CHA floor scabbling and floor coating applications were performed in July and will reduce the likelihood for lengthy decontamination efforts and/or spread. Due to the uniqueness involved with this particular work scope, the probability and consequence levels remain the same. However, these mitigation efforts will reduce the cost and schedule consequences, as applicable.</p>	Mitigation Action(s)	FC Date	%	Perform CHA floor scabbling and apply epoxy floor coating	7/17/2019	100	Floor scabbling, when necessary	Ongoing	N/A	Floor coating applications, where necessary	Ongoing	N/A
Mitigation Action(s)	FC Date	%														
Perform CHA floor scabbling and apply epoxy floor coating	7/17/2019	100														
Floor scabbling, when necessary	Ongoing	N/A														
Floor coating applications, where necessary	Ongoing	N/A														
<b>FY2019 Risk Triggers (Risk could be realized in FY2019)</b>																
100K-KWB-102: "105KW Basin Deactivation – Resources Unavailable"	Other higher CHPRC priority work results in reallocation of key resources (radiological planners, RCTs, industrial hygienist, and nuclear chemical operators), which results in cost and schedule delays as projects compete for key CHRPC resources.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$15K, 16 days	●	↑	<p><b>Risk Event:</b> 100K Closure project soil remediation and basin characterization work is experiencing a shortage of RCTs, radiation control engineers, radiation control work planners, and radiation control first line managers.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Work with RADCON to ensure KW Basin has sufficient RCTs to support remaining FY2019 scope.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> RADCON Contract Services and Labor Relations have succeeded in hiring sufficient RCTs to support 100K Operations and 100K Closure work. This risk will be removed from the stoplight chart in the next reporting period.</p>	Mitigation Action(s)	FC Date	%	Work with RADCON to ensure KW Basin has sufficient RCTs to support remaining FY2019 scope.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%														
Work with RADCON to ensure KW Basin has sufficient RCTs to support remaining FY2019 scope.	Ongoing	N/A														
RCC-300-296-01: "300-296 Latent Conditions Impact Facility Modification"	Latent conditions, poor visibility in REC cells, or drawing omissions, inconsistencies, or errors impact facility modifications (e.g. mechanical, electrical industrial hygiene/radiological control hazards), resulting in unplanned work and subsequently, cost and schedule impacts.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$294.5K, 256 Days	●	↔	<p><b>Risk Event:</b> Based on similar event experienced March 28, unexpected beta-gamma contamination is detected while performing clearance surveys at the 324 Building step-off pad. Following sampling, it was determined to be beta contamination (suspected strontium-90) without a corresponding gamma component, resulting in impacts to the project.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform continuous surveying and monitoring</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> Follow-up contamination surveys were performed throughout the front side areas of the 324 Building using strontium controls (developed for room 18) with no contamination detected. Based on the historical discovery of an elevated latent contamination level (NOC, CHPRC-1801178), this risk will be monitored continuously as routine preventative maintenance activities are in place to reduce the likelihood of occurrence.</p>	Mitigation Action(s)	FC Date	%	Perform continuous surveying and monitoring	Ongoing	N/A						
Mitigation Action(s)	FC Date	%														
Perform continuous surveying and monitoring	Ongoing	N/A														
RCC-300-296-35: "300-296 Loss of Mockup During REC Cell Installation, Startup or Operations"	Mockup unavailable for use requiring relocation of mockup and equipment to neighboring site location, resulting in significant cost and schedule impacts.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$2,263.3K, 180 Days	●	↔	<p><b>Risk Trigger Metric:</b> During REC cell installation, startup, or operations, the mockup and associated support area becomes unavailable due to upset at neighboring fuel fabrication facility, loss of lease, city of Richland rezoning, etc. resulting in significant cost and schedule impacts incurred.</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 (risk is accepted)</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> There exists a worst-case consequence that will require relocation of mockup and equipment to neighboring site location. Including, storage of installed mockup equipment, delayed qualification/proficiency training, slowed development of off-normal recovery planning, delayed replacement of 324 failed equipment (alternate equipment checkout location required) or accelerated mockup demolition costs would be incurred. Due to primarily external factors, this risk is accepted and will be monitored throughout the risk lifecycle.</p>	Mitigation Action(s)	FC Date	%	None identified at this time (risk is accepted)	N/A	N/A						
Mitigation Action(s)	FC Date	%														
None identified at this time (risk is accepted)	N/A	N/A														
<b>Unassigned Risks (Pending ownership of identified risks/opportunities)</b>																
No unassigned risks identified in August.																

## PROJECT BASELINE PERFORMANCE

### Current Month (CM)

(\$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	12.5	15.3	14.4	2.8	22.1%	0.9	5.6%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (+\$2.8M/+22.1%)

The CM favorable schedule variance is due to implementation of baseline change request (BCR) BCR-041-19-010R0, Mod 707 Implementation - RL-0041 100K and BCR-041-19-011R0, Mod 707 Implementation - RL-0041 324 Project that aligned the FY2019 PMB budget with the negotiated FY2019 PRC total contract cost documented by Modification 707, Correspondence No. 1902536, dated June 27, 2019. For RL-0041, the implementation of Modification 707 adjusted the planned value of FY2019 activities to align with negotiated contract cost values, based on the sum of actual costs of work performed to date through March and the forecast costs to complete the remaining planned work, which was greater than originally planned. The overall positive adjustment to planned value was implemented adjusting earned value upwards in the current period by more than the planned value, generating a positive schedule variance.

#### CM Cost Performance (+\$0.9M/+5.6%)

The CM favorable cost variance is due to implementation of BCR-041-19-010R0 and BCR-041-19-011R0, that aligned the FY2019 PMB budget with the negotiated FY2019 PRC total contract cost documented by Modification 707, Correspondence 1902536, dated June 27, 2019. The negotiated FY2019 total contract cost was based on actual cost through March 2019, plus the estimate to complete (ETC) for the remainder of FY2019. Actual costs experienced in this project breakdown structure (PBS) were greater than budgeted resulting in an increase to FY2019 budgeted cost of work performed in the current period. The impacts from Modification 707 are offset by a negative variance of 0.9 million associated with replenishment of personal protective equipment, materials, and costs for roof repairs required for maintenance and min-safe activities at 100K.

## Contract-to-Date (CTD) (\$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	684.0	672.2	639.5	(11.8)	-1.7%	32.7	4.9%	693.0	664.0	24.5	29.0

Numbers are rounded to the nearest \$0.1 million

### CTD Schedule Performance (-\$11.8M/-1.7%)

The CTD schedule variance is within reporting thresholds.

### CTD Cost Performance (+\$32.7M/+4.9%)

The favorable cost variance is primarily due to completing confirmatory sampling - no action (CSNA) waste sites early and under budget. In addition, less demolition was required for the 100K East Sedimentation Basin, and fewer resources are supporting the level of effort (LOE) program management and usage-based services (UBS) scope. Some resources have been diverted to other priority work scope, and some resource sharing has occurred. Offsetting the positive cost variance, the 324 Building Disposition project had an unfavorable cost variance due to increased costs for subcontractor development of the design phases for structural modifications. Additional design requirements were placed on the subcontractor that were not originally part of their scope of work. These additional requirements included more extensive building modeling, soil stabilization and building foundation verifications and testing demonstrations, all of which have contributed to the cumulative cost variance. In addition, latent beta contamination issues continue to hinder the pilot hole scope and effect the subsequent follow on work field work for performing structural modifications. Lastly, there is an apportioned activity for 324 structural modification operations support that continues to incur cost supporting both the design and fieldwork scope. In addition, the negative variance is also due to the core drilling scope that was performed in FY2018 and FY2019. Due to multiple latent beta contamination events within the 324 Building, the core drilling scope was delayed and re-planned a number of times to ensure work was performed in the safest manner possible.

### Variance at Completion (+\$29.0M/+4.2%)

The 100K Closure positive variance at completion (VAC) is primarily due to labor; fewer resources have been supporting the LOE program management and UBS scope. Some resources have been diverted to other priority work scope, and some resource sharing has occurred. Additionally, the VAC is due to completing the CSNA waste sites early and under budget. Offsetting the positive variance, the 324 Building Disposition project experienced greater-than-planned labor support by health physic technicians (HPTs). Additional oversight is required as a result of the alpha contamination latent condition discovered at the 324 Building to support REC cleanout and facility modifications were underestimated. Lastly, a number of unplanned spare parts, acquisitions, and various materials were purchased and/or planned to be acquired in the current FY. As work scope has progressed and evolved, acquisitions were accelerated to achieve alternate fieldwork scope. The decrease in the VAC compared to the VAC reported in July was due to implementation of BCR-041-19-010R0 and BCR-041-19-011R0 that aligned the FY2019 PMB budget with the negotiated FY2019 PRC total contract cost documented by Modification 707, Correspondence No. 1902536, dated June 27, 2019. The negotiated FY2019 total contract cost was based on actual cost through March 2019, plus the ETC for the remainder of FY2019.

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

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

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0041 Spending Forecast	148.3	129.4	19.0
Incremental Scope Change Pending Change Management	0.0	0.0	0.0
RL-0041 – Total	148.3	129.4	19.0

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

The FY2019 projected funding for PBS RL-0041 is \$148.3 million. The projected funding includes carryover from FY2018 and new budget authority. FY2019 funding aligns with the RL Integrated Priority List.

### Critical Path Analysis

Critical path analysis can be provided upon request.

## MILESTONE STATUS

The following table is a one-year look ahead of PBS RL-0041 Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) enforceable milestones, non-enforceable target due dates, and commitments.

Number	Title	Due Date	Forecast Date	Status/ Comment
M-016-85A	Complete Remote Excavation of 300-296 Waste Site	9/30/2021	6/16/2021	On schedule.

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

None currently identified.

## DOE ACTIONS/DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Prepare Documented Safety Analysis (DSA)/Technical Safety Requirement (TSR) Revision Safety Evaluation Report (SER)	5/17/2019(A)	8/30/2019
Safety Review Board Review SER for DSA/TSR Revision	8/31/2019	9/6/2019
RL Issue SER for 324 DSA/TSR	9/7/2019	9/13/2019
RL Review Draft Emergency Planning Hazards Assessment (EPA)	8/29/2019	9/12/2019
RL Approval EPA Final	10/1/2019	10/15/2019
DOE Independent Design Review – Issue for Construction Structural Modification	8/26/2019	9/15/2019

# Section G

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

**CH2MHILL**  
Plateau Remediation Company



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

August 2019  
CHPRC-2019-08, 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

- P-16 Well pump variable frequency drive in building 480-D:
  - Prepared an Industrial Health and Environment Assessment heat stress evaluation and a respirator determination to allow drilling into concrete to mount the variable frequency drive. The effort identified that additional controls are needed to address silica dust and Zenolite insulation (trace asbestos) in the masonry walls that will need to be drilled into.
  - Received final approvals on the work change notice (WCN) to the installation work package.
  - Finished incorporating design authority (DA) comments into the acceptance test plan (ATP) and sent to DA for final check.
- C-670 fire pump controller replacement
  - Transferred responsibility for the review and approval of the WCN for the work package from 100K Engineering to Central Plateau Risk Management.
  - Continued routing the ATP for approval and incorporated reviewer comments as received.
- Completed DA review of draft engineering change request (ECR) to replace panels LPN-43, LPN-18, and LPN-51 in buildings 480A, 480B, and 4842-B. The panels are obsolete and have National Electrical Code-related issues. DA comments were provided to the ECR preparer for resolution and circuit verification.

## MAJOR ISSUES

### Issue

Initiated development of an ECR to replace the aging diesel engine fire pump P-28; however, work was halted after determining that this replacement would require a long-term outage of the diesel backup to the fire water system.

### Corrective Action

An alternative option was identified that involves replacing diesel fire pump P-61 in Building 481A; however, this work would require additional effort to restore power to the building and install additional valves to connect the P-61 replacement to the area-wide water.

### Status

A determination on how to proceed is pending discussion and direction from the U.S. Department of Energy, Richland Operations Office.

## RISK MANAGEMENT STATUS

None currently identified.

## PROJECT BASELINE PERFORMANCE Current Month (CM) (\$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	0.5	0.5	0.2	0.0	-0.5%	0.3	65.8%

Numbers are rounded to the nearest \$0.1M

### CM Schedule Performance: (+\$0.0M/-0.5%)

The schedule variance is within reporting thresholds.

### CM Cost Performance: (+\$0.3M/+65.8%)

The cost variance is within reporting thresholds.

## Contract-to-Date (CTD) (\$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	28.3	28.3	23.6	0.0	0.0%	4.7	16.7%	28.7	24.0	0.4	4.7

Numbers are rounded to the nearest \$0.1 million

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

The schedule variance is within reporting thresholds.

### CTD Cost Performance: (+\$4.7M/+16.7%)

The CTD favorable cost variance is due to reduction in surveillance and maintenance requirements at FFTF as the facility was deactivated. Efficient use of resources to support deactivation activities within available time further aided this favorable cost variance.

### Variance at Completion: (+\$4.7M/+16.4%)

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

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

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

RL-0042 FFTF Closure	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0042 Spending Forecast	3.3	2.0	1.3

Numbers are rounded to the nearest \$0.1 million

### Funds Analysis

Fiscal year 2019 spending forecast is \$2.0 million, which includes support due to electrical component failures and configuration challenges, interest by regulators requiring additional inspections, and a recent failure of the water system/water piping.

### Critical Path Analysis

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

## MILESTONE STATUS

None currently identified.

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

None currently identified.

## DOE ACTIONS/DECISIONS

None currently identified.

# Appendix A

## Contract Performance

### Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

**CH2MHILL**  
**Plateau Remediation Company**



August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

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

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>				<b>3. PROGRAM</b>				<b>4. REPORT PERIOD</b>							
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract				a. NAME Plateau Remediation Contract				a. FROM (YYYYMMDD) 2019 / 07 / 22							
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18				b. TO (YYYYMMDD) 2019 / 08 / 25							
c. TYPE CPAF		d. SHARE RATIO															
<b>5. CONTRACT DATA</b>																	
a. QUANTITY 1	b. NEGOTIATED COST 6,318,614	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 17,945	d. TARGET PROFIT/FEE 278,070	e. TARGET PRICE 6,596,684	f. ESTIMATED PRICE 6,498,237	g. CONTRACT CEILING 6,596,684	h. ESTIMATED CONTRACT CEILING 6,498,237	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) Underwood, Teresa			b. TITLE Prime Contract Compliance Manager					
a. BEST CASE 6,169,851									c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)					
b. WORST CASE 6,229,861																	
c. MOST LIKELY 6,220,167			6,336,559			116,392											
<b>8. PERFORMANCE DATA</b>																	
CAPN.PBS																	
ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION			
	BUDGETED COST		ACTUAL COST WORK PERFORMED		VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED		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)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
RL-0011 Nuclear Mat Stab & Disp PFP	16,912	16,203	6,358	-709	9,845	1,121,327	1,105,468	1,196,925	-15,858	-91,456	0	0	0	1,138,777	1,230,688	-91,911	
RL-0012 SNF Stabilization & Disp	-191	408	1,754	600	-1,346	757,367	757,306	728,906	-61	28,400	0	0	0	759,356	730,072	29,284	
RL-0013 Solid Waste Stab & Disp	7,254	6,416	15,020	-838	-8,605	1,462,612	1,457,749	1,374,996	-4,863	82,753	0	0	0	1,476,215	1,393,553	82,662	
RL-0030 Soil & Water Rem-Grndwtr/Vadose	3,620	1,114	11,032	-2,506	-9,918	1,626,389	1,619,937	1,570,789	-6,452	49,148	0	0	0	1,633,498	1,583,356	50,143	
RL-0040 Nuc Fac D&D - Remainder Hanfrd	7,837	11,360	5,685	3,523	5,675	555,385	552,045	529,838	-3,341	22,207	0	0	0	563,147	544,112	19,036	
RL-0041 Nuc Fac D&D - RC Closure Proj	12,497	15,264	14,412	2,766	851	684,030	672,231	639,503	-11,799	32,728	0	0	0	692,978	664,072	28,906	
RL-0042 Nuc Fac D&D - FTF Proj	532	530	181	-2	348	28,325	28,322	23,582	-2	4,740	0	0	0	28,725	24,000	4,724	
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																
e. SUBTOTAL	48,461	51,294	54,442	2,833	-3,148	6,235,434	6,193,058	6,064,539	-42,376	128,519	0	0	0	6,292,695	6,169,851	122,844	
f. MANAGEMENT RESERVE	50,316																
g. TOTAL	48,461	51,294	54,442	2,833	-3,148	6,235,434	6,193,058	6,064,539	-42,376	128,519	0	0	0	6,343,011			
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																	
a. VARIANCE ADJUSTMENT																	
b. TOTAL CONTRACT VARIANCE										-42,376	128,519				6,343,011	6,169,851	173,159

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

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

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)  2019 / 07 / 22		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD)  2019 / 08 / 25		
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	1,319	1,857	1,245	538	612	97,510	96,960	89,908	-550	7,052	0	0	0	99,123	91,285	7,838
35 - Business Services	0	0	0	0	0	476,879	476,879	453,596	0	23,283	0	0	0	476,879	453,596	23,283
36 - Prime Contract & Proj Integr	0	0	0	0	0	1,111	1,111	492	0	618	0	0	0	1,111	492	618
37 - Resource Mgmt & Strategic Intg	-487	-487	92	0	-579	8,501	8,501	5,487	0	3,014	0	0	0	8,592	5,590	3,001
3B - PFP Closure Project	16,912	16,203	6,358	-709	9,845	1,032,687	1,016,829	1,115,860	-15,858	-99,031	0	0	0	1,050,137	1,149,623	-99,486
3C - Waste & Fuels Management Project	5,779	5,140	12,025	-639	-6,885	1,296,447	1,291,781	1,211,441	-4,666	80,340	0	0	0	1,306,814	1,226,377	80,437
3D - Soil & Groundwater Remediation	2,443	-602	9,767	-3,044	-10,369	1,427,199	1,421,297	1,373,228	-5,902	48,069	0	0	0	1,432,674	1,384,390	48,284
3G - K Basin Oper & Plateau Remediation Project	5,571	6,483	7,923	912	-1,440	1,103,304	1,098,940	1,038,689	-4,363	60,251	0	0	0	1,108,365	1,051,143	57,223
3H - River Risk Management Project	8,445	10,699	11,192	2,254	-493	296,743	289,049	302,031	-7,694	-12,981	0	0	0	305,807	318,881	-13,074
3K - Central Plateau Risk Reduction	8,479	12,000	5,840	3,521	6,160	495,055	491,712	473,807	-3,343	17,905	0	0	0	503,193	488,473	14,719
<b>b. COST OF MONEY</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>c. GENERAL AND ADMINISTRATIVE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>d. UNDISTRIBUTED BUDGET</b>														0	0	0
<b>e. SUBTOTAL (Performance Measurement Baseline)</b>	48,461	51,294	54,442	2,833	-3,148	6,235,434	6,193,058	6,064,539	-42,376	128,519	0	0	0	6,292,695	6,169,851	122,844
<b>f. MANAGEMENT RESERVE</b>														50,316		
<b>g. TOTAL</b>	48,461	51,294	54,442	2,833	-3,148	6,235,434	6,193,058	6,064,539	-42,376	128,519	0	0	0	6,343,011		

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE										DOLLARS IN THOUSANDS							Form Approved OMB No. 0704-0188	
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 a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2019/07/22 b. TO: 2019/08/25							
5. CONTRACT DATA			a. ORIGINAL NEGOTIATED COST 4,312,366		b. NEGOTIATED CONTRACT CHANGE \$2,006,247		c. CURRENT NEGOTIATED COST (A + B) \$6,318,614		d. ESTIMATED COST AUTH UNPRICED WORK \$17,945		e. CONTRACT BUDGET BASE (C + D) \$6,336,559		f. TOTAL ALLOCATED BUDGET \$6,343,011		g. DIFFERENCE (E - F) (\$6,452)			
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2019		k. CONT COMPLETION DATE 9/30/2019				l. EST COMPLETION DATE 9/30/2019							
6. PERFORMANCE DATA																		
BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)																		
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)	FY20 (17)	UNDISTRIB BUDGET (18)	TOTAL BUDGET (19)
			+1 Sep-19 (4)	+2 Oct-19 (5)	+3 Nov-19 (6)	+4 Dec-19 (7)	+5 Jan-20 (8)	+6 Feb-20 (9)										
<b>a. PM BASELINE (BEGIN OF PERIOD)</b>																		
<b>b. BASELINE CHANGES AUTH DURING REPORT PERIOD</b>																		
BCR-011-19-004R0 - Mod 707 Implementation - RL-0011 OA																		
BCR-011C-19-005R0 - PBS RL-0011 CAP 2 Project MR Draw																		
BCR-012-19-001R0 - Mod 707 Implementation - RL-0012 OA																		
BCR-013-19-010R0 - Mod 707 Implementation - RL-0013 W&F																		
BCR-013-19-011R0 - Mod 707 Implementation - RL-0013 W-135																		
BCR-013-19-012R0 - Mod 707 Implementation - RL-0013 ERDF-IDF																		
BCR-030-19-009R0 - Mod 707 Implementation - RL-0030 OA																		
BCR-040-19-005R0 - Mod 707 Implementation - RL-0040 OA																		
BCR-041-19-010R0 - Mod 707 Implementation - RL-0041 100K																		
BCR-041-19-011R0 - Mod 707 Implementation - RL-0041 324 Project																		
BCR-042-19-001R0 - Mod 707 Implementation - RL-042 OA																		
BCR-013-19-013R0 - W-135 WBS Realignment																		
BCR-PRC-19-018R0 - Mod 707 Implementation - Fee Adjustment																		
BCRA-PRC-19-0019R0 - HPIC Updates August FY2019																		
<b>c. PM BASELINE (END OF PERIOD)</b>																		
<b>7. MANAGEMENT RESERVE</b>																		
<b>8. TOTAL</b>																		
	6,186,973	53,750	49,101	4,260	3,005	53	0	0	3,391,477	391,653	471,323	504,826	485,028	470,649	574,870	7,319	0	6,297,144
															2,931	0		2,931
															3,481	9,481		12,963
															(1,744)	0		(1,744)
															(9,537)	0		(9,537)
															2,108	0		2,108
															(1,977)	0		(1,977)
															(13,156)	0		(13,156)
															7,326	0		7,326
															(4,009)	0		(4,009)
															60	0		60
															587	0		587
															0	0		0
															0	0		0
															0	0		0
	6,235,434	48,461	40,461	578	5,096	3,807	4,775	2,489	3,391,477	391,653	471,323	504,826	485,028	470,649	560,940	16,800	0	6,292,695
																		50,316
																		6,343,011

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) 2019 / 07 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 08 / 25	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA															
WBS.Resp Org Group  ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 SEPT 2019 (4)	+2 OCT 2019 (5)	+3 NOV 2019 (6)	+4 DEC 2019 (7)	+5 JAN 2020 (8)	+6 FEB 2020 (9)	MAR 2020 (10)	APR 2020 (11)	MAY 2020 (12)	JUN 2020 (13)	ATCOMPLETE (14)		
300 - Office of the President	12	906	8	0	0	0	0	0	0	0	0	0	0	0	914
303 - Internal Audit	5	589	5	0	0	0	0	0	0	0	0	0	0	0	595
304 - General Counsel	5	543	4	0	0	0	0	0	0	0	0	0	0	0	548
31 - Communications	8	1203	8	0	0	0	0	0	0	0	0	0	0	0	1211
32 - Safety Health Security & Quality	59	8395	61	0	0	0	0	0	0	0	0	0	0	0	8455
34 - Env Program & Strategic Plng	42	5760	41	1	1	0	0	0	0	0	0	0	0	0	5803
35 - Business Services	60	8012	60	0	0	0	0	0	0	0	0	0	0	0	8072
36 - Prime Contract & Proj Integr	40	4338	39	0	0	0	0	0	0	0	0	0	0	0	4377
37 - Resource Mgmt & Strategic Intg	40	3274	42	0	0	0	0	0	0	0	0	0	0	0	3316
38 - Project Technical Services	36	6379	35	0	0	0	0	0	0	0	0	0	0	0	6414
3B - PFP Closure Project	197	53497	201	201	208	210	208	192	87	8	0	0	0	0	54811
3C - Waste & Fuels Management Project	376	57819	374	5	3	5	5	1	0	0	0	0	0	0	58213
3D - Soil & Groundwater Remediation	257	42424	252	11	6	5	4	2	1	1	1	1	1	0	42708
3G - K Basin Oper & Plateau Remediation Project	239	36522	241	32	24	18	6	4	4	2	1	1	7	0	36863
3H - River Risk Management Project	214	8638	224	6	2	1	1	1	1	1	0	0	0	0	8875
3K - Central Plateau Risk Reduction	207	19720	219	26	22	20	17	1	0	0	0	0	0	0	20025
<b>g. TOTAL DIRECT</b>	<b>1797</b>	<b>258020</b>	<b>1814</b>	<b>281</b>	<b>266</b>	<b>259</b>	<b>242</b>	<b>200</b>	<b>93</b>	<b>13</b>	<b>3</b>	<b>2</b>	<b>8</b>	<b>0</b>	<b>261200</b>

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

CLASSIFICATION (When Filled In)									
CONTRACT PERFORMANCE REPORT FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES							FORM APPROVED OMB No. 0704-0188		
1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD			
<b>a. NAME</b> CH2M HILL Plateau Remediation Company		<b>a. NAME</b> Plateau Remediation Contract		<b>a. NAME</b> Plateau Remediation Contract		<b>a. FROM (YYYY/MM/DD)</b>  2019/07/22			
<b>b. LOCATION (Address and ZIP Code)</b>  Richland, WA 99354		<b>b. NUMBER</b> DE-AC06-08RL14788		<b>b. PHASE</b> Base		<b>b. TO (YYYY/MM/DD)</b>  2019/08/25			
		<b>c. TYPE</b> CPAF	<b>d. SHARE RATIO</b>	<b>c. EVMS ACCEPTANCE</b> 2009/09/18 NO YES X					
	<b>BCWS</b>	<b>BCWP</b>	<b>ACWP</b>	<b>SV in \$</b>	<b>SV in %</b>	<b>CV in \$</b>	<b>CV %</b>	<b>SPI</b>	<b>CPI</b>
<b>Current:</b>	48,461	51,294	54,442	2,833	5.8%	(3,148)	-6.1%	1.06	0.94
<b>Cumulative:</b>	6,235,434	6,193,058	6,064,539	(42,376)	-0.7%	128,519	2.1%	0.99	1.02
	<b>BAC</b>	<b>EAC</b>	<b>VAC in \$</b>	<b>VAC in %</b>	<b>TCPI</b>				
<b>At Complete:</b>	6,292,695	6,169,851	122,844	2.0%	0.95				
<b>Explanation of Variance/Description of Problem:</b>									
<p><b>Current Period Schedule and Cost Variance:</b> The positive current month (CM) schedule variance is primarily due to the implementation of contract Modification 707 that aligned the fiscal year (FY) 2019 Performance Measurement Baseline schedule with the negotiated FY2019 Plateau Remediation Contract total contract cost and revised baseline schedule, documented by modification 707, Correspondence 1902536, dated June 27, 2019. The implementation of Modification 707 adjusted the planned value of FY2019 activities to align with negotiated contract cost values, based on the sum of actual costs of work performed to date through March 2019 and the forecast costs to complete the remaining planned work, which was less than originally planned. The overall negative adjustment to planned value was implemented adjusting earned value downwards in the current period by less than the reduction in the planned value generating a positive schedule variance. As activities are completed, the schedule variance will return to zero.</p> <p>The negative CM cost variance is primarily due to the implementation of contract Modification 707. The negotiated FY2019 total contract cost was based on actual costs through March 2019 plus the estimate to complete for the remainder of the FY. Actual costs experienced were lower than budgeted resulting in a decrease in the current period to the FY budgeted cost of work performed generating a negative cost variance. This variance was partially offset by the implementation of budgeted cost of work scheduled from the management reserve for realized PFP risks related to weather and work controls. The performance was claimed in the current month while the risks were realized in prior periods creating a positive cost variance.</p> <p><b>Cumulative Schedule Variance:</b> The variance is within reporting thresholds.</p> <p><b>Cumulative Cost Variance:</b> The variance is within reporting thresholds.</p>									
<b>Impact:</b>									
<p><b>Current Period Schedule:</b> The current month schedule variance is not expected to impact the overall contract schedule.</p> <p><b>Current Period Cost:</b> Cost impacts are being estimated and will be incorporated in the project estimate to complete (ETC).</p> <p><b>Cumulative Schedule:</b> N/A</p> <p><b>Cumulative Cost:</b> N/A</p>									
<b>Corrective Action:</b>									
<p><b>Current Period Schedule:</b> No corrective actions have been identified.</p> <p><b>Current Period Cost:</b> No corrective actions necessary.</p> <p><b>Cumulative Schedule:</b> N/A</p> <p><b>Cumulative Cost:</b> N/A</p>									
<b>Monthly Summary (to include technical causes of VARs, Impacts, and Corrective Action(s):</b>									
<p>CHPRC continues to track completion of the contract within budget and is currently projecting a variance at completion of \$122.8 million, with \$50.3 million of management reserve (MR), for a total positive variance of \$173.1 million. For August, the project was 5.8 percent ahead of schedule and 6.1 percent over planned cost. For the contract to date, the project was 0.7 percent behind schedule and 2.1 percent under planned cost.</p> <p>There was no change in the difference between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of August. The current negative delta is due to the request from PRC RL Contracting Officer (CO), documented in Correspondence No.1704418A, to implement a \$7.1 million drawdown for contingency in BCR-011C-17-013R0. The RL CO has not incorporated the directed \$7.1 million contingency drawdown into the PMB CBB, resulting in the negative delta. There was also an adjustment for \$0.6 million to align AUW to the global settlement.</p> <p>Twelve of the 15 BCRs implemented in the period impacted the PMB:</p> <ul style="list-style-type: none"> <li>• BCR-000-19-005R0, Mod 707 Implementation – Indirect Accounts</li> <li>• BCR-011-19-004R0, Mod 707 Implementation – RL-0011 OA</li> <li>• BCR-011C-19-005R0, PBS RL-0011 CAP 2 Project MR Draw – Summer Weather and Conservative Demolition Approach for Worker Safety</li> <li>• BCR-012-19-001R0, Mod 707 Implementation – RL-0012 OA</li> </ul>									

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

- BCR-013-19-010R0, Mod 707 Implementation – RL-0013 W&F
- BCR-013-19-011R0, Mod 707 Implementation – RL-0013 W-135
- BCR-013-19-012R0, Mod 707 Implementation – RL-0013 ERDF-IDF
- BCR-030-19-009R0, Mod 707 Implementation – RL-0030 OA
- BCR-040-19-005R0, Mod 707 Implementation – RL-0040 OA
- BCR-041-19-010R0, Mod 707 Implementation – RL-0041 100K
- BCR-041-19-011R0, Mod 707 Implementation – RL-0041 324 Project
- BCR-042-19-001R0, Mod 707 Implementation – RL-0042 OA

**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 +\$122.8 million, +2.0% and is within reporting thresholds.

**Format 1 and 3 Contract Data:**

**Contract Price Adjustments**

CPS - In Process		
	Total Authorized Unpriced Work	\$17,945
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	<b>Grand Total Adjustments</b>	<b>\$17,945</b>

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

**Undistributed Budget Activity**

BCR Number	Title	PBS	Fiscal Year	UB
N/A	N/A	N/A	2019	\$0

There was no change to UB in August.

**Management Reserve Activity**

BCR Number	Title	PBS	Fiscal Year	MR
BCR-011C-19-005R0	<i>PBS RL-0011 CAP 2 Project MR Draw – Summer Weather and Conservative Demolition Approach for Worker Safety</i>	RL-0011	2019	-\$12,962K

The MR decreased by \$12,962K in August.

**Fee Activity**

BCR Number	Title	PBS	Fiscal Year	Fee
BCR-PRC-19-018R0	<i>Mod 707 Implementation – Fee Adjustment</i>	N/A	2019	\$23,300K

The fee increased by \$23,300K in August.

**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 ETC 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.

**Prepared by:**  
Project Control Staff

**Date:**  
09/19/2019

**Approved by:**

**Date:**

# Appendix B

## Project Services and Support (WBS 000)

**CH2MHILL**  
Plateau Remediation Company



K. A. Wooley  
Vice President for  
Safety, Health, Security  
and Quality

M. A. Wright  
Vice President for  
Project Technical  
Services

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

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

D. J. Henderson  
Director of  
Communications

K. K. Dickerson  
Vice President for  
Prime Contract and  
Project Integration

M. W. Wells (Acting)  
Vice President for  
Business Services  
Chief Financial Officer

C. J. Simiele  
Vice President for  
Resource Management  
and Strategic Integration

This section is reported quarterly.

# Appendix C

## Capital Asset Projects

**CH2MHILL**  
Plateau Remediation Company



J. L. Casper  
Vice President for  
Plutonium Finishing Plant  
Closure Project

August 2019  
CHPRC-2019-08, 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)

**CH2MHILL**  
Plateau Remediation Company



J. L. Casper  
Vice President for  
Plutonium Finishing Plant  
Closure Project

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

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

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

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

## KEY ACCOMPLISHMENTS

### RL-0011\_C1 Accomplishments:

- The project is on hold pending completion of lower-risk demolition. Glovebox HA-46 will be removed during higher-risk demolition.

## MAJOR ISSUES

None currently identified.

## 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 stoplight chart in <b>August</b> .				
<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 <b>August</b> .				
<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 <b>August</b> .				
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)				
No critical risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in <b>August</b> .				
<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 <b>August</b> .				

## CRITICAL PATH ANALYSIS

The Plutonium Finishing Plant critical path schedule begins with demolition completion of the second floor and duct levels Core Stability Zone (CSZ) 6.1, 6.2, and Zone 6 followed by CSZ 4.2, 4.3, and Zone 4. After completion of 234-5Z low-risk demolition and the associated formal post-job and lessons learned, activities will begin for remote mechanical C and A process lines demolition and debris disposition, as well as load out of glovebox HA-46. Completion of the removal and disposal of glovebox HA-46 is forecast for November 5, 2019. This will lead to a CD-4 declaration for the PFP CAP 1 Project.

## SCHEDULE MARGIN/MANAGEMENT RESERVE

Reference: Appendix C.1 Formats 1, 2, 3, and 5 for specific schedule margin/management reserve 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	11/30/2017	01/30/2020	The current CAP 1 project forecasted completion date is January 30, 2020, a 23 day slip to the forecast completion date reported in July. .

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

\*\*Forecast 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 to prepare for CD-4 closure actions.

# 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

**CH2MHILL**  
Plateau Remediation Company



J. L. Casper  
Vice President for  
Plutonium Finishing Plant  
Closure Project

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC07-08RL14788  
Deliverable C.3.1.3.1 - 1

**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 RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2019 / 07 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 08 / 25	
		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 330,987	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 9,878	e. TARGET PRICE 340,865	f. ESTIMATED PRICE 344,856	g. CONTRACT CEILING 340,865	h. ESTIMATED CONTRACT CEILING 344,856	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) Underwood, Teresa	b. TITLE Prime Contract Compliance Manager		d. DATE SIGNED (YYYYMMDD)
a. BEST CASE	332,585			c. SIGNATURE			
b. WORST CASE	334,991						
c. MOST LIKELY	334,978	330,987	-3,991				

CAPN.PBS Control Account.PARS 2 WBS (2)  ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)						
RL-0011 Nuclear Mat Stab & Disp PFP																
RL_0011_C1.02 Maintain Safe & Compliant PFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RL_0011_C1.05 Disposition PFP Facility	0	0	0	0	0	235,514	235,495	259,792	-19	-24,296	0	0	0	235,514	259,798	-24,283
RL_0011_C1.06 Project Management & Support	0	0	0	0	0	11,990	11,990	12,477	0	-487	0	0	0	11,990	12,477	-487
RL_0011_C1.90 Usage Based Services Distributions -PBS RL-11	0	0	0	0	0	7,221	7,221	7,731	0	-510	0	0	0	7,221	7,731	-510
RL_0011_C1.98 Ramp-up and transition	0	0	0	0	0	19,399	19,399	19,253	0	147	0	0	0	19,399	19,253	147
RL_0011_C1.99 PBS RL-11 UBS, G-n-A, Direct Distrib	0	0	0	0	0	41,028	41,028	33,328	0	7,700	0	0	0	41,028	33,328	7,700
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															
e. SUBTOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,585	-17,433
f. MANAGEMENT RESERVE	2,393															
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545	332,585	-15,040
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																
a. VARIANCE ADJUSTMENT	0															
b. TOTAL CONTRACT VARIANCE	-19															

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

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

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)  2019 / 07 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD)  2019 / 08 / 25	
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  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)						
35 - Business Services	0	0	0	0	0	60,427	60,427	52,580	0	7,847	0	0	0	60,427	52,580	7,847
3B - PFP Closure Project	0	0	0	0	0	254,725	254,706	279,999	-19	-25,293	0	0	0	254,725	280,005	-25,280
<b>b. COST OF MONEY</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>c. GENERAL AND ADMINISTRATIVE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>d. UNDISTRIBUTED BUDGET</b>														0	0	0
<b>e. SUBTOTAL (Performance Measurement Baseline)</b>	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,585	-17,433
<b>f. MANAGEMENT RESERVE</b>														2,393		
<b>g. TOTAL</b>	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545		

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE										DOLLARS IN THOUSANDS						Form Approved OMB No. 0704-0188	
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA			2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2019/07/22 b. TO: 2019/08/25						
5. CONTRACT DATA																	
a. ORIGINAL NEGOTIATED COST 330,987			b. NEGOTIATED CONTRACT CHANGE \$0		c. CURRENT NEGOTIATED COST (A + B) \$330,987		d. ESTIMATED COST AUTH UNPRICED WORK \$0		e. CONTRACT BUDGET BASE (C + D) \$330,987		f. TOTAL ALLOCATED BUDGET \$317,545		g. DIFFERENCE (E - F) \$13,442				
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2019		k. CONT COMPLETION DATE 9/30/2019		l. EST COMPLETION DATE 9/30/2019								
6. PERFORMANCE DATA										BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)							
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)	UNDISTRIB BUDGET (17)	TOTAL BUDGET (18)
			+1 Sep-19 (4)	+2 Oct-19 (5)	+3 Nov-19 (6)	+4 Dec-19 (7)	+5 Jan-20 (8)	+6 Feb-20 (9)									
a. PM BASELINE (BEGIN OF PERIOD)	315,152	0	0	0	0	0	0	0	302,288	4,109	7,749	890	116	0	0	0	315,152
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																	
None at this time.																	0
c. PM BASELINE (END OF PERIOD)	315,152	0	0	0	0	0	0	0	302,288	4,109	7,749	890	116	0	0	0	315,152
7. MANAGEMENT RESERVE																	2,393
8. TOTAL																	317,545

**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) 2019 / 07 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 08 / 25	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA															
WBS.Resp Org Group  ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 SEPT 2019 (4)	+2 OCT 2019 (5)	+3 NOV 2019 (6)	+4 DEC 2019 (7)	+5 JAN 2020 (8)	+6 FEB 2020 (9)	MAR 2020 (10)	APR 2020 (11)	MAY 2020 (12)	JUN 2020 (13)	ATCOMPLETE (14)		
35 - Business Services	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
3B - PFP Closure Project	0	15441	0	0	1	0	0	0	0	0	0	0	0	0	15442
<b>g. TOTAL DIRECT</b>	0	15458	0	0	1	0	0	0	0	0	0	0	0	0	15459

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 MPB - RL_0011_C1 - PFP D&D (ARRA/Base)				a. FROM (YYYYMMDD) 2019/07/22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE				b. TO (YYYYMMDD) 2019/08/25	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No                      X                      Yes                      (YYYYMMDD)    2009 / 09 / 18					
<b>Direct Projects</b>									
<b>5. Evaluation</b>									
	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	0	0	0	0	0	0	0	0	0
Cumulative:	315,152	315,133	332,579	-19	0.0%	-17,446	-5.5%	1.00	0.95
	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:	315,152	332,585	-17,433	-5.5%	0	3.12			
<p><b>Explanation of Variance/Description of Problem:</b>            Current Period:            Schedule Variance: The schedule variance is within threshold.            Cost Variance: The current month cost variance is within threshold.</p> <p>Cumulative To Date:            Schedule Variance: Within Threshold            Cost Variance: Within Threshold</p> <p><b>Impact:</b>            Impact: The RL-011.C1 Plutonium Finishing Plant (PFP) project baseline completion date is November 19, 2016. The current schedule reflects a completion date of January 30, 2020.</p> <p>Cost Impact: Cost variance is not considered recoverable as there is only a small amount of scope remaining to complete the Key Performance Parameters (KPP).</p> <p><b>Corrective Action:</b>            None at this time</p> <p><b>Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):</b></p> <p>There was no change in the difference between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of August. The Total Allocated Budget (TAB) is based on the DOE-HQ approved DOE PBS RL-0011-C1 Project Execution Plan Appendix D. The Appendix D table established a total project value of \$330.9M, based on a mix of actuals to-date (through ~FY2014) and a to-go forecast for project completion. The total project value reflected in the DOE PEP exceeded the Contract Budget Base (CBB) reflected in Plateau Remediation Contract (PRC) due to negative cost performance through ~FY2014 against the PRC negotiated cost for the C1 project. DOE elected to not incorporate the total project value reflected in the DOE PEP into the PRC to maintain the negative cost variance reported by CHPRC. This created the continuing difference between the TAB and CBB which is currently ~\$13.4M.</p> <ol style="list-style-type: none"> <li>Schedule Margin Analysis: There is no schedule margin associated with the RL-011.C1 capital asset account.</li> <li>IMS Data dictionary Changes: None in the month of August.</li> <li>Forecast Schedule with No Baseline: None in the month of August.</li> <li>UB Balance: None in the month of August.</li> <li>Negative Actual Cost of Work Performed (ACWP): None in the month of August.</li> <li>Earned Actual Cost (EAC) Analysis: Best Case = \$332,585; Most Likely = \$334,978; Worst Case = \$334,991. The Best Case 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 Case EAC is the ACWP plus the ETC or Budgeted Cost of Work Remaining 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.</li> <li>Negative Cost Variance (CV) &gt; Variance at Completion (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.</li> <li>Management Reserve Transactions: None in the month of August.</li> <li>Freeze Period Changes: None in the month of August.</li> <li>Retroactive Changes: None in the month of August.</li> <li>Earned Value Types Changes: None in the month of August.</li> </ol>									
Prepared by: Jessica Mares			9/11/2019			Approved by:		Date:	

# Appendix C.2

## Capital Asset Project

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



J. L. Casper  
Vice President for  
Plutonium Finishing Plant  
Closure Project

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

In August, the Plutonium Finishing Plant (PFP) Closure Project team successfully closed all prestart findings identified in the high-risk work resumption Management Assessment, and accordingly received authorization from U.S. Department of Energy, Richland Operations Office (RL) to proceed with the 234-5Z and 236-Z higher-risk work as outlined in the PFP Work Resumption Plan. The team continued low-risk work, completing demolition and debris disposition of 234-5Z Core Stability Zone (CSZ) 4.1 and Zone 7. Demolition was completed on the second floor and duct level on the east side of the facility from columns 8 to 9. Expansion of the PFP Environmental Restoration Disposal Facility (ERDF) waste container loading area has been completed. Enlarging this area will enable greater efficiency in loading waste containers and shipping those containers to ERDF for permanent disposal of the content. Preparations for high-risk demolition continued with the completion of aerosol testing the exhausters to be installed on remote mechanical A and C process lines and installation of the Plutonium Reclamation Facility (PRF) waste scale. Sixty-seven ERDF roll-off boxes filled with low-risk demolition debris were shipped to ERDF for permanent disposal of the debris.

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

## KEY ACCOMPLISHMENTS

### RL-0011\_C2 Accomplishments:

- Completed demolition and debris loadout of 234-5Z CSZ 4.1 and Zone 7.
- Continued demolition on the second floor and duct levels of zones 4, 5, and 6.
- Completed expansion of the ERDF waste container loading area to allow more efficient demolition waste loading and shipping.
- Completed aerosol testing of the exhausters that are necessary for performance of high-risk demolition and installed truck scales for PRF weight-restricted waste shipments to ERDF.
- Shipped 67 containers of low-level demolition debris to ERDF.

## MAJOR ISSUES

None currently identified.

## 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-0011/WBS-011.OA</b>																			
<b>Explanation of major changes to the project monthly spotlight chart:</b> No major changes to the spotlight chart in August.																			
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)																			
PFP-P3-003: <i>Weather Impacts During 234-5Z Demolition</i>	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms, will result in in-scope unplanned work and schedule impacts to the project.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Very Likely (>90%) <b>Worst Case Impacts:</b> \$0, 20 days	<span style="color: red; font-size: 1.5em;">●</span>	<span style="color: blue; font-size: 1.5em;">↑</span>	<b>Risk Event:</b> Summer weather brought high temperatures and wind speeds greater than 30 miles per hour (mph) with gusts above 40 mph that limited outside fieldwork. These events impacted demolition status, and the project moved to a tropical shift schedule to reduce potential impacts. Productivity has been impacted by the weather events and resulting shift change.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="width: 80%;">Risk Recovery Action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>Move workforce to "tropical" shift schedule</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <b>Risk Action Assessment:</b> This risk was realized in July 2019. Although wind impacted demolition progress, surveys are now conducted more efficiently, resulting in less recovery time and allowing work to resume sooner following an event. The tropical shift allows work crews to make early morning zone entry to avoid heat impact. A baseline change request (BCR) was processed in August to draw down management reserve and schedule margin and incorporate them into the baseline to address high heat weather impacts. All recovery actions for this risk event are complete and this risk will be moved from the realized risks to the risk triggers to track mitigation actions for cold weather impacts this winter.	Risk Recovery Action(s)	FC Date	%	Move workforce to "tropical" shift schedule	Complete	100									
Risk Recovery Action(s)	FC Date	%																	
Move workforce to "tropical" shift schedule	Complete	100																	
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)																			
No critical risks identified in August.																			
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																			
No high-risk threat values identified in August.																			
<b>FY2019 Risk Triggers</b> (Risk could be realized in FY2019)																			
PFP-P-004: <i>Stop Work From Concerned Workers</i>	Concerned workers result in a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$0, 52 days	<span style="color: green; font-size: 1.5em;">●</span>	<span style="color: black; font-size: 1.5em;">↔</span>	<b>Risk Trigger:</b> During PFP demolition activities, an increase in stop works could result in delays.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <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>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No major changes in August. In July, the risk occurrence probability level was decreased from very likely to likely, and the confidence trend increased as the ongoing mitigation actions are improving morale and worker understanding of the scope of work. Increased communication and worker involvement to avoid confusion and concern in an effort to minimize stop works have continued; stop works may impact the project schedule going forward.	Mitigation Action(s)	FC Date	%	Update communications as positions change.	Ongoing	N/A	Provide new maps with entry/exit instructions when boundaries are revised.	Ongoing	N/A	Encourage additional worker involvement.	Ongoing	N/A	Increase frequency of post-job reviews.	Ongoing	N/A
Mitigation Action(s)	FC Date	%																	
Update communications as positions change.	Ongoing	N/A																	
Provide new maps with entry/exit instructions when boundaries are revised.	Ongoing	N/A																	
Encourage additional worker involvement.	Ongoing	N/A																	
Increase frequency of post-job reviews.	Ongoing	N/A																	

	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0011/WBS-011.OA</b>										
PFP-P-007: <i>Demolition Equipment Reliability and Modification</i>	Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment impact the demolition of PFP. Equipment modification, leasing, or replacement will be required, resulting in cost and schedule impacts.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Very Likely (>90%) <b>Worst Case Impacts:</b> \$1.0M, 48 days	●	↑	<b>Risk Trigger:</b> Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment impact the demolition of PFP. Equipment modification, leasing, or replacement would be required, resulting in cost and schedule impacts.  <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Negotiate buy-out of leased equipment</td> <td>Complete</td> <td>100%</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> This item was added to the stoplight chart as a risk trigger in July. Additional leased equipment that was contaminated in the December 2017 event has been identified. <b>Based on negotiations for the buy-out of leased equipment, the project has determined that there is no significant impact to the project and this risk will be removed from the stoplight report before September reporting. It will continue to be monitored internally throughout the remainder of its lifecycle.</b>	Mitigation Action(s)	FC Date	%	Negotiate buy-out of leased equipment	Complete	100%
Mitigation Action(s)	FC Date	%								
Negotiate buy-out of leased equipment	Complete	100%								
PFP-P5-006: <i>Additional Soil Removal is Required</i>	Prior to the placement of the cover cap, the additional soil added for contamination control is required to be dispositioned, resulting in cost and schedule delays to the project.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$0, 54 days	●	↔	<b>Risk Trigger:</b> Additional soil above planned value is required to be removed due to contamination or regulatory concerns.  <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Engage early with the U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No major changes in August. CHPRC drafted a white paper in August supporting no additional excavation and soil removal above currently planned quantities is required. RL is reviewing options with regulators to determine a path forward.	Mitigation Action(s)	FC Date	%	Engage early with the U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.	Complete	100
Mitigation Action(s)	FC Date	%								
Engage early with the U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.	Complete	100								
<b>Unassigned Risks</b> (Pending ownership of identified threats/opportunities)										
No unassigned risks identified in August.										

## CRITICAL PATH ANALYSIS

The PFP critical path schedule begins with demolition completion of the second floor and duct levels of CSZ 6.1, 6.2, and Zone 6 followed by CSZ 4.2, 4.3, and Zone 4. After completion of 234-5Z low-risk demolition and the associated formal post-job and lessons learned, activities will begin for remote mechanical C and A process lines demolition and debris disposition, as well as load out of glovebox HA-46. The 236-Z Canyon demolition will also resume with completion anticipated by January 15, 2020, meeting the requirements for the Hanford Federal Facility Agreement and Consent Order Milestone M-083-00A, “Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities.” Demolition completion will be followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities completing by April 2020.

## SCHEDULE MARGIN/MANAGEMENT RESERVE

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

## CRITICAL DECISION MILESTONE STATUS

Number	Title	*Due Date	**Forecast Date	Status/ Comment
RL-011.C2	Completion of demolition of all PFP facilities	7/31/2020	3/30/2020	The forecast completion date slipped four-weeks from the forecast date reported in July 2019 due to weather, dense building debris, and a conservative pace taken for size reduction and debris load out.

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

\*\*Forecast date reflects CD-4 completion date (does not include 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

**CH2MHILL**  
Plateau Remediation Company



J. L. Casper  
Vice President for  
Plutonium Finishing Plant  
Closure Project

August 2019  
CHPRC-2019-08, Rev. 0  
Contract DE-AC07-08RL14788  
Deliverable C.3.1.3.1 - 1

**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 RL_0011_C2 PFP Demolition Capital Asset Project				a. FROM (YYYYMMDD)  2019 / 07 / 22									
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788				b. PHASE				b. TO (YYYYMMDD)  2019 / 08 / 25									
		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 114,274	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 17,945	d. TARGET PROFIT/FEE 5,000	e. TARGET PRICE 119,274	f. ESTIMATED PRICE 172,323	g. CONTRACT CEILING 119,274	h. ESTIMATED CONTRACT CEILING 172,323	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) Underwood, Teresa			b. TITLE Prime Contract Compliance Manager										
a. BEST CASE		166,750				c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)										
b. WORST CASE		173,972																	
c. MOST LIKELY		167,323	132,220	-35,104															
<b>8. PERFORMANCE DATA</b>																			
CAPN.PBS Control Account.PARS 2 WBS (2)		CURRENT PERIOD				CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION					
ITEM (1)		BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)			SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
		WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)								
RL-0011 Nuclear Mat Stab & Disp PFP																			
RL_0011_C2.05 Disposition PFP Facility		14,057	12,861	5,358	-1,195	7,504	121,630	105,807	139,666	-15,823	-33,859	0	0	0	0	0	138,704	166,750	-28,046
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																	0	0	0
e. SUBTOTAL		14,057	12,861	5,358	-1,195	7,504	121,630	105,807	139,666	-15,823	-33,859	0	0	0	0	0	138,704	166,750	-28,046
f. MANAGEMENT RESERVE																	573		
g. TOTAL		14,057	12,861	5,358	-1,195	7,504	121,630	105,807	139,666	-15,823	-33,859	0	0	0	0	0	139,278	166,750	-27,473
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																			
a. VARIANCE ADJUSTMENT																			
b. TOTAL CONTRACT VARIANCE												-15,823	-33,859				139,278	166,750	-27,473

**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_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2019 / 07 / 22		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019 / 08 / 25		
		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  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)						
3B - PFP Closure Project	14,057	12,861	5,358	-1,195	7,504	121,630	105,807	139,666	-15,823	-33,859	0	0	0	138,704	166,750	-28,046
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)	14,057	12,861	5,358	-1,195	7,504	121,630	105,807	139,666	-15,823	-33,859	0	0	0	138,704	166,750	-28,046
f. MANAGEMENT RESERVE														573		
g. TOTAL	14,057	12,861	5,358	-1,195	7,504	121,630	105,807	139,666	-15,823	-33,859	0	0	0	139,278		

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE										DOLLARS IN THOUSANDS							Form Approved OMB No. 0704-0188		
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA			2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM RL_0011_C2 PFP Demolition Capital Asset Project a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2019/07/22 b. TO: 2019/08/25								
5. CONTRACT DATA																			
a. ORIGINAL NEGOTIATED COST 51,683			b. NEGOTIATED CONTRACT CHANGE \$62,591		c. CURRENT NEGOTIATED COST (A + B) \$114,274		d. ESTIMATED COST AUTH UNPRICED WORK \$17,945		e. CONTRACT BUDGET BASE (C + D) \$132,220		f. TOTAL ALLOCATED BUDGET \$139,277			g. DIFFERENCE (E - F) (\$7,058)					
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2019		k. CONT COMPLETION DATE 9/30/2019			l. EST COMPLETION DATE 9/30/2019									
6. PERFORMANCE DATA			BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)																
ITEM		BCWS CUM TO DATE	BCWS FOR REPORT PERIOD	SIX MONTH FORECAST						FY09-13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	UNDISTRIB BUDGET	TOTAL BUDGET
(1)		(2)	(3)	+1 Sep-19	+2 Oct-19	+3 Nov-19	+4 Dec-19	+5 Jan-20	+6 Jul-20	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
a. PM BASELINE (BEGIN OF PERIOD)		107,573	5,161	5,689	4,260	3,005	53	0	0	0	0	6,090	29,182	19,407	628	63,116	7,319	0	125,742
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																			
BCR-011C-19-005R0 - PBS RL-0011 CAP 2 Project MR Draw																3,481	9,481		12,962
c. PM BASELINE (END OF PERIOD)		121,630	14,057	274	578	5,096	3,807	4,775	2,489	0	0	6,090	29,182	19,407	628	66,598	16,800	0	138,704
7. MANAGEMENT RESERVE																			573
8. TOTAL																			139,277

**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) 2019 / 07 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 08 / 25	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA															
WBS.Resp Org Group  ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 SEPT 2019 (4)	+2 OCT 2019 (5)	+3 NOV 2019 (6)	+4 DEC 2019 (7)	+5 JAN 2020 (8)	+6 FEB 2020 (9)	MAR 2020 (10)	APR 2020 (11)	MAY 2020 (12)	JUN 2020 (13)	ATCOMPLETE (14)		
3B - PFP Closure Project	158	3924	155	155	163	168	161	146	65	1	0	0	0	4937	
<b>g. TOTAL DIRECT</b>	<b>158</b>	<b>3924</b>	<b>155</b>	<b>155</b>	<b>163</b>	<b>168</b>	<b>161</b>	<b>146</b>	<b>65</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4937</b>	

CLASSIFICATION (When Filled In)										
CONTRACT PERFORMANCE REPORT FORMAT 5 - Explanations and Problem Analysis								FORM APPROVED OMB No. 0704-0188		
1. CONTRACTOR		2. CONTRACT		3. PROGRAM			4. REPORT PERIOD			
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2019/07/22			
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019/08/25			
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE No      X      Yes      (YYYYMMDD)      2009 / 09 / 18						
<b>Direct Projects</b>										
5. Evaluation		Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:		14,056.7	12,861.3	5,357.6	-1,195.3	-8.5%	7,503.7	58.3%	0.91	2.40
Cumulative:		121,630.0	105,806.8	139,665.6	-15,823.2	-13.0%	-33,858.8	-32.0%	0.87	0.76
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		138,704.4	166,750.3	-28,045.9	-20.2%	0	1.21			
<b>Explanation of Variance/Description of Problem:</b>										
Current Month:										
Schedule Variance: The Current Month (CM) unfavorable schedule variance is primarily attributed to the impact of summer heat and the project's deliberate approach to complete 235-Z low-risk demolition and load-out activities.										
Cost Variance: The CM unfavorable cost variance is primarily attributed to the accrual of labor costs and lagging demolition and debris load-out activities.										
Cumulative to Date:										
Schedule Variance: The cumulative schedule variance is due to delayed completion of low risk work scope due to implementation of revised approach, warm weather impacts, and a deliberate approach to demolition activities.										
Cost Variance: The cumulative negative cost variance is associated with MSA resources arriving to support PFP demolition that were planned as P/Q shift support. Additionally, Readiness Assessment activities lagged due to a delay in the start of 236-Z Demolition and increased requirements to show readiness resulting in increased costs due to additional time and effort required from subcontracted and direct labor resources. The apportioned project management activities (i.e. project oversight and planning) and support activities are ongoing, while a delay in the discrete field work is resulting in minimal apportioned BCWP. Demolition mobilization activities took longer than originally assumed because of recommendations made during the readiness assessment and purchasing unplanned PBS fixative to support 236-Z demolition. In addition, significant winter weather impacts (i.e., snow, wind, freezing rain, etc.) have been recognized on the Hanford Site. Site closures, freezing temperatures and significant snowfall that required clearing of the demolition zone rather than performing physical demolition on the facilities while a constant staff provides demolition support services is a contributing factor. Unplanned Management Assessment efforts for the 234-5Z and 291-Z facilities took longer than originally assumed. Impacts associated with the Stop Work that was initiated by the HAMTC union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As the project gets further into the demolition phase of the PRF Canyon, increased utilization of Personnel Protective Equipment to align with the original plan as well as increased material procurements to align with the scope being performed (i.e., P-100 filters, Labounty Shear, additional fixative, etc.) are also contributing to this variance. An adjustment to the General & Administrative (G&A) Rate for FY2017 resulted in a reduction to the Performance Measurement Baseline (PMB) of \$463K. Finally, impacts from a contamination event that occurred on Friday, December 15, 2017, swing shift where RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis was conducted and resumption actions identified.										
This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
<b>Impact:</b>										
Schedule Impact: Completion of all demolition activities are forecast to occur in December 2019. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of November 30, 2017, was not met.										
Cost Impact: A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017.										
<b>Corrective Action:</b>										
Demolition and load out activities are progressing at an effective speed to mitigate potential safety and stop work concerns. The current slab on grade date is 1/8/2020.										
<b>Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):</b>										
There was no change in the difference between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of August. The current negative delta is due to the request from PRC RL Contracting Officer (CO), documented in Correspondence No.1704418A, to implement a \$7.1 million drawdown for contingency in BCR-011C-17-013R0. The RL CO has not incorporated the directed \$7.1 million contingency drawdown into the PMB CBB, resulting in the negative delta.										
The following items are addressed, as applicable:										
1. Schedule Margin Analysis: The project drew down 45 days of schedule margin in the month of August.										
2. Data dictionary Changes: No change in the month of August.										
3. Forecast Schedule with No Baseline: No change in the month of August.										
4. UB Balance: No change in the month of August.										
5. Negative Actual Cost of Work Performed (ACWP): No change in the month of August.										
6. Earned Actual Cost (EAC) Analysis: Best Case = \$166,750; Most Likely = \$1167,323; Worst Case = \$173,972. The Best Case 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 Case EAC is the ACWP plus the ETC 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.										
7. Negative CV > VAC: No change in the month of August.										
8. Management Reserve Transactions: The project drewdown \$12,962.30 in the month of August.										
9. Freeze Period Changes: No change in the month of August.										
10. Retroactive Changes: No change in the month of August.										
11. Earned Value Type Changes: No change in the month of August.										
Prepared by: Jessica Mares		Date: 08/20/19			Approved by:			Date:		