

# Monthly Performance Report

October 2020

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 12:20 pm, Nov 19, 2020*

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**CH2MHILL**  
**Plateau Remediation Company**  
*a Jacobs company*



**L. Ty Blackford**  
**President and**  
**Chief Executive Officer**

# Monthly Performance Report

U.S. Department of Energy Contract  
DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

**October 2020**  
CHPRC-2020-10, Revision 0

**CONTENTS**

EXECUTIVE SUMMARY .....2

KEY ACCOMPLISHMENTS .....6

MAJOR ISSUES.....6

EARNED VALUE MANAGEMENT.....8

FUNDING ANALYSIS.....9

BASELINE CHANGE REQUESTS .....10

SELF-PERFORMED WORK.....12

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I).....13

DOE ACTIONS/DECISIONS .....13

**PROJECT BASELINE SUMMARY SECTIONS**

Section A – Nuclear Materials Stabilization and Disposition of PFP (RL-0011).....A

Section C – Solid Waste Stabilization and Disposition (RL-0013) .....C

Section D – Soil and Groundwater Remediation Project (RL-0030) .....D

Section E – Nuclear Facility D&D, Remainder of Hanford (RL-0040)..... E

Section F – Nuclear Facility D&D, River Corridor (RL-0041)..... F

Section G – FFTF Closure (RL-0042).....G

**APPENDICES**

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

## EXECUTIVE SUMMARY

CH2M HILL Plateau Remediation Company (CHPRC) advanced cleanup throughout the Hanford Site during October. CHPRC continued Phase 2 operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) approved CHPRC resumption of work plan developed in response to the RL-directed March 24, 2020, partial stop work order (PSWO) due to the coronavirus (COVID-19), which ended September 30, 2020. CHPRC implemented plans to mitigate work delays and disruption and address impacts to programmatic work caused by the PSWO and COVID-19. In compliance with state and federal government COVID-19 guidance, and as required by RL, CHPRC has taken and continues to take reasonable actions to protect and provide support to the workforce.

Major accomplishments included the following:

- Plutonium Finishing Plant (PFP) Closure Project:** The PFP Closure Project continued to perform approved Phase 2 resumption activities by maintaining essential mission critical operations. The project performed a survey of PFP radiological boundaries, re-applied soil fixative to the PFP demolition site and performed equipment maintenance. The PFP senior management team began preparations and planning to support the resumption of loadout and shipments of debris.
- Waste and Fuels Management (W&FM) Project:** The W&FMP continued to perform approved Phase 2 resumption activities. The W-135 Management of Cesium and Strontium Capsules (MCSC) Project and Capsule Storage Area (CSA) subproject continued construction of the raw water pipeline, trenching and conduit placement for area lighting. Concrete placement for the capsule storage pad was completed. The request for proposal for the construction of the Waste and Encapsulation Storage Facility (WESF) Modifications has been issued, and proposals are being evaluated for award. WESF crane annual performance maintenance was initiated and design activities to stabilize the canyon decontamination sink were completed. Aerosol testing of the newly installed 291-T high-efficiency particulate air filters was completed. The Waste Receiving and Processing glovebox ventilation (alternate train) was restored after replacing the fan motor. Received and transported the U.S. Navy submarine reactor compartment at the Port of Benton in Richland, Washington, and placed in Trench 94. The T Plant canyon crane completed corrective and preventative maintenance items and was returned to service to support Sludge Transport and Storage Container weighing and cover block inspections.
- Soil and Groundwater Remediation Project (S&GRP):** The S&GRP team continued to perform approved Phase 2 resumption activities. Drilling crews supported recovery of well drilling delayed by the PSWO, with seven drill rigs in the field, completing two wells in October. DOE/RL-2008-78, *200 West Area 200-ZP-1 Pump-and-Treat Remedial Design/Remedial Action Work Plan*, Revision 1, was completed. This revision incorporated the requirements to support all of the additional feed streams and other requirements that have been added to P&T since the remedial design/remedial action work plan was authored in 2009. The Central Plateau Principles and Parameters document, establishes the framework to guide consistent cleanup decision-making for the Central Plateau inner area, was issued as a standalone document referenced through the *Hanford Federal Facility Agreement and Consent Order*.



Years of hard work turned into visible progress in October, as workers finished pouring the concrete pad that will make up the CSA. The 1,936 highly radioactive capsules currently stored underwater at WESF will be moved to the CSA for safer dry storage.

**K Basins Operations (KBO):** At KBO, the project continued to perform approved Phase 2 resumption activities. The transfer carts and grating modification components for the vertical pipe casing (VPC) were delivered. The first VPC mockup loading and grout testing was completed at the off-site testing facility. Grating modifications and setup work for the Settler Tank Borescope Inspection were completed in preparation to start the inspection process. Nondestructive assay (NDA) of Transfer Cask Assembly-1 was completed. The soil remediation team began site setup at 100-K-96, 100-K-55:2 and 100-K-56:3 in preparation for overburden removal, while remediation at the 100-K-79:7 waste site continued to excavate and stockpile overburden removal material. The 116-KE-2 excavation site was downposted from a contamination area (CA) to a soil CA in preparation for final global positioning radiological survey and verification sample instructions preparation.

- **River Risk Management Project (RRMP):** The project continued to perform approved Phase 2 resumption activities. Training of the essential mission-critical operations and construction forces core teams was initiated for the general CA/high contamination area (HCA)/airborne radiation areas (ARAs). Development of the training materials for Room 18 CA/HCA/ARAs continues. Six of the 20 corrective actions for the 324 Facility Contamination Event Phase 1 have been completed. Integrated Disposal Facility (IDF) successfully migrated away from “Care and Custody,” a mothball state of essential mission-critical operation readiness, to “baseline operations and maintenance (O&M),” where facilities, procedures and personnel are ramping up to support active disposal operations. While baseline O&M is in its infancy at IDF, philosophical and procedural shifts in ensuring full operational readiness is interwoven with ongoing essential mission-critical operation actions. Infrastructure upgrades continued with placing the final working surfaces in the waste receiving and handling area, continued erection of the inspection buildings, and installation of electrical and communication systems. The *Resource Conservation and Recovery Act of 1976* permitting team continued work on responses to the Washington State Department of Ecology’s (Ecology) draft deficiency reports from a permit modification request; not all deficiencies have been received yet. The permitting team is working to produce another major permit modification request at Ecology’s insistence to bring the leachate collection tanks into the permit. IDF is meeting with RL and Ecology every other week. Continued interaction with the Direct-Feed Low-Activity Waste integration committees is occurring on a regular basis.
- **Central Plateau Risk Management Project:** The project continued to perform approved Phase 2 resumption activities. The Aging Structures team completed fabrication of the conveyance and ventilation systems and all site preparations for stabilization of the 216-Z-2 and 216-Z-9 Cribs and the 241-Z-361 Tank. At the Reduction-Oxidation (REDOX) facility, crews completed an NDA of nitric acid and hexone transfer lines outside of the main facility to progress the cold and dark process. Construction of the Container Transfer Area completed, and all appropriate radiological chains and signage has been hung. Crews at the 224B Facility completed ultrasonic testing of the chemical and piping systems on the clean side of all three floors and the exterior of the south side of the facility to confirm no presence of liquids within the system. Additionally, crews completed all hazardous material removals throughout the non-cell side of the facility and abatement of all Class 2 asbestos on the first and second floors. At U Plant, crews continued interference removals, allowing for abatement of 70 feet of asbestos-contaminated piping insulation. Finally, the Plutonium Uranium Extraction Plant (PUREX) North team installed a new access gate on the north side of the PUREX fence line and completed the electrical isolation of the 2701AB facility.
- **West Area Remediation Project (WARP):** The project continued to perform approved Phase 2 resumption activities. The WARP team completed the hazardous waste removal, demolition and debris loadout of six former mobile office trailers (MO211, MO2114, MO2115, MO2116, MO2506 and MO6500) in the South Trailer Village. Crews also completed electrical and mechanical isolations for the 234-5Z-BA and 234-5Z-BE Boiler Annexes.

The President's Zero Accident Council (PZAC) meeting for October was hosted by RRMP via virtual meeting. The three main ideas were:

- October is fire safety month
- Human performance improvement
- Facing change

Four *Thinking Target Zero* (TTZ) bulletins were published to convey important occupational, safety, health and environmental messages:

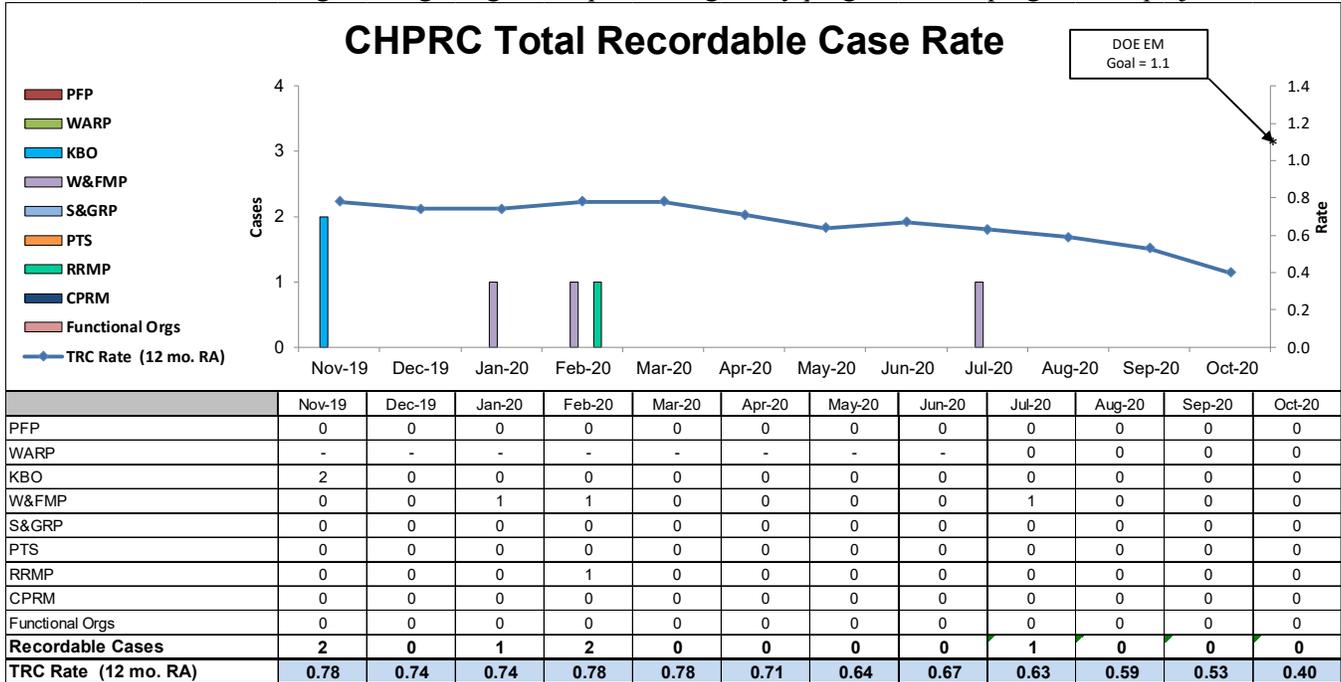
- Distracted driving
- Star of excellence
- Plan for winter
- Fall back safely

*Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:

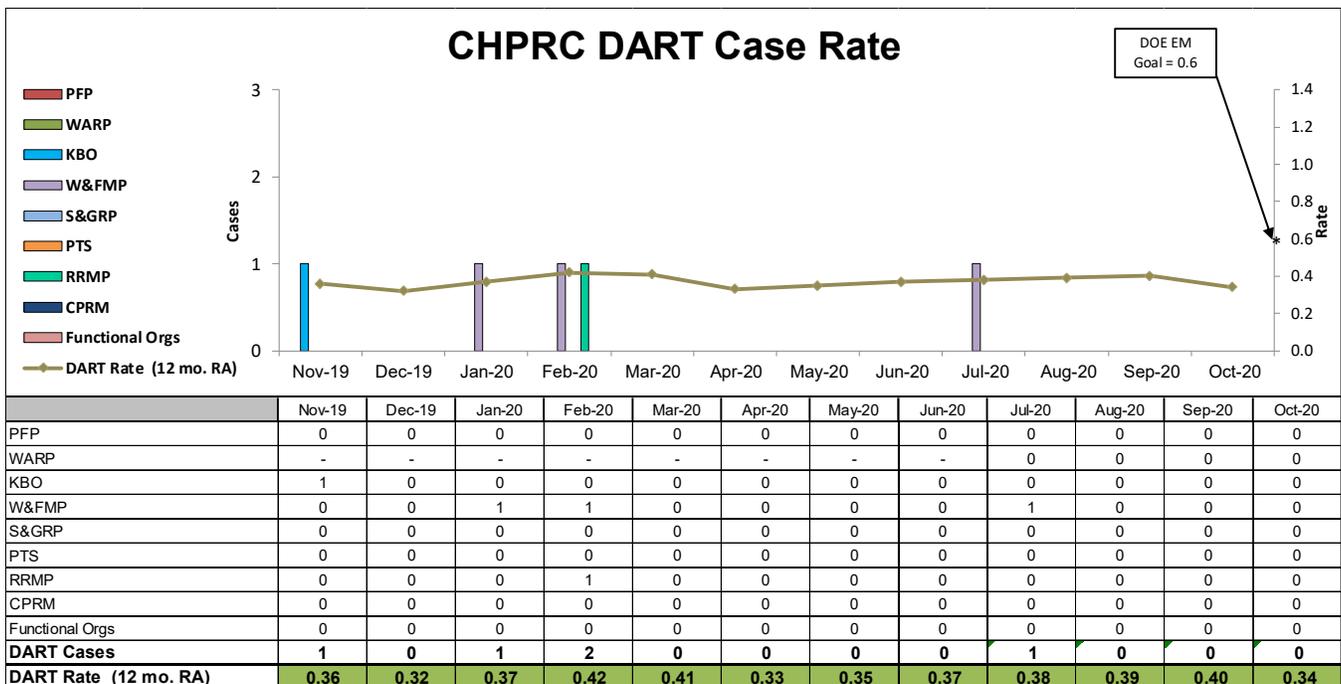
- Three Lessons Learned:
  - OPEXShare: NREL-FY19-S-001-MAY Mindfulness in the Workplace – National Renewable Energy Laboratory (NREL).
  - OPEXShare: 2015-04-09-DOE-EHSS-4798 Health Hazards of Prolonged Sitting.
  - OPEXShare: 2020-RL-HNF-65620 Breacher Training Injury Lessons Learned.
  - OPEXShare: 2020-RL-HNF-65643 Proper Clothing for Cold Weather.
- Injuries
- Weekly ethics moments
- Vehicle events
- Transition – safety focus
- Commit to focus
- CHPRC leadership commitment
- What we know about transition
- What to expect during transition
- During transition
- Transition information
- Frequently asked questions
- How to deal with change
- What to do when facing distractions
- Recent driving incidents
- Traffic safety survey
- HPMC drive-up flu clinic
- Drive-up clinic schedule
- 360 vehicle inspections
- Windy conditions
- Procedure update
- Stay flexible and healthy
- Safety in motion - ergonomics
- Cold weather walking
- Autumn safety tasks
- Winter safety 2020-21
- Safe driving reminder

## TARGET ZERO PERFORMANCE

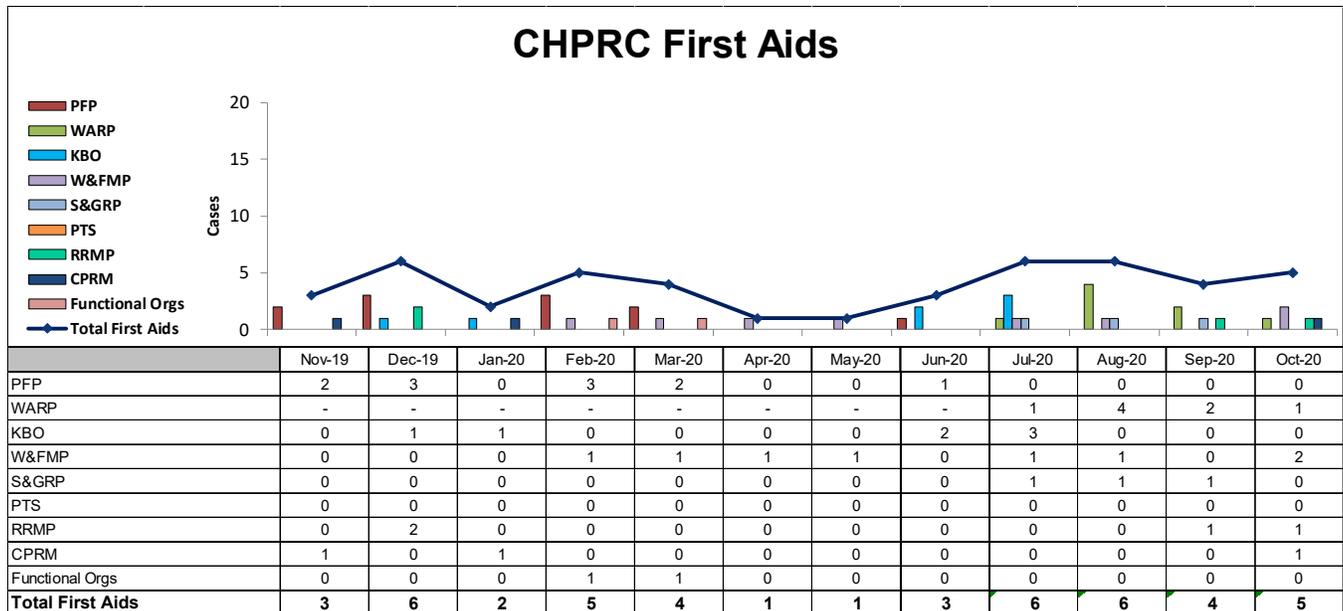
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.40 is based on a total of six Recordable injuries. October had no reported recordable cases.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.34 is based on a total of five Days Away cases. October had no reported DART cases.



First Aid Case Summary: CHPRC reported five First Aid cases in October. The contributors were two abrasions/bruises/contusions, one strain/sprain/pain, one insect bite and one miscellaneous (e.g., burn, rash, repetitive motion) injury.

## 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 (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

#### Issue

Due to COVID-19, a national emergency was declared on March 13, 2020. On March 17, 2020, CHPRC senior management issued a companywide stop work on all fieldwork not associated with technical safety requirements, environmental compliance or emergency response. On March 18, 2020, CHPRC submitted letter CHPRC-2001123 to RL identifying that COVID-19 may impact CHPRC’s ability to meet contractual requirements. On March 24, 2020, RL issued letter 20-PRO-0139, a PSWO for non-portable work. On May 22, 2020, the RL contracting officer approved CHPRC’s request for submission of the request for equitable adjustment (REA) 90 days after the end of the PSWO. On July 22, 2020, CHPRC received Contract Modification 747, extending the PSWO through September 30, 2020, unless the contracting officer directs an earlier date. On August 27, 2020, RL authorized CHPRC to implement Phase 2 of the remobilization plan starting August 31, 2020. On September 24, 2020, RL issued letter 20-PRO-0297, informing CHPRC that the PSWO would expire on September 30, 2020. The PSWO noted that CHPRC would have 30 days following

termination of the PSWO to assert its rights for an equitable adjustment. CHPRC anticipates that in addition to schedule impacts, the PSWO will result in fiscal year (FY) 2020 and FY2021 cost impacts under the following clauses:

- Plateau Remediation Contract (PRC) Section Contract Clause I.115, Federal Acquisition Regulation (FAR) 52.249-14, “Excusable Delays” (April 1984).
- PRC Section F “Deliveries or Performance,” F.3 FAR 52.242-15, Stop Work Order (August 1989) – Alternative (April 1984).

### **Corrective Action**

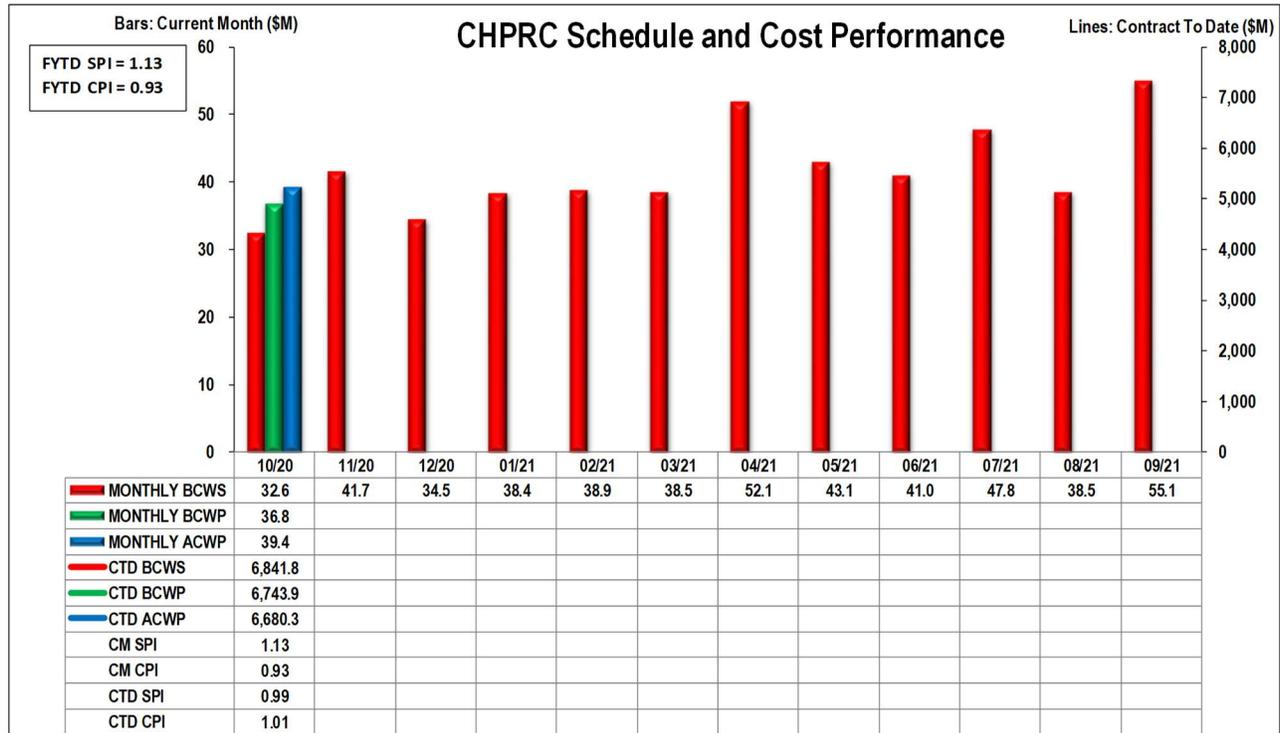
CHPRC will notify the RL contracting officer in a timely manner of events, incidents or circumstances causing grounds to submit an REA. Following receipt of RL’s PSWO direction, a PSWO implementation plan and restart plan were developed. To support workforce stability as directed by RL, CHPRC employees were provided attendance code “COV” to be used for charging hours not worked but in a paid status for time not spent on portable work or for those where performance of meaningful productive work is not practical. CHPRC provided similar guidance to the subcontractors that CHPRC believes will be critical to ramp up and execute to full performance capacity at the conclusion of the PSWO. This guidance also notified CHPRC subcontractors that justifiable absence time could be reimbursable by CHPRC.

### **Status**

The situation at the Hanford Site continues to evolve. CHPRC has continued implementation of actions to mitigate work delays and disruption and cost effectively address unanticipated impacts to programmatic work. CHPRC remains in constant contact with RL to ensure related information requests and deliverables meet RL needs and CHPRC stays abreast of potential changes in the essential mission-critical operations posture so the information requests and deliverables can be anticipated and addressed in a timely manner should they occur. CHPRC policies and procedures to address COVID-19 and new training for returning workers continue to be updated to reflect Lessons Learned and changing conditions. Deliverables in response to COVID-19 and the PSWO continue to be coordinated with other Hanford contractors to ensure a collaborative, consistent approach for resumption activities planned and proposed to RL. CHPRC continues to communicate to RL that the resumption activities has both cost and schedule impacts.

During September, CHPRC worked with RL on adjustments to the staffing remobilization plan, implemented Phase 2 and achieved the goal of returning all workers performing non-portable tasks back to work. Essential mission-critical operations, low and medium-risk field activities, and base operations are being performed on the Hanford Site. High-risk field activities that require significant personal protective equipment (PPE) have not resumed. During October, CHPRC worked with RL on Revision 3D of the resumption plan, which would include some high-risk and high PPE usage activities as part of Phase 2. Portable work continues to be performed via teleworking. On October 2, CHPRC received Contract Modification 757 extending the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) to December 11, 2020. This extension allows workers performing non-portable tasks to be paid without the need to take time out of their personal time bank (PTB), if directed by a medical professional to isolate and under the following conditions: remain healthy and “ready to work” and remain asymptomatic with a positive COVID-19 result, had potential COVID-19 exposure or pending COVID-19 testing results. Not being required to take PTB is expected to encourage workers to stay home, reducing the potential of passing COVID-19 to others at the work place. In compliance with state and federal government COVID-19 guidance, and as required by or in consequence of the PSWO, CHPRC has taken and continues to take reasonable actions to protect and provide support to the workforce.

## EARNED VALUE MANAGEMENT



	\$M						\$M					\$M		
	Current Period			Contract to Date			Contract to Date			Contract Period				
	Budgeted Cost	Actual Cost	Variance	Budgeted Cost	Actual Cost	Variance	BAC	EAC	Variance					
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost	BAC	EAC	Variance	
RL-0011 - Nuclear Materials Stab & Disp PFP	3.6	0.2	0.6	(3.4)	(0.4)	1,137.9	1,132.1	1,243.2	(5.8)	(111.1)	1,152.8	1,265.6	(112.8)	
RL-0012 - SNF Stabilization & Disposition	-	-	0.0	-	(0.0)	759.6	759.6	729.8	(0.0)	29.8	759.6	729.8	29.8	
RL-0013 - Solid Waste Stab & Disposition	11.0	13.3	14.3	2.3	(1.0)	1,688.1	1,668.1	1,579.5	(19.9)	88.6	1,860.5	1,774.8	85.7	
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	6.0	8.1	7.4	2.1	0.7	1,761.2	1,741.3	1,684.9	(19.8)	56.5	1,859.4	1,801.8	57.5	
RL-0040 - Nuc Fac D&D - Remainder	5.1	7.9	9.4	2.8	(1.5)	647.7	623.3	627.2	(24.4)	(3.9)	725.8	736.3	(10.5)	
RL-0041 - Nuc Fac D&D - RC Closure Project	6.7	7.1	7.3	0.4	(0.3)	814.9	787.4	788.6	(27.5)	(1.2)	917.8	928.3	(10.5)	
RL-0042 - Nuc Fac D&D - FFTF Project	0.2	0.2	0.3	0.1	(0.1)	32.5	32.1	27.0	(0.3)	5.1	35.5	30.3	5.2	
(Values are rounded to the nearest \$0.1M)	<b>Total</b>	<b>32.6</b>	<b>36.8</b>	<b>39.4</b>	<b>4.2</b>	<b>(2.6)</b>	<b>6,841.8</b>	<b>6,743.9</b>	<b>6,680.3</b>	<b>(97.9)</b>	<b>63.7</b>	<b>7,311.3</b>	<b>7,266.9</b>	<b>44.4</b>

### Performance Summary

CHPRC continues to track completion of the contract within budget. Currently, a variance at completion of \$44.4 million is projected, with an additional \$43.5 million of management reserve (MR) for a total positive variance of \$87.9 million. For October, the project was 13.0 percent ahead of schedule and 7.0 percent over planned cost. Contract to date, the project was 1.4 percent behind schedule and 0.9 percent under planned cost.

The labor absence adder pool was not fully liquidated in FY2020 (September 2020), and therefore, was processed in October. Approximately \$4.9 million of the current month (CM) negative cost variance is due to the liquidation of this cost or associated general and administrative pool cost that was distributed back to all projects. Additionally, a large accrual at REDOX was overstated. These negative cost variances were partially offset by an error in the processing of October 2020 labor accruals, which resulted in costs for fiscal month of October being understated. Labor accrual costs were incorrectly calculated by the Business Management System (BMS) during cost processing, resulting in the error which impacted all Hanford Site contractors using the BMS. This error

caused October costs to be understated by approximately \$2.3 million. The error will be corrected by fiscal month November cost processing when October accruals are reversed and the associated actual costs are incorporated.

The CM positive schedule variance is primarily the result of schedule recovery for scope that was planned in FY2020 and delayed due to the PSWO. Large drivers that recovered schedule in this period include well drilling activities at S&GRP, the fulfillment of procurements at the W-135 MCSC Project and stabilization activities for CPRM and WARP. This was partially offset by limited performance at PFP, where work has not resumed, and at W&FMP, where large box repacks were delayed due to delayed procurement of standard waste boxes and a NDA with higher-than-expected readings resulting in an Evaluation of Safety of the Situation.

## FUNDING ANALYSIS

### FY2021 Funds vs. Fiscal Year Spend Forecast (\$M)

PBS	Project	FY2021		Variance
		Projected Funding	Spending Forecast	
RL-0011	Nuclear Materials Stabilization and Disposition	24.9	23.0	1.9
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	0.0	0.0	0.0
RL-0013	Waste and Fuels Management Project	206.1	206.1	(0.0)
RL-0013	Management of Cesium and Strontium Capsules	13.1	13.8	(0.7)
RL-0030	Soil, Groundwater and Vadose Zone Remediation	127.9	127.9	0.0
RL-0040	Nuclear Facility D&D, Remainder of Hanford	114.1	111.6	2.5
RL-0041	Nuclear Facility D&D, River Corridor	146.1	143.3	2.8
RL-0042	Fast Flux Test Facility Closure	4.4	3.5	0.8
<b>Total Fiscal Year Spending Forecast</b>		<b>636.6</b>	<b>629.3</b>	<b>7.3</b>

#### Funds/Variance Analysis

FY2021 projected funding of \$636.6 million includes \$71.6 million of carryover funding and an expected new budget authority of \$565.0 million. The spending forecast is based on the FY2021 performance measurement baseline (PMB) implemented in October and carryover work scope.

## BASELINE CHANGE REQUESTS

In October, CHPRC approved and implemented two baseline change requests (BCRs) into the PMB. One of the two BCRs impacted the PMB budget. The change requests are identified in the following table:

Change Request#	Title	PBS	Summary of Change
BCRA-PRC-21-001R0	<i>HPIC Updates October 2020</i>	RL-0013 RL-0030 RL-0040 RL-0041	This administrative BCR incorporated October FY2021 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.
BCR-PRC-21-002R0	<i>Implementation of FY2021 Performance Measurement Baseline</i>	RL-0011 RL-0013 RL-0030 RL-0040 RL-0041 RL-0042	This BCR implemented the CHPRC FY2021 PMB and extended the period of performance through September 30, 2021, to enable accurate performance reporting and cost forecasts for FY2021 consistent with DOE Earned Value Management requirements. Scope priorities and funding needs to complete carryover work scope were also taken into consideration when determining the new schedule and scope that would be included in the PMB for FY2021. This BCR increased the PMB by \$486,818.6K.

The allocated (distributed) budget increased \$486,818.6K.

### Undistributed Budget (UB) Activity

BCR Number	Title	PBS	Fiscal Year	UB
N/A	N/A	N/A	2021	N/A

There was no change to UB in October.

### Management Reserve (MR) Activity

BCR Number	Title	PBS	Fiscal Year	MR
N/A	N/A	N/A	2021	N/A

There was no change to the MR in October.

### Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
BCR-PRC-21-002R0	<i>Implementation of FY2021 Performance Measurement Baseline</i>	RL-0011 RL-0013 RL-0030 RL-0040 RL-0041 RL-0042	2021	4,590.0K

The Fee increased by 4,590.0K in October.

The PMB values of BCRs are summarized by FY in the following tables. For a list of change requests that have impacted the PMB budget by FY, see the Format 3 Report in Appendix A.

**October 2021 Summary of Changes (\$M)**

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	FY2020	FY2021	Contract Period Total	Total PMB
<b>September 2020 Estimate</b>												
PMB	3,391.5	391.7	471.3	504.8	485.0	470.6	2,323.5	563.1	531.2	15.3	6,824.5	6,824.5
MR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	35.6	43.5	43.5
Fee	155.5	14.3	14.5	27.8	10.6	18.9	86.1	36.5	20.1	0.0	298.2	298.2
<b>Total</b>	<b>3,547.0</b>	<b>406.0</b>	<b>485.8</b>	<b>532.6</b>	<b>495.6</b>	<b>489.5</b>	<b>2,409.6</b>	<b>599.5</b>	<b>559.2</b>	<b>50.9</b>	<b>7,166.1</b>	<b>7,166.1</b>
<b>October 2020 Change</b>												
<b>PMB</b>												
Change to PMB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	486.8	486.8	486.8
<b>MR</b>												
Change to MR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Fee</b>												
Change to Fee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	4.6	4.6
<b>Total Change</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>491.4</b>	<b>491.4</b>	<b>491.4</b>
<b>October 2020 Estimate</b>												
PMB	3,391.5	391.7	471.3	504.8	485.0	470.6	2,323.5	563.1	531.2	502.1	7,311.3	7,311.3
MR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	35.6	43.5	43.5
Fee	155.5	14.3	14.5	27.8	10.6	18.9	86.1	36.5	20.1	4.6	302.8	302.8
<b>Total</b>	<b>3,547.0</b>	<b>406.0</b>	<b>485.8</b>	<b>532.6</b>	<b>495.6</b>	<b>489.5</b>	<b>2,409.6</b>	<b>599.5</b>	<b>559.2</b>	<b>542.3</b>	<b>7,657.6</b>	<b>7,657.6</b>

**Changes to/Utilization of Management Reserve in October 2021 (\$M)**

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	FY2019	FY2020	FY2021	Total
<b>September 2020 MR Totals</b>											
RL-0011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	8.8	11.2
RL-0012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	5.4
RL-0013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	6.6
RL-0030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.6
RL-0040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	8.4
RL-0041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	7.8	7.8
RL-0042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>7.9</b>	<b>35.6</b>	<b>43.5</b>
<b>October 2020 MR Changes/Utilization</b>											
RL-0011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>October 2020 MR Totals</b>											
RL-0011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	8.8	11.2
RL-0012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	5.4
RL-0013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	6.6
RL-0030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.6
RL-0040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	8.4
RL-0041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	7.8	7.8
RL-0042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>7.9</b>	<b>35.6</b>	<b>43.5</b>

## SELF-PERFORMED WORK

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

Contract-to-Date Actual Awards & Mods (\$M) 10/1/2008 - 10/31/2020					
Reporting Category					
	\$ Value	%	Goal %		
SB	\$1,783.85	56.89%	49.3%	PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
SDB	\$342.90	10.94%	8.2%		
SWOB	\$313.35	9.99%	7.5%	CHPRC Contract Value:	\$7,249.87
HUB	\$105.59	3.37%	2.2%	SB actual:	\$1,783.85
VOSB	\$276.43	8.82%	3.5%	SB Performed %:	24.61%
SDVO	\$182.35	5.82%	1.3%	PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed	
NAB	\$119.04	3.80%	N/A		
Large	\$849.09	27.08%	N/A	CHPRC Contract Value:	\$7,249.87
GOVT	\$6.02	0.19%	N/A	CHPRC Self Performed:	\$4,114.11
GOVT CONT	\$483.23	15.41%	N/A	CHPRC Self Performed %:	56.75%
EDUCATION	\$0.18	0.01%	N/A		
NONPROFIT_	\$4.48	0.14%	N/A		
FOREIGN	\$8.91	0.28%	N/A		
<b>Total</b>	<b>\$3,135.77</b>	<b>100.00%</b>	<b>N/A</b>		

Notes:

1. Since the contract award in October 2008, CHPRC has subcontracted more than \$3.1 billion in goods and services, with more than 57 percent going to small businesses. All subcontracting goals have been exceeded.
2. Approximately 90 percent of the total dollars arise from service and staffing contracts and contract amendments, with 6.9 percent of the remaining expenditures arising from PCard purchases and 3.9 percent from the balance in purchase orders for materials and equipment.
3. Data are summarized by business category (e.g., 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	PBS-11, <i>Plutonium Finishing Plant Closure Project</i>  PBS-13, <i>Solid and Liquid Waste Treatment and Disposal</i>	Offsite Transportation of Radioactive Material: RL provides equipment and government drivers to transport transuranic (TRU) materials outbound/inbound between the Hanford Site and Perma-Fix Northwest locations. RL is the authorized shipper and acts as signatory on the shipping papers and ensures compliance with DOE Manual 460.2-1, Radioactive Material Transportation Practices Manual for Use with DOE Order 460.2A. 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.
J.12/C.2.3.6	PBS-13, <i>Transuranic Waste Certification</i>	Waste Isolation Pilot Plan (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.	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**

*a Jacobs company*



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

**October 2020**  
**CHPRC-2020-10, Rev. 0**  
**Contract DE-AC06-08RL14788**  
**Deliverable C.3.1.3.1 - 1**

## PROJECT SUMMARY

In October, the Plutonium Finishing Plant (PFP) Closure Project team continued Phase 2 operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) approved CH2M HILL Plateau Remediation Company (CHPRC) resumption of work plan developed in response to the RL-directed March 24, 2020, partial stop work order (PSWO) that ended September 30, 2020. Work performed included surveying PFP radiological boundaries and performing equipment maintenance. The PFP senior management team began preparations and planning to support the resumption of Plutonium Reclamation Facility (PRF) work scope.

### 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	67 structures
Non-Radioactive Waste Shipped	0	89.8 m <sup>3</sup>
Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped	0 m <sup>3</sup>	5,016 m <sup>3</sup>
Low-level Waste (LLW)/Mixed (M)LLW Shipped	0 m <sup>3</sup>	23,507 m <sup>3</sup>

### 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	11	N/A
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0011 Accomplishments:

- Operations in October consisted of the completion of required surveillance and maintenance (S&M) activities to protect government property and maintain safety and environmental compliance. These efforts included surveying PFP radiological boundaries and performing equipment maintenance.
- Crews continued work on the disposition of legacy waste.
- The PFP senior management team began preparations and planning to support the resumption of PRF work scope.

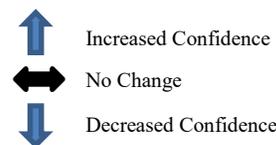
## MAJOR ISSUES

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.



	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
<b>RL-0011</b>																			
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risk identification numbers were updated to align with identification system used in the Enterprise Risk and Opportunity Management System for FY) 2021.																			
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)																			
No realized risks identified in <b>October</b> .																			
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)																			
No critical risks identified in <b>October</b> .																			
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																			
No high threat risks identified in <b>October</b> .																			
<b>FY2021 Key Risks</b>																			
RL11 PFP-0003-T: Stop Work From Concerned Workers	Concerned workers can implement 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> Mitigate  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$0, 16 days	<span style="color: green; font-size: 20px;">●</span>	<span style="color: black; font-size: 20px;">↔</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="text-align: center;">Mitigation Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Provide new maps with entry/exit instructions when boundaries are revised.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No major changes in <b>October</b> . Increased communication and worker involvement to avoid confusion and concern 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																	
RL11 PFP-0013-T: Weather Impacts During 236-Z Demolition	Inclement weather, including moderate winds, low or high temperatures, and above average snowfall or thunderstorms will result in in-scope unplanned work and schedule impacts to the project.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$0, 20 days	<span style="color: green; font-size: 20px;">●</span>	<span style="color: black; font-size: 20px;">↔</span>	<b>Risk Trigger:</b> High winds and cold weather may impact the project in the winter and spring seasons. Average winds above 15 mph shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and, therefore, shuts down fieldwork activities.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Mitigation Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No major changes in <b>October</b> . No weather events impacted the project in <b>October</b> .	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																	
RL11-PFP-0017-T: Delay of PRF Debris Loadout	The loadout of PRF debris is delayed.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$0, 32 days	<span style="color: green; font-size: 20px;">●</span>	<span style="color: black; font-size: 20px;">↔</span>	<b>Risk Trigger:</b> The project experiences delays to PRF debris loadout, impacting project completion.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk Recovery Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Communicate PRF loadout options with RL.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No major changes in <b>October</b> . PRF debris loadout has not resumed due to the phased return to work from the Richland Operations Office (RL)-directed response to the coronavirus (COVID-19).	Risk Recovery Action(s)	FC Date	%	Communicate PRF loadout options with RL.	Ongoing	N/A	Encourage additional worker involvement.	Ongoing	N/A						
Risk Recovery Action(s)	FC Date	%																	
Communicate PRF loadout options with RL.	Ongoing	N/A																	
Encourage additional worker involvement.	Ongoing	N/A																	
<b>Unassigned Risks</b> (Pending ownership of identified threats/opportunities)																			
No unassigned risks identified in <b>October</b> .																			

## 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	3.6	0.2	0.6	(3.4)	-94.5%	(0.4)	-204.1%

Numbers are rounded to the nearest \$0.1 million.

#### CM Schedule Variance: (-\$3.4M/-94.5%)

PFP demolition was scheduled to resume in October, however, due to the continuing impacts of COVID-19, the reliability of the supply chain for personal protective equipment (PPE) required to perform the task is uncertain. Resumption of demolition activities is currently scheduled to begin in January 2021 when it is believed a reliable PPE supply will be available to continue and complete PFP demolition.

#### CM Cost Variance: (-\$0.4M/-204.1%)

The CM cost variance is within threshold.

## Contract to Date (CTD)

### (\$M)

WBS 011/ RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,137.9	1,132.1	1,243.2	(5.8)	-0.5%	(111.1)	-9.8%	1,152.8	1,265.6	22.4	(112.8)

Numbers are rounded to the nearest \$0.1 million.

#### CTD Schedule Variance: (-\$5.8M/-0.5%)

The CTD schedule variance is within threshold.

#### CTD Cost Variance: (-\$111.1M/-9.8%)

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 radiation control technicians (RCTs) and deactivation and decommissioning (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 (e.g., waste shipping containers TL-1800s, SLB2s, IP-1 bags) required for TRU waste disposition loadout activities; 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, implementing infrastructure modifications and performing stabilization activities. Reassignment of project personnel to support the radiological control area (RCA) and programmatic assessments also contributed to the variance.

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

The project was demobilized and placed in a safe configuration in late March 2020 due to the RL-directed PSWO. CHPRC and subcontractor labor assigned to work that could not be performed in a remote manner were charged to control account 011.97.01.04 to collect and segregate unproductive time caused by the PSWO.

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

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

**Variance at Completion (VAC): (-\$112.8M/-9.8%)**

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 and revising radiological postings, infrastructure modifications and stabilization activities. Reassignment of CHPRC personnel to support the RCA and programmatic assessments also contributed to the variance. Impacts attributable to COVID-19 concerns have pushed project completion, increasing the expected total project cost.

Overtime used to ready the 234-5Z Building 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 the 234-5Z Building, allowing piping and ducting to be left in place for demolition.

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

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

RL-0011 Nuclear Matl Stab & Disp PFP	FY2021		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	24.9	23.0	1.9

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

The fiscal year (FY) 2021 variance of \$1.9 million reflects funding of \$24.9 million and a spend forecast of \$23.0 million. The spending forecast is based on the FY2021 performance measurement baseline implemented in October.

### Critical Path Analysis

The PFP critical path schedule begins with the completion of PRF loadout, which is forecast to occur by March 9, 2021, 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 and turnover to S&M and project closeout activities, completing by June 24, 2021.

## MILESTONE STATUS

The following table is a one-year look ahead to project breakdown structure RL-0011 Tri-Party Agreement-enforceable milestones, nonenforceable 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		3/9/2021	Work resumption was planned in the revised DOE O 413.3B, <i>Program and Project Management for the Acquisition of Capital Assets</i> , Critical Decision (CD)-2 and CD-3 package for early October based on a phased resumption approach and to conserve PPE in response to COVID-19 impacts. The forecast date reflects the continuing impacts of COVID-19, which precluded work resumption as planned in the CD-2 and CD-3 package.

## 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 for Use with DOE O 460.2A</i> . RL arranges for Commercial Motor Vehicle Safety Alliance Level VI vehicle inspections and verifies that the government drivers meet 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.

# Section C

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

**CH2MHILL**  
**Plateau Remediation Company**  
*a Jacobs company*



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

**M. L. Douglas**  
Vice President for  
River Risk Management Project

**M. A. Wright**  
Vice President for  
Project Technical Services

October 2020  
CHPRC-2020-10, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

In the October reporting period (October 1 – October 25, 2020), the Waste and Fuels Management Project (W&FMP) and the River Risk Management Project continued essential mission-critical operations and a phased return to normal operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) approved CH2M HILL Plateau Remediation Company (CHPRC) resumption of work plan developed in response to the March 24, 2020, RL-directed partial stop work order issued as a part of the Hanford Site response to the novel coronavirus.

Major accomplishments in October included:

- The Management of Cesium and Strontium Capsule (MCSC) Project, W-135, Capsule Storage Area (CSA) Project, continued construction of the raw water pipeline, trenching and conduit placement for area lighting. Concrete placement for the operating pad (OP) was completed. Responses to a request for proposal (RFP) for construction of the Waste and Fuel Storage Facility (WESF) Modifications Line Item were received.
- Annual maintenance of the WESF crane was initiated and design activities to stabilize the canyon decontamination sink were completed. Aerosol testing of the newly installed 291-T high-efficiency particulate air (HEPA) filters was completed.
- The Waste Receiving and Processing Facility (WRAP) glovebox ventilation (alternate train) was restored after replacing the fan motor. Receipt of four U.S. Navy submarine reactor compartments at the Port of Benton in Richland, Washington, occurred, and the compartments were transported and placed in Trench 94.
- T Plant canyon crane corrective and preventative maintenance (PM) items were completed, and the crane was returned to service to support Sludge Transport and Storage Containers (STSC) weighing and cover block inspections.
- Integrated Disposal Facility (IDF) successfully migrated away from “Care and Custody,” a mothball state of essential mission-critical operations readiness, to “Baseline Operations and Maintenance,” where facilities, procedures and personnel are ramping up to support active disposal operations. While baseline operations and maintenance is in its infancy at IDF, philosophical and procedural shifts in ensuring full operational readiness is interwoven with ongoing essential mission-critical operation actions. Infrastructure upgrades continued with placing the final working surfaces in the waste receiving and handling area, continued erection of the inspection buildings, and installation of electrical and communication systems.

## EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
21-EMS-WFMP-OBJ1-P1	T Plant Complex will receive three filter media STSC shipments.	Each filter media STSC shipment will constitute one-third of completion of the objective, approximately 33 percent each.	9/30/2021	0%
21-EMS-WFMP-OBJ2-P1	WFMP will repackage the remaining 284 m <sup>3</sup> of Transuranic (TRU)/ Transuranic mixed (TRUM) legacy waste.	Each 2.84 m <sup>3</sup> of waste repackaged and returned to the Central Waste Complex (CWC) will constitute 1 percent of completion of the objective.	9/30/2021	0%
21-EMS-WFMP-OBJ3-P1	WFMP will complete CSA construction.	Completion of each of the five primary activities will constitute 20 percent completion of the objective.	9/30/2021	0%
21-EMS-RRMP-OBJ1-P1	Track maintenance/ recycling activities at the Environmental Restoration Disposal Facility (ERDF) (e.g., used oil recycling, tires, batteries and product drums).	On a quarterly basis, track the maintenance recycling activities of the ERDF subcontractor and CHPRC transportation organization.	9/30/2021	4%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred (DART)	0	3*	*1 DART, Project Technical Services (PTS) in support of RL-0013. *1 DART, Mission Support Alliance, LLC in support of RL-0013.
Total Recordable Injuries	0	0	N/A
First Aid Cases	2	10	10/7/2020 – Employee experienced joint pain in the left wrist while moving absorbent bags. Employee was taken to HPM Corporation, received an elastic bandage and returned to work without restrictions. (25585) 10/21/2020 – Employee at IDF was knocked down by a piece of sheet metal that was caught by the wind and hurt their left knee. Employee was taken to HPMC, received over-the-counter medicine and returned to work without restrictions. (25593)
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### Waste and Fuels Management Project

#### 13.01 Project Management

- On October 7, 2020, CHPRC transmitted the Class 1 permit modification to update the CSA Emergency Response Organization and Initial Command Post location during pre-active life to the Washington State Department of Ecology (Ecology) for final approval. Ecology approved the permit modification on October 20, 2020.

#### 13.02 Capsule Storage and Disposition

- Completed design activities to stabilize the canyon decontamination sink.
- Completed 23 PM packages.

#### 13.03 Canister Storage Building (CSB)

- Completed 18 PM packages.

#### 13.07 Waste Receiving and Processing

- Glovebox ventilation (alternate train) was restored after replacing the fan motor.
- Completed 173 surveillances and 14 PM packages.

#### 13.08 T Plant

- Canyon crane corrective and PM items were completed and returned to service to support STSC weighing and cover block inspections.
- Completed aerosol testing of the newly installed 291-T HEPA filters.

- Shipped one roll-on/roll-off waste box from T Plant to ERDF.
- Shipped two drums from T Plant to Stericycle.
- Shipped two boxes from T Plant to the Centralized Consolidation/Recycling Center.
- Completed 446 surveillances and 31 PM packages.

### **13.09 Central Waste Complex and Low-Level Burial Grounds**

- Receipt of the four U.S. Navy submarine reactor compartments at the Port of Benton occurred, and the compartments were transported and placed in Trench 94.
- Completed 233 surveillances and 27 PM packages.

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

- Maintained coordination of offsite spent nuclear fuel disposition.

### **13.21 Mixed-Waste Disposal Trenches**

- Received seven boxes from Perma-Fix Northwest (PFNW) into Mixed Waste Trench 31 in two shipments.
- Completed 103 surveillances.

### **13.24 Management of Cesium (Cs) and Strontium (Sr) Capsules Project**

- Fabrication of CSS equipment continued at offsite vendors.
- The construction RFP for the WESF Modifications was issued, and responses were received. Responses are being evaluated for award.
- With the support of PTS, the following progress was made on MCSC subproject construction activities:
  - Construction of the raw water pipeline.
  - Trenching and conduit placement for area lighting.
  - Concrete placement for the OP was completed.

## **River Risk Management Project**

### **13.10 Environmental Restoration Disposal Facility**

- Received 3,495 tons of waste for disposal.
- Container maintenance performed annual inspections on 87 containers and corrective maintenance on 43 containers.
- ERDF operations disposed 36 containers off the enhanced ramp.

### **13.12 Integrated Disposal Facility**

- Operations and Maintenance
  - Completed monthly inspections.
  - Performed four significant storm event inspections.
- IDF Operational Readiness
  - Construction subcontractors.
    - Infrastructure upgrades continued with placing the final working surfaces in the waste receiving and handling area.
    - Continued to make progress on utility installation of electrical and communication.
    - Work continued on constructing the inspection buildings.
  - Environmental
    - Completed five Waste Storage Area inspections.
    - Prepared remaining universal waste for shipment to the Centralized Consolidation/Recycling Center.

## MAJOR ISSUES

**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 or eliminate the risk and additional cost for long-term management of these containers.

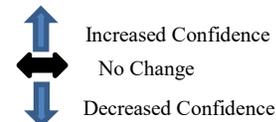
**Status**

Continued 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 the resumption of TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue into fiscal year (FY) 2021.

### RISK MANAGEMENT STATUS

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

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0013/WBS-013</b>										
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risk identification numbers and verbiage were updated to align with the values in the Enterprise Risk and Opportunity Management System for FY2021.										
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>										
RL13 WFM-0022-T: 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	<span style="color: red; font-size: 24px;">●</span>	<span style="font-size: 24px;">↔</span>	<b>Risk Event:</b> Ecology provided technical comments on the permit addendum, expanding the number of DWMUs.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk Recovery Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Conduct weekly meetings with Ecology and RL.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <b>Recovery Action Assessment:</b> No significant changes in <b>October</b> . Impacts associated with 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. The project does not expect to resolve this realized risk within the current contract period.	Risk Recovery Action(s)	FC Date	%	Conduct weekly meetings with Ecology and RL.	Ongoing	N/A
Risk Recovery Action(s)	FC Date	%								
Conduct weekly meetings with Ecology and RL.	Ongoing	N/A								
RL13 WFM-0024-T: 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> Somewhat likely (26% to 74%) <b>Worst Case Impacts:</b> \$0, 96 days	<span style="color: red; font-size: 24px;">●</span>	<span style="color: blue; font-size: 24px;">↑</span>	<b>Risk Event:</b> Ecology's review time is impacting the permit management schedule.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk Recovery Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Conduct routine meetings with Ecology and the contractor to promote communication efforts.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <b>Recovery Action Assessment:</b> This risk will be removed from the spotlight chart prior to November reporting. FY2021 planning accounts for Ecology delays and, therefore, this risk is no longer being realized.	Risk Recovery Action(s)	FC Date	%	Conduct routine meetings with Ecology and the contractor to promote communication efforts.	Ongoing	N/A
Risk Recovery Action(s)	FC Date	%								
Conduct routine meetings with Ecology and the contractor to promote communication efforts.	Ongoing	N/A								

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
<b>RL-0013/WBS-013</b>													
RL13 WFM-0013-T: Regulatory Document Results in Significant Comments from the Regulator	<p>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.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$10M, 192 days</p>	●	↑	<p><b>Risk Event:</b> Eight closure plans were formally resubmitted to Ecology in August and November 2018. In January 2019, Ecology provided additional comments, changing the closure strategy for several units.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Use a standardized approach to quickly evaluate and categorize comments for resolution.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct routine meetings to address agency comments and to remain current on the influences from agencies.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b> The likelihood of changing the entire strategy has been decreased as CHPRC planned for the appeal process in FY2021. However, this risk is still being realized as Ecology has issued some versions with changes that the project has spent resources identifying and commenting on Ecology's changes.</p>	Risk Recovery Action(s)	FC Date	%	Use a standardized approach to quickly evaluate and categorize comments for resolution.	Ongoing	N/A	Conduct routine meetings to address agency comments and to remain current on the influences from agencies.	Ongoing	N/A
Risk Recovery Action(s)	FC Date	%											
Use a standardized approach to quickly evaluate and categorize comments for resolution.	Ongoing	N/A											
Conduct routine meetings to address agency comments and to remain current on the influences from agencies.	Ongoing	N/A											
RL13 CSA-0004-T: Configuration of Existing Facilities and Infrastructure Different from Assumed	<p>The CSA construction is impacted by a discovery that configuration of existing facilities and infrastructure differs from that represented in the design documents.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><b>Worst Case Impacts:</b> \$500K, 32 days</p>	●	↑	<p><b>Risk Event:</b> The actual elevation of an existing buried sewer line as discovered during pot holing by the contractor was such that the alignment of the new fire protection raw water line in the immediate vicinity will be revised.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Revise the design to realign the raw water line.</td> <td>10/29/2020</td> <td>90</td> </tr> <tr> <td>Construct water line (no rework involved).</td> <td>12/24/2020</td> <td>50</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b> The design revision to address the new alignment is forecast to be released by October 29, 2020. A contract change has been issued, and the contractor will complete construction by December 24, 2020.</p>	Risk Recovery Action(s)	FC Date	%	Revise the design to realign the raw water line.	10/29/2020	90	Construct water line (no rework involved).	12/24/2020	50
Risk Recovery Action(s)	FC Date	%											
Revise the design to realign the raw water line.	10/29/2020	90											
Construct water line (no rework involved).	12/24/2020	50											
RL13 CSA-0012-T: CSA Design Errors and Omissions	<p>CSA construction is impacted by errors and omissions in the issued design documents. Impacts could be to safety, quality, schedule and/or cost.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><b>Worst Case Impacts:</b> \$800K, 24 days</p>	●	↔	<p><b>Risk Event:</b> The new CSA fire protection raw water line requires installation of a new Reduced-Pressure Backflow-Prevention Assembly (RPBA) at WESF. The RPBA was omitted from the original design. The omission was identified by the Hanford Fire Department during a supplemental review of the design in connection with a water system tie-in permit.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Revise the design to include an RPBA facility.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Construct new RPBA facility.</td> <td>12/24/2020</td> <td>0</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b> The design revision to address the omission (i.e., to include an RPBA facility) was released in September. A contract change is now being processed with the CSA contractor to construct the new facility with work anticipated to start by November 20. This risk is forecast to remain realized through calendar year 2020.</p>	Risk Recovery Action(s)	FC Date	%	Revise the design to include an RPBA facility.	Complete	100	Construct new RPBA facility.	12/24/2020	0
Risk Recovery Action(s)	FC Date	%											
Revise the design to include an RPBA facility.	Complete	100											
Construct new RPBA facility.	12/24/2020	0											
RL13 CSS-0006-T: Fabrication of the Equipment from the Contractor	<p>Fabrication of critical items for the long-term storage of the Cs and Sr capsules does not go exactly as planned, resulting in design changes and rework.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$6M, 192 days</p>	●	↔	<p><b>Risk Event:</b> Fabrication of required equipment and items does not go according to schedule, requiring redesign or additional components that will impact the project's cost and schedule baseline.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Automated Weld System (AWS) vendor to provide portions of design for review as available.</td> <td>12/16/2020</td> <td>58</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b> A design change for the AWS was proposed and accepted by CHPRC, which would minimize crane movements of the AWS and simplify operation. Implementation of this change requires seismic considerations in the design, which was not recognized by the fabricator/designer, resulting in cost and schedule delays. The contractor has submitted a proposal with realistic design duration. AWS gantry delivery is not on the project critical path. Further mitigation is for the AWS vendor to provide parts of the design to CHPRC for review (as available) to minimize formal design review time at the completion of full design. The preliminary gantry design review has been completed. Preliminary design review for the weld head and alternate motion platform is forecast to be conducted on October 29. Completion of the seismic analysis is taking longer than planned, extending design duration.</p>	Risk Recovery Action(s)	FC Date	%	Automated Weld System (AWS) vendor to provide portions of design for review as available.	12/16/2020	58			
Risk Recovery Action(s)	FC Date	%											
Automated Weld System (AWS) vendor to provide portions of design for review as available.	12/16/2020	58											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
<b>RL-0013/WBS-013</b>													
RL13 CSS-0015-T: CSS Design Changes	<p>During fabrication of the CSS equipment, necessary design changes are identified, resulting in cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><b>Worst Case Impacts:</b> \$750K, 96 days</p>	●	↔	<p><b>Risk Event:</b> Design changes for the CSS equipment have been identified by the Nuclear Assurance Corporation (NAC) and CHPRC engineering that will improve ease of fabrication, decrease operational risk and improve occupational safety.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Evaluate each proposed change for necessity, cost and schedule impacts, as well as benefit prior to implementing change.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b> No significant changes in October. As fabrication began, NAC engineering identified design changes that were necessary for fabrication but required additional analysis and approval by CHPRC to implement, resulting in a schedule delay. Additionally, CHPRC engineering staff assigned to other high priority projects during the CSS design period have identified changes from previous lessons learned. These changes reduced operational risk and improved occupational safety but resulted in additional costs and schedule delays. Mitigation is for CHPRC engineering to perform a cost/benefit analysis for presentation to the project management prior to requesting change from the contractor. Minor drawing changes have been communicated to the fabrication contractor for incorporation at the next drawing revision to avoid unnecessary diversion of critical resources from fabrication tasks</p>	Risk Recovery Action(s)	FC Date	%	Evaluate each proposed change for necessity, cost and schedule impacts, as well as benefit prior to implementing change.	Ongoing	N/A			
Risk Recovery Action(s)	FC Date	%											
Evaluate each proposed change for necessity, cost and schedule impacts, as well as benefit prior to implementing change.	Ongoing	N/A											
RL13 MCSC-0010-T: Maintenance and Storage Facility (MASF) Mockup Construction Subcontractor Performance	<p>The MASF mockup construction contractor fails to perform per the proposal or fails to meet CHPRC expectations, leading to schedule delays.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$350K, 64 days</p>	●	↑	<p><b>Risk Event:</b> The MASF mockup construction contractor has not managed their subcontractors effectively and has submitted fabrication drawings that cannot be approved by CHPRC. Workmanship in the field is not adequate and has resulted in nonconformance report conditions that require rework.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Provide additional oversight of apprentice employees.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide markups of fabrication drawings to shorten review, resubmit and approval cycles.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b> During October, the construction contractor made substantial progress toward completion of the mockup structure. The forecast is to complete the mockup structure and subsequent acceptance testing in November 2020.</p>	Risk Recovery Action(s)	FC Date	%	Provide additional oversight of apprentice employees.	Ongoing	N/A	Provide markups of fabrication drawings to shorten review, resubmit and approval cycles.	Complete	100
Risk Recovery Action(s)	FC Date	%											
Provide additional oversight of apprentice employees.	Ongoing	N/A											
Provide markups of fabrication drawings to shorten review, resubmit and approval cycles.	Complete	100											
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>													
RL13 WFM-0006-T: Major Equipment Failure – T Plant	<p>T Plant suffers a major equipment failure (e.g., crane, primary power supply), resulting in cost impacts and schedule delays.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$3M, 96 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> During planned facility operation activities, a suspected system component is discovered that requires attention or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC contract.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure and receive crane trolley motor parts.</td> <td>12/17/2020</td> <td>5</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in October. The project has commenced mitigating strategies (i.e., aggressive surveillance and maintenance activities) to help reduce this risk. The canyon crane is currently operational, and spare parts have been procured for the most critical spares. Additional spare parts will continue to be procured in FY2021.</p>	Mitigation Action(s)	FC Date	%	Procure and receive crane trolley motor parts.	12/17/2020	5			
Mitigation Action(s)	FC Date	%											
Procure and receive crane trolley motor parts.	12/17/2020	5											
<b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b>													
No high threat value risks identified in October.													

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0013/WBS-013</b>																
<b>FY2020 Key Risks</b>																
RL13 WFM-0012-T: W&FM Solid Waste Operations Complex (SWOC) Contamination Event	<p>A contamination event at SWOC results in cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Unlikely (10% to 25%)</p> <p><b>Worst Case Impacts:</b> \$1.1M, 32 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> A contamination event at SWOC results in cost and schedule 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>Adhere to CHPRC procedures, safety programs and training programs that are designed to minimize the potential of worker injury.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Ship four fiberglass reinforced plywood boxes to PFNW for treatment.</td> <td>09/30/2021</td> <td>0</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in <b>October</b>. This risk was identified as a key project risk for FY2020. The project continued to follow CHPRC procedures and safety programs to minimize any industrial accidents or contamination events.</p>	Mitigation Action(s)	FC Date	%	Adhere to CHPRC procedures, safety programs and training programs that are designed to minimize the potential of worker injury.	Ongoing	N/A	Ship four fiberglass reinforced plywood boxes to PFNW for treatment.	09/30/2021	0			
Mitigation Action(s)	FC Date	%														
Adhere to CHPRC procedures, safety programs and training programs that are designed to minimize the potential of worker injury.	Ongoing	N/A														
Ship four fiberglass reinforced plywood boxes to PFNW for treatment.	09/30/2021	0														
RL13 WFM-0009-T: Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues	<p>A pause in waste processing results in an unexpected container degradation within the SWOC (excluding TRU retrieval activities) and requires additional resources to respond.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$5M, 0 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a “watch list” of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Mine/retrieve and overpack 50 containers (FY2021).</td> <td>9/30/2021</td> <td>0</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in <b>October</b>. Surveillances continue to be performed for the project to identify container and container-cover abnormalities. Surveillance and enhanced monitoring is required on the remaining containers. <b>50 containers are planned to be overpacked in FY2021, reducing the risk of container integrity issues.</b></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	Mine/retrieve and overpack 50 containers (FY2021).	9/30/2021	0
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														
Mine/retrieve and overpack 50 containers (FY2021).	9/30/2021	0														
RL13 WFM-0011-T: CWC/WRAP Components Fail	<p>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.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$2M, 0 days</p>	●	↔	<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>Conduct 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>October</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. Maintenance work at CWC will be scheduled based on facility work priorities.</p>	Mitigation Action(s)	FC Date	%	Conduct doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%														
Conduct doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A														
RL13 WFM-0014-T: As-Found-Unknown Conditions - SWOC Facilities	<p>Unknowns, as found or emergent conditions impact the operability of one or more W&amp;FMP facilities, requiring recovery actions that result in in-scope unplanned work.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$2M, 0 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> Unknowns, as found or emergent conditions impact the operability of one or more W&amp;FMP SWOC facilities, requiring recovery actions that result in in-scope unplanned work.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No changes in <b>October</b>. This risk will be removed from the spotlight chart prior to November reporting, as it is not considered a key risk in FY2021.</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														
RL13 WFM-0016-T: Changes to Ecology Strategy	<p>Ecology issues a permit that significantly differs from planned scope, resulting in both cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$10M, 192 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> Ecology issues a permit that does not align with CHPRC’s plans. RL does not appeal the permit, causing CHPRC to incorporate all permit requirements.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continuous communication and routine meetings to address agency comments.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Periodic meetings with RL to discuss the impacts of Ecology decisions.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No changes in <b>October</b>. This risk will be removed from the spotlight chart prior to November reporting, as it is not considered a key risk in FY2021.</p>	Mitigation Action(s)	FC Date	%	Continuous communication and routine meetings to address agency comments.	Ongoing	N/A	Periodic meetings with RL to discuss the impacts of Ecology decisions.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%														
Continuous communication and routine meetings to address agency comments.	Ongoing	N/A														
Periodic meetings with RL to discuss the impacts of Ecology decisions.	Ongoing	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0013/WBS-013</b>																
RL13 CSA-0011-T: CSA Site Location Found to Have Extensive Contamination	<p>The CSA location is found to have contaminated soil or volumes of unfavorable (e.g., loose) soils.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$20K, 32 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> Significant volumes of contaminated or otherwise unsuitable soils are discovered during CSA construction that cause delays and costs, resulting in the required excavation of additional soil and potentially causing the contamination of leased equipment.</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 October. As of the end of October, excavation of loose foundation materials within the footprints of the CSP and the OP were completed without encountering contamination. However, significant excavation remains related to the installation of the new fire protection raw water line between WESF and CSB; therefore, this risk is retained as a key risk for October. This risk has been accepted because the project has taken great precautions to plan the location of the CSA away from any potential contamination. In the unlikely event that contamination is detected within the CSA site location, project costs and a schedule delay will be accepted, and shipping the contaminated soil to ERDF for disposal will proceed.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A						
Mitigation Action(s)	FC Date	%														
None identified at this time.	N/A	N/A														
WSD-W135-31: Canyon Crane Non-Functional/ Not Serviceable	<p>The WESF crane was put back into limited usage for the W-130 Project; however, the crane is found to be unserviceable or fails during the W-135 Project construction and or operational activities to move Cs/Sr capsules to dry storage.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (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>Perform preventative/corrective maintenance procedures on the crane to facilitate reliability.</td> <td>11/19/2020</td> <td>85</td> </tr> <tr> <td>Procure critical spares.</td> <td>9/30/2021</td> <td>0</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> The completion of the crane PM was delayed 16 days from the October 22, 2020, forecast completion date due to resource constraints and the extension of the preceding work to clean crane rails and repair rail brackets. Facility personnel will complete crane PMs in November 2020. Critical spares will be evaluated and procured prior to the end of FY2021.</p>	Mitigation Action(s)	FC Date	%	Perform preventative/corrective maintenance procedures on the crane to facilitate reliability.	11/19/2020	85	Procure critical spares.	9/30/2021	0			
Mitigation Action(s)	FC Date	%														
Perform preventative/corrective maintenance procedures on the crane to facilitate reliability.	11/19/2020	85														
Procure critical spares.	9/30/2021	0														
RL13 IDF-0010-T: Discovery of Unplanned Site Conditions	<p>Unexpected site conditions are encountered during soil excavation activities, resulting in recovery actions.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Unlikely (10% to 24%)</p> <p><b>Worst Case Impacts:</b> \$240K, 16 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> During excavation (i.e., underground trenching for sewer, electrical and potable water), the project encounters unplanned contamination, debris, legacy waste (drums) or utilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Review of historical as-built drawings.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Site walk downs as needed.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Radiological surveying, as needed.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in October. This risk has been identified as a key project risk for FY2020. Detailed reviews of existing drawings, site walk downs and continuous site radiological surveys throughout excavation efforts are being executed as best practices and included in the baseline; therefore, this risk is accepted with residual probability and consequences.</p>	Mitigation Action(s)	FC Date	%	Review of historical as-built drawings.	Complete	100	Site walk downs as needed.	Ongoing	N/A	Radiological surveying, as needed.	Ongoing	N/A
Mitigation Action(s)	FC Date	%														
Review of historical as-built drawings.	Complete	100														
Site walk downs as needed.	Ongoing	N/A														
Radiological surveying, as needed.	Ongoing	N/A														
<b>Unassigned Risks (Pending ownership of identified risks/opportunities)</b>																
No unassigned risks identified in October.																

## 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	11.0	13.3	14.3	2.3	21.2%	(1.0)	-7.5%

Numbers are rounded to the nearest \$0.1 million.

#### CM Schedule Performance (+\$2.3M/+21.2%)

The CM positive schedule variance is primarily due to the project recovering the schedule for scope planned in prior periods including rebar assembly, fence/gates material procurements, concrete placement for the OP, lighting system work, and continued excavation and installation activities for the fire protection raw water line and CSA power supply. Also contributing is FY2020 performance measurement baseline (PMB) scope not completing as planned and being performed as carryover scope in FY2021. This carryover scope has no additional budgeted cost of work scheduled in the current FY.

#### CM Cost Performance (-\$1.0M/-7.5%)

The CM negative cost variance resulted from the labor absence adder pool not fully liquidated in FY2020 (September 2020), and therefore, was processed in October. Approximately \$1,046.1K of the CM negative cost variance is due to the liquidation of this cost and/or associated general and administrative pool cost that was distributed back to all projects.

An error in the processing of October 2020 labor accruals resulted in costs for the fiscal month of October being understated, which contributed to the CM positive cost variance. Labor accrual costs were incorrectly calculated by the Business Management System (BMS) during cost processing, resulting in the error, which impacted all Hanford Site contractors using the BMS. This error caused October costs for this control account to be understated. The error will be corrected by fiscal month November cost processing, when October accruals are reversed and the associated actual costs are incorporated.

## 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	1,688.1	1,668.1	1,579.5	(19.9)	-1.2%	88.6	5.3%	1,860.5	1,774.9	195.2	85.7

Numbers are rounded to the nearest \$0.1 million.

#### CTD Schedule Performance (-\$19.9M/-1.2%)

The CTD schedule variance is within threshold.

#### CTD Cost Performance (+\$88.6M/+5.3%)

The CTD favorable cost variance is a result of realizing the following efficiencies:

- 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 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 and using project-wide support.
- Optimizing maintenance scheduling and execution and reducing operations fieldwork supervision.
- Increasing emphasis on managing planned absence coverage within existing resources.
- Simplifying and optimizing acquisition and procurement management within W&FMP.
- Eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and the Solid Waste Inventory Tracking System (SWITS).

#### **Variance at Completion (+\$85.7M/+4.6%)**

The CTD VAC favorable cost variance is a result of realizing the following efficiencies:

- 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 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 and using project-wide support.
- Optimizing maintenance scheduling and execution and reducing operations fieldwork supervision.
- Increasing emphasis on managing planned absence coverage within existing resources.
- Simplifying and optimizing acquisition and procurement management within W&FMP.
- Eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and the SWITS.

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

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

RL-0013 Solid Waste Stabilization and Disposition	FY2021		Variance
	Projected Funding	Spending Forecast	
Waste Stabilization and Disposition	206.1	206.1	0.0
Management of Cesium and Strontium Capsules (Line Item)	13.1	13.8	(0.7)
RL-0013 – Total	219.2	219.9	(0.7)

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

The current FY2021 projected funding level is \$219.2 million, and the spend forecast is \$219.9M, for a variance of \$0.7 million over projected funding in the line item project. The FY2021 spending forecast is based on the PMB implemented in October and carryover work scope. The planned work scope and spending forecast in the line item project will be adjusted as necessary and monitored closely to ensure costs will not exceed available funding.

### Critical Path Analysis

Critical path analysis will be provided upon request.

## MILESTONE STATUS

The following table is a one-year look ahead of project breakdown structure (PBS) RL-0013, *Hanford Federal Facility Agreement and Consent Order*-enforceable milestones, non-enforceable target due dates and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-53	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste	9/30/2018			Ecology has not agreed to the change form
M-091-03O	TPA M-091-03O Submit Revision of TRUM Waste and Mixed Low-level Waste to Ecology	6/30/2021		6/30/2021	On schedule
M-091-52-T02	M-091-52-T02 TPA Submit to Ecology an Interim Response Action (IRA) to meet M-91-49A	9/30/2021		9/30/2021	On schedule

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

Contract Section	Project	GFS/I	Status
J.12/C.2.2, C.2.3	PBS RL-0011, <i>Plutonium Finishing Plant Closure Project</i>  PBS RL-0013, <i>Solid and Liquid Waste Treatment and Disposal</i>	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, acts as signatory on the shipping papers and ensures compliance with DOE Manual 460.2-1, <i>Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A</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 treatment, storage and disposal requirements.	Ongoing
J.12/C.2.3.6	PBS RL-0013, <i>Transuranic Waste Certification</i>	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-Headquarters 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
RL Review/Approve CSA Preliminary Documented Safety Analysis (first FY)	5/16/2019(A)	10/29/2020
RL Review/Approve Project W-135, WESF Modifications, Critical Decision (CD)-2 and CD-3 Documentation	7/27/2020(A)	11/24/2020
RL Approve IDF Final Hazard Categorization	8/3/2020(A)	11/5/2020

# Section D

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

**CH2MHILL**  
**Plateau Remediation Company**  
*a Jacobs company*



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

**J. A. Lerch**  
Vice President for  
Environmental Program  
and Strategic Planning

**M. A. Wright**  
Vice President for  
Project Technical  
Services

October 2020  
CHPRC-2020-10, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

In October, pump and treat (P&T) operations continued progress on the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* remedial process documentation for the River Corridor and Central Plateau. Groundwater treatment and well drilling (including development) that was completed include 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	29.9	29.9	1.9	1.9						
HX P&T	26.0	26.0	3.6	3.6						
KR-4 P&T	12.6	12.6	0.2	0.2						
KW P&T	12.4	12.4	1.0	1.0						
KX P&T	26.5	26.5	1.3	1.3						
200 West P&T	105.8	105.8	1.2	1.2	159.0	159.0	2.32x10 <sup>11</sup>	2.32 x10 <sup>11</sup>	9.1	9.1
<b>Combined</b>	213.2	213.2	9.2	9.2	159.0	159.0	2.32x10 <sup>11</sup>	2.32 x10 <sup>11</sup>	9.1	9.1
<b>FY2021 Gold Metric</b>	<b>184</b>	<b>2,200.0</b>	<b>7</b>	<b>80.0</b>	<b>150</b>	<b>1,800.0</b>	<b>2.315E+11</b>	<b>2.4Ci</b>	<b>7</b>	<b>90.00</b>

Current month (CM) Fiscal year (FY) to date (TD)

Well Drilling Completion by Area*	FY2021 Planned	Current Calendar Month	FY2021 Cumulative
100-KR-4	1	0	0
100-HR-3	6	0	0
100-NR-2	1	0	0
M-24 Milestone	16	0	0
<b>Total FY2021 Wells</b>	<b>24</b>	<b>0</b>	<b>0</b>
<b>Site Wide Boreholes</b>	<b>4</b>	<b>0</b>	<b>0</b>
	<b>FY2020 Carryover</b>	<b>Current Calendar Month</b>	<b>Cumulative</b>
100-HR-3	5	1	1
200-DV-1	2	0	0
200-ZP-1	7	0	0
M-24 Milestone	3	1	1
<b>Total FY2020 Carryover Wells</b>	<b>17</b>	<b>2</b>	<b>2</b>

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

## EMS Objectives and Target Status

Objective #	Objective	Due Date	Status
21-EMS-SGRP-OBJ1-P1	Prevent 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.	7/30/2021	25%
21-EMS-SGRP-OBJ2-P1	Soil and Groundwater Remediation Project operates six P&T facilities that remove contaminants from groundwater at the Hanford Site. The goal is to treat and remediate a total of 2.2 billion gallons of groundwater.	9/30/2021	8%

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

## KEY ACCOMPLISHMENTS

### Environmental Integration

- Issued the Central Plateau Principles and Parameters as a standalone document referenced through the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement). The Principles and Parameters document establishes the framework to guide consistent cleanup decision-making for the Central Plateau inner area.

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

- Provided DOE/RL-2020-42, *Parent Rebound Study Sampling and Analysis Plan for the 100-KR-4 Operable Unit*, Decisional Draft, to the U.S. Department of Energy (DOE), Richland Operations Office, (RL) for review.
- Transmitted the signed SGW-65174, *Groundwater Vertical Sampling Instruction for the 100-KR-4 Operable Unit*, Revision 0, to RL and the U.S. Environmental Protection Agency (EPA) on October 26, 2020.

### Central Plateau

#### 200-ZP-1 OU

- Transmitted DOE/RL-2008-78, *200 West Area 200-ZP-1 Pump-and-Treat Remedial Design/Remedial Action Work Plan*, Revision 1, on October 5, 2020, to RL for transmittal to EPA.

### Groundwater Science Program

- Transmitted SGW-65236, *Post-Closure Corrective Action Groundwater Monitoring Report for the 183-H Solar Evaporation Basins: January – June 2020*, Revision 0, to RL on October 14, 2020, for transmittal to the Washington State Department of Ecology (Ecology).
- Transmitted SGW-65168, *Post-Closure Corrective Action Groundwater Monitoring Report for the 300 Area Process Trenches: January – June 2020*, Revision 0, to RL on October 13, 2020, for transmittal to Ecology.
- Transmitted DOE/RL-2019-68, *Calendar Year 2019 Annual Summary Report for Pump and Treat Operations in the Hanford Central Plateau Operable Units*, Revision 0, to RL on October 6, 2020.
- Transmitted SGW-65024, *Opportunistic Sampling Program Sampling and Analysis Plan/Work Instruction During the Drilling of Milestone M-24 Wells at LLGB WMA-1*, Revision 0, to RL on October 5, 2020.

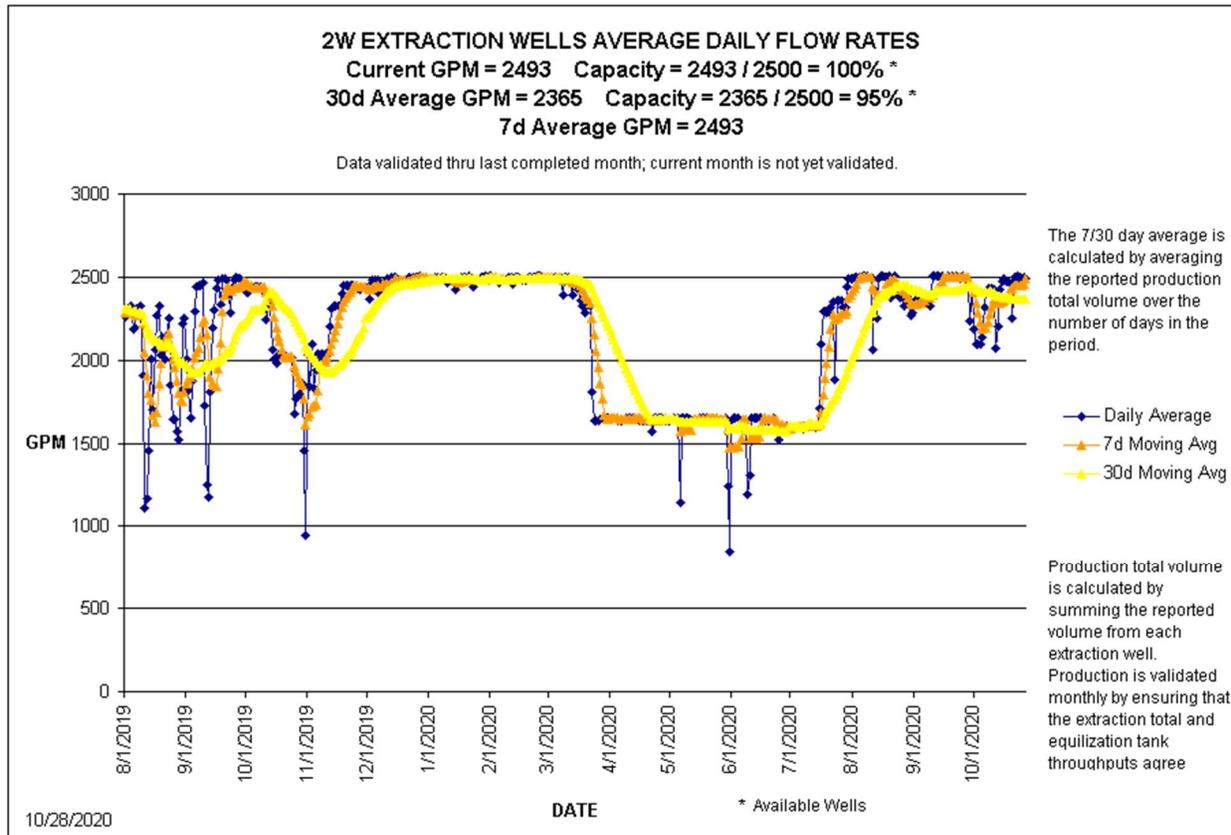
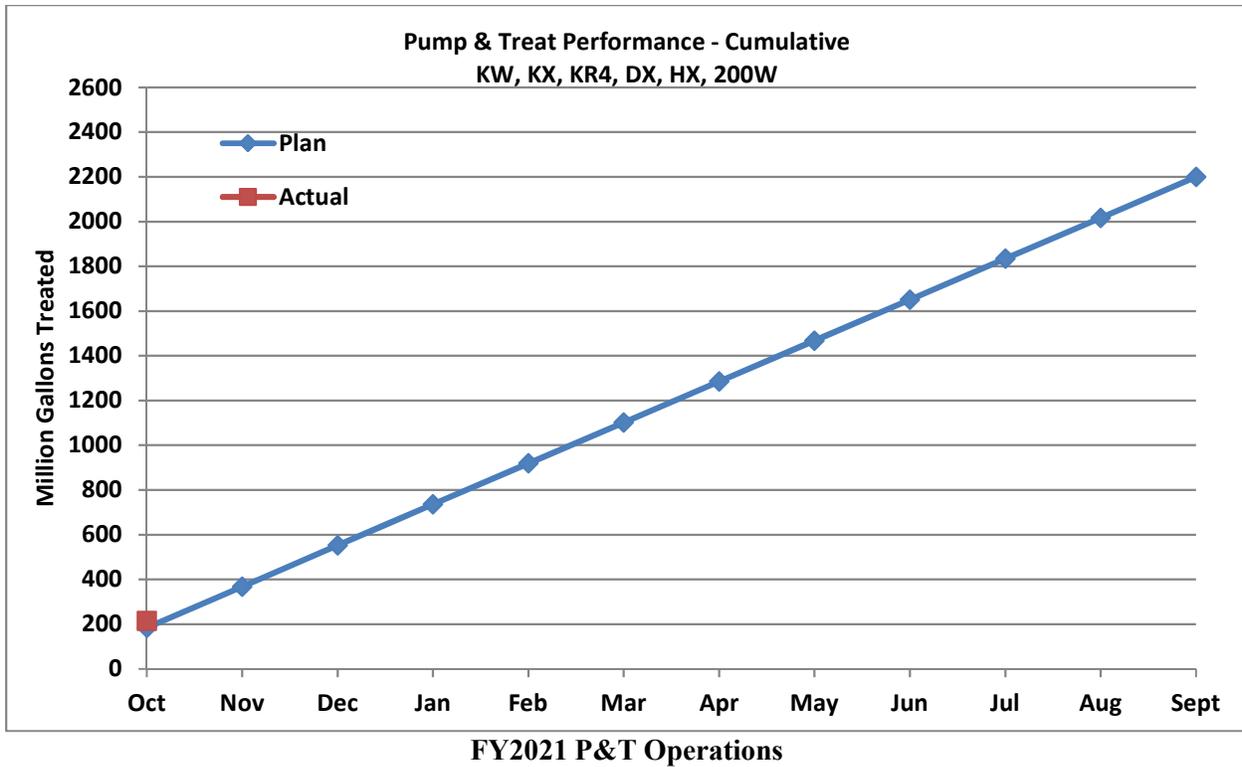
### Groundwater P&T Facilities

#### 200 West P&T

- Operated the 200 West Area P&T at an average of 2,365 gpm.
- Completed carbon removal from the fluidized bed reactor on October 1, 2020.

#### 100 Area P&Ts

- Operated the DX P&T at 671 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 282 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 277 gpm, below the facility capacity of 330 gpm.
- Operated the KX P&T at 596 gpm, below the facility capacity of 900 gpm.
- Operated the HX P&T at 575 gpm, below the facility capacity of 900 gpm.



## MAJOR ISSUES

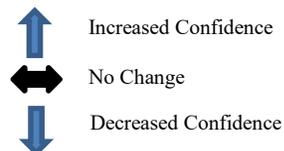
**Issue**

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.



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>										
1. Risk identification numbers and verbiage were updated to align with the values in the Enterprise Risk and Opportunity Management System for FY2021. 2. Realized risks associated with 216 closure plans where updated to reflect the revised October risk posture with a low probability, now that the closure plans have been formally submitted as a single bulk package with RL concurrence.										
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>										
RL30 DOC-0003-T: 216-B-63 Closure Plan Atypical Comments	Atypical 216-B-63 comments result in multiple rounds of comment resolution that require additional effort and duration.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Unlikely (10% to 25%) <b>Worst Case Impacts:</b> \$174.0K, 32 days	<span style="color: red; font-size: 2em;">●</span>	<span style="color: blue; font-size: 2em;">↑</span>	<p><b>Risk Event:</b> RL's 216-B-63 Closure Plan comments provided in June 2019 requested removal of the pipeline for consistency with the 241-CX Tank System Closure Plan and because they were being addressed in the 200-IS-1 OU. CH2M HILL Plateau Remediation Company (CHPRC) was coordinating with both RL and Ecology to resolve these comments while the review was ongoing. Efforts to resolve the pipeline comment were nearing completion between RL and Ecology in July 2019 when additional Ecology comments and research requests were provided from the new Ecology lead. The issue has grown to include a more global conveyance discussion (based on a December 2019 meeting), and new comments have been received that requested additional historic information (based on a January 2020 meeting). CHPRC continues with efforts to support RL in resolving the original pipeline comments and the new comments. Ecology has expressed the desire to incorporate the resolutions into the two other closure plans currently in process (216-S-10 and 216-B-3), as well as other closure plans already certified or frozen. RL or CHPRC have not acted on this request. The issues will be revisited once resolution is reached within this 216-B-63 Closure Plan.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #f2f2f2;"> <th style="width: 70%;">Recovery Action(s)</th> <th style="width: 15%;">FC Date</th> <th style="width: 15%;">%</th> </tr> </thead> <tbody> <tr> <td>CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> No significant changes in October. CHPRC has formally submitted the 216-A-29, 216-B-3, 216-B-63 and 216-S-10 Closure Plans as a single bulk closure planning package to RL senior management. Following certification by RL senior management, clearance of the closure plans can be completed and transmitted to Ecology for final lockdown and official removal of this risk.</p>	Recovery Action(s)	FC Date	%	CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.	Ongoing	N/A
Recovery Action(s)	FC Date	%								
CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.	Ongoing	N/A								

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0030/WBS-030</b>										
<b>RL30 DOC-0004-T:</b> 216-S-10 Closure Plan Atypical Comments	Atypical 216-S-10 comments result in multiple rounds of comment resolution that require additional effort and duration.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Unlikely (10% to 25%) <b>Worst Case Impacts:</b> \$174.0K, 32 days	●	↑	<b>Risk Event:</b> RL and Ecology comments were originally received in April 2019. Since that date, additional Ecology comments were received in August, November and December 2019 as part of Ecology’s “confirm comment capture” task. Additional comments were received via the 216-B-63 Closure Plan review.  <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Recovery Assessment:</b> No significant changes in October. CHPRC has formally submitted the 216-A-29, 216-B-3, 216-B-63 and 216-S-10 Closure Plans as a single bulk closure planning package to RL senior management. Following certification by RL senior management, clearance of the closure plans can be completed and transmitted to Ecology for final lockdown and official removal of this risk.	Recovery Action(s)	FC Date	%	CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.	Ongoing	N/A
Recovery Action(s)	FC Date	%								
CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.	Ongoing	N/A								
<b>RL30 DOC-0001-T:</b> 216-A-29 Closure Plan Atypical Comments	Atypical 216-A-29 comments result in multiple rounds of comment resolution that require additional effort and duration.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Unlikely (10% to 25%) <b>Worst Case Impacts:</b> \$174.0K, 32 days	●	↑	<b>Risk Event:</b> This closure plan was “frozen” by Ecology in April 2019, with the remaining activity of certification and transmittal to occur concurrently with the in-process 216-B-63, 216-B-3 and 216-S-10 Closure Plans. During the 216-B-63 Closure Plan comment resolution meeting held in December 2019, Ecology expressed a desire to update the 216-A-29 Closure Plan upon resolution of the conveyance discussions. During the January 2020 conveyance follow-up meeting with Ecology, new comments were provided regarding a request for additional historical information and an informal statement that the other certified or frozen closure plans may also need to be revised accordingly.  <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Recovery Assessment:</b> No significant changes in October. CHPRC has formally submitted the 216-A-29, 216-B-3, 216-B-63 and 216-S-10 Closure Plans as a single bulk closure planning package to RL senior management. Following certification by RL senior management, clearance of the closure plans can be completed and transmitted to Ecology for final lockdown and official removal of this risk.	Recovery Action(s)	FC Date	%	CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.	Ongoing	N/A
Recovery Action(s)	FC Date	%								
CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.	Ongoing	N/A								
<b>RL30 KR4-0004-T:</b> FS (Feasibility Study) – Greater Than Expected Comments from RL or Regulators	Comments from RL or other regulators on the FS document (Draft B and Draft Revision 0) submitted for review/approval are atypical, need multiple rounds of comment resolution, are global in nature, or are causing both 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> \$120.0K, 32 days	●	↔	<b>Risk Event:</b> After completion of EPA review, the project is required to disposition more comments than planned and resolve global policy issues associated with the application of the Technical Impracticability (TI) waiver, resulting in in-scope and unplanned work.  <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>No discrete mitigation actions have been identified to further reduce the probability and consequences of this risk; therefore, the impacts identified are considered accepted by the project.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Recovery Assessment:</b> EPA completed review of the FS and provided comments in September 2020. Preliminary assessment of the comments indicate that 279 comments were received. The baseline assumption planned for only 200 comments to be dispositioned. Additionally, there are significant policy issues associated with the applicability of the TI waiver that could take up to six months to address.	Recovery Action(s)	FC Date	%	No discrete mitigation actions have been identified to further reduce the probability and consequences of this risk; therefore, the impacts identified are considered accepted by the project.	Ongoing	N/A
Recovery Action(s)	FC Date	%								
No discrete mitigation actions have been identified to further reduce the probability and consequences of this risk; therefore, the impacts identified are considered accepted by the project.	Ongoing	N/A								
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No Critical Risks identified in October.										
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)										
No High Risks identified in October.										

Risk Title	Unmitigated Risk Impacts	Assessment		Comments		
		Month	Trend			
<b>RL-0030/WBS-030</b>						
<b>FY2020 Key Risks</b>						
<b>RL30 TI-0003-T: TI- Key Environmental Modeling Hardware Failure</b>	Computer hardware components for environmental modeling fail, requiring immediate replacement and resulting in cost and schedule impacts to CHPRC and other Hanford Site contractor's projects.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Somewhat Likely (26% to 74%) <b>Worst Case Impacts:</b> \$350K, 24 days			<b>Risk Event:</b> A primary node of the Gaia Environmental modeling super computer server fails. This failure results in delays to composite analysis and cumulative impact evaluation work activities and requires the purchase and validation of new components.		
				<table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Implement the use of a virtual server for modelling activities.</td> <td>TBD</td> <td>0</td> </tr> </tbody> </table>	Mitigation Action(s)	FC Date
Mitigation Action(s)	FC Date	%				
Implement the use of a virtual server for modelling activities.	TBD	0				
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)						
No unassigned risks identified in <b>October</b> .						

## 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	6.0	8.1	7.4	2.1	34.5%	0.7	8.4%

Numbers are rounded to the nearest \$0.1 million.

### CM Schedule Performance (+\$2.1M/+34.5%)

The CM positive schedule variance is primarily driven by significant progress on 100-HR-3, 200-ZP-1, and Tri-Party Agreement Milestone M-024-00 well drilling campaigns, which were planned in FY2020 but were delayed due to the RL-directed March 24, 2020, partial stop work order for non-portable work that was extended through September 30, 2020. In addition, factory acceptance testing for the procurement of an ion exchange treatment train proceeded in October after lengthy delays due to COVID-19 driven facility closure, as well as instrumentation changes and upgrades.

### CM Cost Performance (+\$0.7M/+8.4%)

The CM positive cost variance is primarily attributed to an under run experienced on the Tri-Party Agreement Milestone M-024-00 (M24) FY2020 well drilling campaign, which progressed in October. The M24 wells were planned using a prior campaign as a basis. However, the drilling contract was awarded at a much lower value, less sampling was required and one well drilled in October was found to be dry, so it was decommissioned, generating cost savings.

An error in the processing of October 2020 labor accruals resulted in costs for fiscal month of October being understated, which contributed to the CM positive cost variance. Labor accrual costs were incorrectly calculated by the Business Management System (BMS) during cost processing, resulting in the error, which impacted all Hanford Site contractors using the BMS. This error caused October costs for this control account to be understated. The error will be corrected by fiscal month November cost processing when October accruals are reversed and the associated actual costs are incorporated.

## 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	1,761.2	1,741.3	1,684.9	(19.8)	-1.1%	56.5	3.2%	1,859.4	1,801.8	117.0	57.5

Numbers are rounded to the nearest \$0.1 million.

### CTD Schedule Performance (-\$19.8M/-1.1%)

The CTD negative schedule variance is within reporting thresholds.

### CTD Cost Performance (+\$56.5M/+3.2%)

The CTD positive cost variance is within reporting thresholds.

### Variance at Completion (+\$57.5M/+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	FY2021		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	127.9	127.9	0.0

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

The FY2021 projected funding level is \$127.9 million, and the spend forecast is \$127.9 million, leaving no variance. The FY2021 spending forecast is based on the performance measurement baseline implemented in October and carryover work scope.

### Critical Path Analysis

Critical path analysis will be provided upon request.

## MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-93C	Initiate Characterization Fieldwork for 200-SW-2 Operable Unit Landfills	9/30/2018		To be determined (TBD)	In abeyance
M-015-98	Complete Remedial Investigation of U Plant Related Waste Sites located in 200-WA-1	6/30/2019		TBD	In abeyance
M-085-70	Submit to Ecology a Remedial Investigation/Feasibility Study Work Plan for 200-CP-1	9/30/2019		2/20/2023	In abeyance
M-015-99	Complete Remedial Investigation of Plutonium Finishing Plant (PFP) Related Waste Sites Located in 200-WA-1	12/31/2019		TBD	In abeyance
M-015-112	Submit Draft B 200-IS-1 RFI/CMS/RI/FS Work Plan to Ecology with Schedule Dates	11/30/2020		3/7/2023	In abeyance
M-024-58N	Initiate Discussions of Well Commitments	6/1/2021		6/1/2021	On schedule
M-024-72-T01	Conclude Discussions of Well Commitments Initiated Under M-024-58	8/1/2021		8/1/2021	On schedule
M-085-90	Submit Remedial Investigation/Feasibility Study Work Plan for 200-CR-1 to EPA	9/30/2021		5/20/2023	In abeyance

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

None currently identified.

**DOE ACTIONS/DECISIONS\***

Description	CHPRC Delivery Date	Expected RL Due Date
RL Approve 100-HR-3 Remedial Design/Remedial Action Work Plan (RD/RAWP) Revision 0	6/18/2020 (A)	11/27/2020
RL Certify and Submit 216-S-10 Pond and Ditch Closure Plan Addendum H to Ecology	9/29/2020 (A)	11/10/2020
RL Certify and Submit 216-B-63 Trench Closure Plan Addendum H to Ecology	9/29/2020 (A)	11/10/2020
RL Certify and Submit 216-B-3 Pond Closure Plan Addendum H to Ecology	9/30/2020 (A)	11/10/2020
RL Certify and Submit 216-A-29 Ditch Closure Plan Addendum H to Ecology	9/29/2020 (A)	11/10/2020
RL Review of KW Rebound Study Parent Sampling and Analysis Plan (SAP) Draft	10/19/2020 (A)	11/11/2020
RL Review of 100-KE Soil Flushing Explanation of Significant Difference	11/13/2020	12/12/2020
RL Review of 100-D-H Waste Site Closeout Package C	11/16/2020	12/1/2020
RL Transmit Final 100-HR-3 RD/RAWP Revision 0 to Ecology	11/18/2020	11/27/2020
RL Review 200-BP-5/200-PO-1 Decisional Draft IA RD/RAWP	12/1/2020	12/30/2020
RL Transmit 100-KE Soil Flushing Explanation of Significant Difference to EPA	12/31/2020	1/14/2021
RL Review 200-PO-1 Decisional Draft Conceptual Site Model SAP	1/5/2021	2/3/2021
RL Transmit ZP-1 Operation and Maintenance Plan, Draft A, to EPA	1/12/2021	1/26/2021
RL Review KR-4 FY2021 Parent Rebound KW SAP Addendum	1/12/2021	2/10/2021

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

# Section E

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

**CH2MHILL**  
**Plateau Remediation Company**  
*a Jacobs company*



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

October 2020  
CHPRC-2020-10, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

**J. L. Casper**  
Vice President for  
Plutonium Finishing Plant  
Closure/West Area  
Remediation Projects

## PROJECT SUMMARY

In October, the Central Plateau Risk Management (CPRM) Aging Structures team completed fabrication of the conveyance and ventilation systems and all site preparations for stabilization of the 216-Z-2 and 216-Z-9 Cribs and the 241-Z-361 Tank. At the Reduction-Oxidation (REDOX) facility, crews completed non-destructive assays (NDAs) of nitric acid and hexone transfer lines outside of the main facility to progress the cold and dark process. Also, construction of the Container Transfer Area completed and all appropriate radiological chains and signage has been hung. Crews at the 224B Facility completed ultrasonic testing of the chemical and piping systems on the clean side of all three floors and the exterior of the south side of the facility to confirm no presence of liquids within the system. Additionally, crews completed all hazardous material removals throughout the non-cell side of the facility and abatement of all Class 2 asbestos on the first and second floors. At U Plant, crews continued interference removals, allowing for abatement of 70 feet of asbestos-contaminated piping insulation. Finally, the Plutonium Uranium Extraction Plant (PUREX) North team installed a new access gate on the north side of the PUREX fence line and completed the electrical isolation of the 2701AB Facility. The West Area Remediation Project (WARP) team completed the hazardous waste removal, demolition and debris loadout of six former mobile office trailers (MO211, MO2114, MO2115, MO2116, MO2506 and MO6500) in the South Trailer Village. Crews completed electrical and mechanical isolations for the 234-5-BA and 234-5Z-BE Boiler Annexes. Crews also installed temporary power for the South Trailer Village, began electrical isolations to the remainder of the South Trailer Village, and continued hazardous waste removal.

### EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
21-EMS-CPRM-OBJ1-P1	Spill Prevention, Universal Waste, and Recycling Compliance	On a monthly basis, monitor and evaluate representative universal waste and recycling accumulation areas within the CPRM project.	9/30/2021	8%

## 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	2	11	10/8/2020 – Employee noticed an itching sensation while performing a visual inspection in the field. Employee was taken to HPM Corporation (HPMC), received wound skin care and returned to work without restrictions. (25586)  10/19/2020 – While walking on site, an employee stepped on a rock(s), causing the employee to lose balance and fall to the ground. Employee was taken to HPMC, received wound skin care and returned to work without restrictions. (25590)
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### Central Plateau Risk Management

#### Surveillance and Maintenance (S&M)

- Completed cleanup and packaging of white powder in the Aqueous Makeup Unit at PUREX.
- Completed annual airflow and aerosol testing for PUREX and REDOX exhaust systems.

#### REDOX Canyon Risk Mitigation

- Completed Phase I corrective actions.
- Completed electrical verification of the south sample gallery and first floor silo.
- Completed installation of medium voltage distribution of the 291S power drop.
- Completed NDAs of nitric acid and hexone transfer lines outside of the main facility.

#### Aging Structures Stabilization

- Completed fabricating the conveyance and ventilation systems for the 216-Z-2 and 216-Z-9 Cribs and 241-Z-361 Tank.
- Completed site preparations and installation of the conveyance systems for the 216-Z-2 Crib, 241-Z-361 Tank and 216-Z-9 Crib.

#### 224B Facility Demo Prep

- Completed workability review for the 224B Initial Cell Entry work package.
- Completed Class 2 abatement on the first and second floors of the 224B Facility.
- Completed above 8-foot and below 8-foot characterization of the clean side of the 224B Facility.
- Completed hazmat removal of the clean side of the 224B Facility.

**PUREX North Risk Mitigation**

- Completed mechanical and electrical isolation indexes for 2714A and 214A.
- Installed a gate to improve access to the PUREX North yard for future demolition fieldwork.
- Completed electrical isolations of the 2701AB Facility.
- Completed radiological surveys on the roof of the 2701AB Facility to complete characterization efforts.

**West Area Remediation Project**

- Completed hazardous waste removal and demolition and debris loadout of six former mobile office trailers (MO211, MO2114, MO2115, MO2116, MO2506 and MO6500) in the South Trailer Village.
- Crews completed the electrical and mechanical isolations for the 234-5Z-BA and 234-5Z-BE Boiler Annexes.
- Crews also installed temporary power for the South Trailer Village, began electrical isolations to the remainder of South Trailer Village and continued hazardous waste removal.

## MAJOR ISSUES

**Issue**

Management directed a work stand down at the REDOX canyon on October 2, 2019, to address a variety of issues, including step-off pad (SOP) upgrades, temporary lighting and lack of ventilation throughout the facility. This management-directed work stand down was intended to obtain feedback from REDOX personnel about recommendations to improve the infrastructure at REDOX to support future work scope and minimize the risk of potential issues the project has previously experienced.

**Corrective Action**

On October 3, 2019, CPRM and REDOX management held a meeting with REDOX personnel to identify all issues and concerns that workers experience while performing risk mitigation activities at REDOX. From this meeting, a list of actions was developed and assigned to functional managers. A phased approach was established and categorized into two sections to address the issues identified and captured as actions. Phase I consisted of improving infrastructure that would better facilitate entries into radiologically posted areas at REDOX and reviewing all governing documentation (i.e., work packages, radiological work permits) for adequacy. Phase II addressed the working conditions on the interior of REDOX in radiologically posted areas, including ways to improve ventilation and temporary power needs in the areas where risk mitigation activities were being performed. The list of actions is updated weekly and posted in a location that is easily accessible to all REDOX personnel.

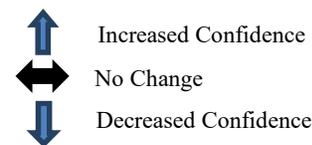
**Status**

With engagement from REDOX personnel, REDOX management identified a path of improving the infrastructure at REDOX that includes moving the radiation zone SOP outside the facility. Phase I corrective actions were completed in October. Phase II corrective actions are in progress to upgrade power, lighting and temporary ventilation. Delayed personal protective equipment (PPE) certifications due to coronavirus (COVID-19) impacts have pushed Phase 2 completion into March 2021.

## RISK MANAGEMENT STATUS

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

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0040/WBS-040</b>																
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risk identification numbers and verbiage were updated to align with the values in the Enterprise Risk and Opportunity Management System for fiscal year (FY) 2021. Risk 224B-0006, <i>Impacted by OHC (Other Hanford Contractors) or Other CH2MHill Plateau Remediation Company (CHPRC) Projects</i> , was removed from the spotlight chart, as it is no longer being realized. Risk RL40 REDOX-0005-T, <i>Collapse of Sand Filter</i> , was moved to the Key Risk section of the spotlight chart, as it is no longer considered a critical risk in FY2021. Risks RL40 WARP-0003-T, <i>Facility Integrity</i> , and RL40 WARP-0001-T, <i>Regulatory Documents Delayed</i> , were added to the spotlight chart as key risks.																
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>																
RL40 REDOX-0008-T: Concerned Citizen	Delays caused by public concern (i.e., stakeholders, other Hanford Site workers and concerned citizens) impact the project schedule and technical approach, resulting in recovery actions and causing unplanned, in-scope work.  <b>Risk Handling Strategy:</b> Mitigate  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$350K, 48 days	<span style="color: red;">●</span>	↓	<b>Risk Event:</b> A concerned citizen called a stop work, which caused delays and unplanned work necessary to address the required action.  <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>Procure and install the SOP trailer, decontamination trailer, and portable emergency chemical shower.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Create and implement a phased approach to address identified concerns.</td> <td>March 2020</td> <td>82</td> </tr> <tr> <td>Upgrade temporary power/lighting and localized ventilation.</td> <td>January 2020</td> <td>50</td> </tr> </tbody> </table> <b>Recovery Action Assessment:</b> This risk was realized in October 2019. A detailed corrective action list was created with REDOX personnel input. A phased approach schedule was developed and implemented to address infrastructure upgrades necessary to support future work demands. Action items have been assigned to the appropriate responsible manager, and REDOX management is interfacing with personnel for weekly updates on corrective actions. Phase I corrective actions completed in October. Phase II corrective actions have been delayed due to required off-site PPE certification requirements and COVID-19 delay impacts.	Risk Recovery Action(s)	FC Date	%	Procure and install the SOP trailer, decontamination trailer, and portable emergency chemical shower.	Complete	100	Create and implement a phased approach to address identified concerns.	March 2020	82	Upgrade temporary power/lighting and localized ventilation.	January 2020	50
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Create and implement a phased approach to address identified concerns.	March 2020	82														
Upgrade temporary power/lighting and localized ventilation.	January 2020	50														
RL40 REDOX-0013-T: Facility Integrity	Problems with aging building systems and components (e.g., roofing and overall structure) result in inoperability or require unscheduled maintenance or outages that impact planned decontamination and decommissioning activities, resulting in schedule delays and cost impacts.  <b>Risk Handling Strategy:</b> Transfer  <b>Probability:</b> Somewhat likely (26% to 74%) <b>Worst Case Impacts:</b> \$0, 0 days	<span style="color: red;">●</span>	↓	<b>Risk Event:</b> A leaking roof results in unsafe working conditions for personnel.  <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>Perform cold and dark activities to shut off building power.</td> <td>February 2021</td> <td>46</td> </tr> <tr> <td>Repair minor roof defects.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Recovery Action Assessment:</b> Integrity failures could lead to water issues within radiologically contaminated areas, causing a hazard to personnel. Going to a cold and dark state will minimize the risk for electrical shock due to water. Electrical cold and dark activities have slowed, with electrical engineers and electricians unable to access specific locations of REDOX to continue building the electrical isolation index. Project workers continue to make minor repairs to reduce water intrusion. Electrical isolation indexing activities are expected to increase in November 2020. Work package revisions are in progress; however, delays in required off-site PPE certification due to COVID-19 impacts have resulted in delayed progress.	Risk Recovery Action(s)	FC Date	%	Perform cold and dark activities to shut off building power.	February 2021	46	Repair minor roof defects.	Ongoing	N/A			
Risk Recovery Action(s)	FC Date	%														
Perform cold and dark activities to shut off building power.	February 2021	46														
Repair minor roof defects.	Ongoing	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0040/WBS-040</b>																
RL40 REDOX-0018-T: Ventilation System - Unexpected Design Changes	<p>Unexpected ventilation system design changes result in rework of planned scope, resulting in cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$100K, 32 days</p>			<p><b>Risk Event:</b> Necessary design changes have been identified for the REDOX ventilation system, including previously unidentified features for successful operation, requirements for fire detection or functionality/communication and system inlet/outlet to the facility.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Design and procurement of the 291S power distribution.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Design, fabrication and planning for procurement of the 202S ventilation system.</td> <td>January 2021</td> <td>80</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b> The project team continues to integrate CPRM Engineering and Facility Design Authorities with the vendor for the objective of early detection of unexpected or emerging design changes to mitigate schedule and cost impact. Necessary procurement of replacement flexible duct connectors has delayed final delivery, with an estimate to complete in January.</p>	Risk Recovery Action(s)	FC Date	%	Design and procurement of the 291S power distribution.	Complete	100	Design, fabrication and planning for procurement of the 202S ventilation system.	January 2021	80			
Risk Recovery Action(s)	FC Date	%														
Design and procurement of the 291S power distribution.	Complete	100														
Design, fabrication and planning for procurement of the 202S ventilation system.	January 2021	80														
RL40 ZSS-0003-T: Latent Condition Impacts	<p>Unknowns, as found or emergent conditions impact the Z Structure stabilization efforts, resulting in in-scope unplanned work and subsequently resulting in cost and schedule impacts.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$500K, 16 days</p>			<p><b>Risk Event:</b> Subcontractor change orders for unknown and as-found conditions resulted in the project experiencing cost and schedule impacts. The project was directed to place a dedicated camera trailer for oversight of project activities, instead of relying on existing overhead cameras, resulting in cost impacts to the project. The project discovered an obstruction in the 216-Z-2 Crib that prevents access to the void space.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Review and process change orders as appropriate to mitigate cost and schedule impacts.</td> <td>December 2020</td> <td>10</td> </tr> <tr> <td>Install dedicated camera trailer for project oversight.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Research potential recovery actions for grouting 216-Z-2 Crib void space.</td> <td>December 2020</td> <td>25</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b> Latent conditions regarding environmental compliance, access and riser load limitations have resulted in multiple change orders that are currently under review. The project baseline assumed that cameras deployed in each structure combined with the existing overhead cameras would be sufficient for oversight; however, the U.S. Department of Energy (DOE), Richland Operations Office (RL) directed CHPRC to contract with Mission Support Alliance, LLC (MSA) to deploy a camera system at the structures. The camera was deployed in October, and procurement activities to replace the trailer for MSA are ongoing. Additionally, in October, an unknown obstruction was discovered in the 216-Z-2 Crib that prevents access to the void space to complete investigations and place grout. Recovery options are in development and are being ranked by engineering personnel and the project team.</p>	Risk Recovery Action(s)	FC Date	%	Review and process change orders as appropriate to mitigate cost and schedule impacts.	December 2020	10	Install dedicated camera trailer for project oversight.	Complete	100	Research potential recovery actions for grouting 216-Z-2 Crib void space.	December 2020	25
Risk Recovery Action(s)	FC Date	%														
Review and process change orders as appropriate to mitigate cost and schedule impacts.	December 2020	10														
Install dedicated camera trailer for project oversight.	Complete	100														
Research potential recovery actions for grouting 216-Z-2 Crib void space.	December 2020	25														
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in October.																
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																
No high threat value risks identified in October.																
<b>FY2021 Key Risks</b>																
RL40 BOS-0010-T: Facility Integrity Outside CHPRC Control	<p>Problems with aging building, systems or components (e.g., roofing/structures, etc.) result in inoperability or recovery actions, causing unplanned work outside of CHPRC's scope of work or resulting in cost impacts outside of CHPRC's ability to manage.</p> <p><b>Risk Handling Strategy:</b> Transfer</p> <p><b>Probability:</b> Somewhat likely (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$0M, 0 days</p>			<p><b>Risk Triggers:</b> The project experiences problems with aging building systems and components (e.g., cribs, roofing and structures) during routine S&amp;M activities. Scheduled maintenance activities must then be performed in addition to unplanned recovery actions.</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> The essential mission-critical operations facility integrity risk is no longer considered a key risk in FY2021. This risk will be removed from the stoplight chart prior to November reporting. The mitigation actions and assessment that had been tracked under this risk are truly mitigation actions for risk RL40 WARP-0003T, <i>Facility Integrity</i>, and have been moved to that risk for continued reporting.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A						
Mitigation Action(s)	FC Date	%														
None identified at this time.	N/A	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
<b>RL-0040/WBS-040</b>													
RL40 REDOX-0005-T: Collapse of Sand Filter	<p>Due to the close proximity of equipment in operation (e.g., cranes, forklifts used for waste loadout, and steam lines and steam line stanchion removal activities), 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> Mitigate</p> <p><b>Probability:</b> Very unlikely (&lt;10%) <b>Worst Case Impacts:</b> \$260K, 64 days</p>	●	↔	<p><b>Risk Triggers:</b> Due to the close proximity of equipment in operation (e.g., cranes, forklifts used for waste loadout and steam line stanchion removal activities), 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>December 2020</td> <td>51</td> </tr> <tr> <td>Implement a communication plan between OHCs and other CHPRC projects.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> Current work scope has not yet impacted this potential risk. Based on the contractor schedule, new temporary exhausters for REDOX are not expected to arrive until <b>late January 2021 due to design complications and ongoing delayed shipping and testing requirements for the high-efficiency particulate air filters.</b> Based on this information, the current plan would move any excavation work near the sand filters to <b>December 2020.</b></p>	Mitigation Action(s)	FC Date	%	Establish sand filter access boundary.	December 2020	51	Implement a communication plan between OHCs and other CHPRC projects.	Ongoing	N/A
Mitigation Action(s)	FC Date	%											
Establish sand filter access boundary.	December 2020	51											
Implement a communication plan between OHCs and other CHPRC projects.	Ongoing	N/A											
RL40 REDOX-0016-T: Ventilation System - Changes to Stack Monitoring Requirements Affect the Project Schedule	<p>Additional stack and stack monitoring requirements are issued by the regulators, resulting in cost impacts and schedule delays to the project.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%) <b>Worst Case Impacts:</b> \$1M, 384 days</p>	●	↑	<p><b>Risk Triggers:</b> Regulators issued recommendations for additional stack and stack monitoring requirements that mandate significant changes to the current plan. The supplemental ventilation unit is currently identified in the air-monitoring plan (AMP), as well as the associated monitoring requirements for the existing stack.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Negotiate changes to the AMP with regulators.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> CHPRC continues to meet with representatives of RL, the U.S. Environmental Protection Agency (EPA) and Washington Department of Health (DOH) to discuss the ventilation improvements proposed for REDOX to gain endorsement on the proposed changes to the system and stack monitoring. Revision to the AMP was submitted to RL, EPA and DOH on May 25, 2020, for their review, and resolution of this review was completed in October. Resolution occurred after re-running the air model using CAP-88 software, which resulted in no change to stack monitoring requirements. This risk is no longer a threat to the project and will be removed from the stoplight chart prior to November reporting.</p>	Mitigation Action(s)	FC Date	%	Negotiate changes to the AMP with regulators.	Complete	100			
Mitigation Action(s)	FC Date	%											
Negotiate changes to the AMP with regulators.	Complete	100											
RL40 WARP-0001-T: Regulatory Documents Delayed	<p>The approvals of regulatory documents are delayed, resulting in schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Very likely (&gt;90%) <b>Worst Case Impacts:</b> \$M, 96 days</p>	●	↔	<p><b>Risk Triggers:</b> The approvals for regulatory documents required for project execution are delayed, resulting in significant project schedule delays. The project cannot complete demolition without approval from outside agencies (i.e., Ecology). Regulatory documents include but are not limited to the Removal Action Work Plan (RAWP) for the 224-T Facility and the Documented Safety Analysis for the 231-Z Facility.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Maintain close contact with regulators to accelerate document reviews/approvals</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> CHPRC has implemented an aggressive schedule to complete the 200 West Area Tier II structures Engineering Evaluation/Cost Analysis, Action Memorandum, Sampling Analysis Plan (SAP) and RAWP by the end of FY2021. The subcontractor supporting document development has expressed concerns but has developed a schedule to support completion.</p>	Mitigation Action(s)	FC Date	%	Maintain close contact with regulators to accelerate document reviews/approvals	Ongoing	N/A			
Mitigation Action(s)	FC Date	%											
Maintain close contact with regulators to accelerate document reviews/approvals	Ongoing	N/A											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0040/WBS-040</b>										
<b>RL40 WARP-0003-T: Facility Integrity</b>  Problems with aging building, systems or components (e.g., roofing/structures) result in inoperability, inhabitation or recovery actions, causing unplanned in-scope work and result in cost impacts.  <b>Risk Handling Strategy:</b> Mitigate  <b>Probability:</b> Somewhat likely (26% to 74%) <b>Worst Case Impacts:</b> \$5M, 32 days			<b>Risk Triggers:</b> Due to the age of facilities and lack of information on facility systems, the project has to change the demolition approach, causing cost and schedule impacts. Potential issues with the facility may be due to the roofing, electrical systems, mechanical systems, structural integrity, safety code, system ties and inhabitation.  <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform lifecycle evaluations of critical structures, systems and components.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> The lifecycle evaluations were completed in October. A subcontract to perform structural analysis of the 231-Z Facility was awarded in late April 2020. The contract work began in June 2020. The evaluation has been completed, and the report was finalized in October 2020. Routine S&M activities continue to be performed to mitigate risk. As identified mitigation actions have been completed and this risk is not considered a high threat value for FY2021, it will be removed from the spotlight chart prior to November reporting.		Mitigation Action(s)	FC Date	%	Perform lifecycle evaluations of critical structures, systems and components.	Complete	100
Mitigation Action(s)	FC Date	%								
Perform lifecycle evaluations of critical structures, systems and components.	Complete	100								
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in <b>October</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	5.1	7.9	9.4	2.8	55.0%	(1.5)	-18.9%

Numbers are rounded to the nearest \$0.1 million.

#### CM Schedule Performance: (\$2.8M/+55.0%)

The CM favorable schedule variance is partially the result of carryover scope from FY2020. October performance for scope that was planned to complete in FY2020 has no remaining budgeted cost of work scheduled, resulting in a CM favorable schedule variance. Carryover scope is primarily due to the RL-directed partial stop work order (PSWO) issued on March 24, 2020 and was extended through September 30, 2020.

WARP completed trailer demolitions and received the associated performance earlier than planned based on a change in priorities/schedule, as well as performance earned on Boiler Annex activities that carried over from the prior year. This is offset by the lack of performance on activities for 216-ZP-1 Deactivation and Decommission (D&D), which has been pushed into the future based on demolition priority.

#### CM Cost Performance: (-\$1.5M/-18.9%)

The labor absence adder pool was not fully liquidated in FY2020 (September 2020), and therefore, was processed in October. Approximately \$763.2K of the CM negative cost variance is due to the liquidation of this cost and/or associated general and administrative pool cost that was distributed back to all projects. An error in the processing of October 2020 labor accruals resulted in costs for the fiscal month of October being understated, which partially offset the CM negative cost variance. Labor accrual costs were incorrectly calculated by the Business Management System (BMS) during cost processing resulting in the

error, which impacted all Hanford contractors using the BMS. This error caused October costs for this control account to be understated by approximately \$334.4K. The error will be corrected by fiscal month November cost processing when October accruals are reversed and the associated actual costs are incorporated.

The current month unfavorable cost variance is also attributed to in scope, unplanned work supporting the stabilization of the 216-Z-9 Crib. Specifically, activities associated with work package development, site preparations, conveyance and ventilation system installation, and project management support. Until the unplanned work completes, actual cost will continue to be incurred and the negative cost variance will continue. The project continues to seek and maximize opportunities, such as extended shift hours, weekend work, and maximize subcontractor support such as the mixer truck drivers that will be assigned to the stabilization effort, to recover the schedule where attainable to stabilize 216-Z-9 as safely and efficiently as possible.

### 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	647.7	623.3	627.2	(24.4)	-3.8%	(3.9)	-0.6%	725.8	736.3	109.0	(10.5)

Numbers are rounded to the nearest \$0.1 million.

**CTD Schedule Performance: (-\$24.4M/-3.8%)**

The CTD schedule variance is within reporting thresholds.

**CTD Cost Performance: (-\$3.9M/-0.6%)**

The CTD cost variance is within reporting thresholds.

**Variance at Completion (-\$10.5M/-1.4%)**

The VAC is within reporting thresholds.

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

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

RL-0040 Nuclear Facility D&D	FY2021		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	114.1	111.6	2.5
Numbers are rounded to the nearest \$0.1 million.			

### Funds/Variance Analysis

The FY2021 variance of \$2.5 million reflects projected funding of \$114.1 million and a spend forecast of \$111.6 million. The spending forecast is based on the FY2021 performance measurement baseline implemented in October and carryover work scope.

### Critical Path Analysis

Critical path analysis can be provided upon request.

## MILESTONE STATUS

The following table is a one-year look ahead of project breakdown structure RL-0040, *Hanford Federal Facility Agreement and Consent Order*-enforceable milestones, non-enforceable target due dates and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-250F	Submit to Ecology a 3-Year Rolling Prioritized Schedule to Implement Waste Site Removal Actions	3/31/2021		3/31/2021	On schedule
M-016-257	Complete Confirmation Sampling/No Further Action for All Waste Sites as Identified in Change Control Form M-16-20-01 in FY2021	9/30/2021		9/30/2021	On schedule

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

None currently identified.

## DOE ACTIONS/DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Obtain Regulator Review DOE/RL-2016-53, PUREX Action Memorandum (AM)	5/6/2020(A)	10/7/2020(A)
RL Review DOE/RL-2020-04, PUREX RAWP	5/20/2020(A)	10/19/2020(A)
RL Obtain Regulator Review of DOE/RL-2017-06, REDOX RAWP, Revision 1 Draft	7/23/2020(A)	11/30/2020
RL Obtain Regulator Review of DOE/RL-2018-46, REDOX AMP, Revision 1, Draft	7/23/2020(A)	11/30/2020
RL Obtain Regulator Review of DOE/RL-2017-05, REDOX SAP, Revision 1 Draft	7/23/2020(A)	11/30/2020
RL Obtain Regulator Review DOE/RL-2019-37, 224T SAP, Draft A	8/13/2020(A)	10/14/2020(A)
RL Obtain Regulator Review DOE/RL-2019-36, 224T RAWP, Draft A	8/13/2020(A)	10/14/2020(A)
RL Review DOE/RL-2016-51, B Plant AM, Decisional Draft	8/26/2020(A)	10/8/2020(A)
RL Obtain Regulator Review DOE/RL-2019-37, 224T SAP, Revision 1, Draft	10/30/2020	11/28/2020
RL Obtain Regulator Review DOE/RL-2019-36, 224T RAWP, Revision 1, Draft	10/30/2020	11/28/2020
RL Review DOE/RL-2020-05, PUREX SAP Draft A	11/2/2020	11/12/2020
RL Transmit DOE/RL-2020-39, Tier 2 Engineering Evaluation/Cost Analysis, Draft A to Regulators for Review	11/12/2020	11/30/2020
RL Review DOE/RL-2016-51, B Plant AM, Draft A	11/17/2020	11/23/2020
RL Obtain Regulator Review DOE/RL-2020-04, PUREX RAWP, Draft A	11/18/2020	1/15/2021

# Section F

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

**CH2MHILL**  
**Plateau Remediation Company**  
*a Jacobs company*



**R. M. Geimer**  
Vice President for  
K Basin Operations

October 2020  
CHPRC-2020-10, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

**L.M. Douglas**  
Vice President for  
River Risk Management Project

**M. A. Wright**  
Vice President for  
Project Technical Services

## PROJECT SUMMARY

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

In October, the project continued Phase 2 operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) approved CH2MHILL Plateau Remediation Company (CHPRC) resumption of work plan developed in response to the RL- directed March 24, 2020, partial stop work order (PSWO) that ended September 30, 2020. The transfer carts and grating modification components for the vertical pipe casing (VPC) equipment to be utilized for removal of the basin high dose debris were delivered. The first VPC mockup loading and grout testing was completed at the vendor's offsite facility. Preparations for Operational Acceptance Testing (OAT) for the Garnet Filter Media Retrieval (GFMR) System continued with the initiation of revisions to the OAT procedures and affidavit reviews in response to feedback from the Readiness Review Board (RRB). Grating modifications and setup work for the Settler Vessel Video Borescope Inspection were completed in preparation to start the inspection process.

A nondestructive assay (NDA) of Transfer Cask Assembly (TCA)-1 was completed, including shots of TCA-1 in a configuration meant to mimic the geometry that will be used for the TCA-2 NDA. An NDA of TCA-2 will be planned after the TCA-1 results are received and reviewed. Demolition of 166K East continued and is expected to be completed the first week of December with loadout of spoils and debris expected to continue into the second quarter of fiscal year (FY) 2021.

The soil remediation team began setup at the 100-K-96, 100-K-55:2 and 100-K-56:3 waste sites in preparation for the removal of overburden material. At the 100-K-79:7 waste site, excavation and stockpiling of overburden material continued. The 116-KE-2 waste site excavation was down posted from a contamination area (CA) to a soil contamination area (SCA) in preparation for final global positioning radiological survey and verification sample instructions preparation.

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

The project continued approved Phase 2 operations in compliance with the RL-approved CHPRC resumption of work plan developed in response to the RL-directed March 24, 2020, PSWO that ended September 30, 2020. Training of the essential mission-critical operations and construction forces core teams was initiated for the general CA/high contamination area/airborne radiation areas (HCA/ARAs). Six of the 20 corrective actions for the 324 Facility Contamination Event Phase 1 have been completed.

## EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
21-EMS-KBO-OBJ1-P1	Evaluate 100K work activities to ensure there are no excessive water discharges to the ground and appropriate actions are being taken to minimize fugitive dust generation.	On a quarterly basis, evaluate upcoming work from the Hanford Fire Department, 100K decontamination and decommissioning (D&D) and soil remediation activities. Ensure the water discharge to ground requirements found in DOE/RL-97-67, <i>Pollution Prevention and Best Management Practices Plan for State Waste Discharge Permits ST 0004511, ST 4509, and ST 4510</i> , and 100K-STD-OP-52370, <i>Discharges to Ground</i> , are followed.	9/30/2021	0%
21-EMS-KBO-OBJ2-P1	Improve compliance/pollution and spill prevention.	Evaluate the status of spill prevention, use of secondary containment, universal waste and other recycling compliance, and waste reduction opportunities for compliance with CHPRC procedures.	9/30/2021	8%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	0	9	N/A
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### 100K Basin Operations

- 100K Closure Project
  - 105K West Basin Deactivation
    - Received the transfer carts and grating modification components for the VPC.
    - Completed the first VPC mockup loading and grout testing at the Bauer facility in Conroe, Texas.
    - Continued preparations for the GFMR OAT with identification of revisions to procedures in response to feedback from the RRB and initiation of affidavit reviews.
    - Completed an NDA of TCA-1, including shots of TCA-1 in a configuration meant to mimic the geometry that will be used for TCA-2.
    - Completed the annual 105KW truck scale calibration.

- Soil Remediation Project
  - The soil remediation team began site setup at 100-K-96, 100-K-55:2 and 100-K-56:3 in preparation for overburden removal.
  - Down posted the 116-KE-2 waste site excavation from a CA to a SCA in preparation for final global positioning radiological survey and verification sample instructions preparation.

### **RRMP, 324 Building Disposition Project**

- Continued equipment procurements for the following:
  - o Cell dams for the 324 Building in fabrication; D Cell dams delivered in October.
  - o Remote Excavator Arm (REA) demolition tool; prototype testing completed.
  - o Water delivery system for the airlock; preparing for factory acceptance test (FAT).
  - o Modified airlock rail; fabrication awaiting CA/HCA resumption.
  - o Four-inch steel shield containers in fabrication.
  - o B Cell 10-ton crane (in fabrication).
  - o Upper REA replacement (in fabrication).
  - o Having completed prototype testing, Bin offset recovery tool is being prepared for FAT testing.
  - o Initiated training of the essential mission-critical operations and construction forces core teams for work in CA/HCA/ARAs using the new work-resumption training classes.
- Engineering supported engineered equipment procurements.

### **Project Technical Services**

- Training and Procedures
  - o Conducted the first session of the CA/HCA/ARA classroom portion of the 324 Facility Advance Radiation Work Practices to students. This is the first of several courses developed to improve worker skills necessary to resume higher-risk work at the 324 Facility safely.
  - o Conducted a procedure validation meeting on 324-PRO-OP-54163, *Low-Level Waste Container Packaging*, with 324 Project operations staff members. Revisions were made as a result, and the procedure was re-routed for a second review.
- Operations Program
  - o Supported the Apparent Cause Evaluation for the 324 Roof Guardrail Safety Concern.

## **MAJOR ISSUES**

### **Issue**

TCA-1 is staged outside of the 105K West Facility and is awaiting disposition, and TCA-2 is staged inside the fuel transfer (FTS) annex attached to the north side of 105K West Basin. TCA-1 and TCA-2 were previously used to support transfer operations between 105K East and 105K West and are internally contaminated. Based on historical data, the casks contain residual amounts of basin water and sludge material. Both TCAs require further characterization to verify the source material, radiation levels and location of contamination in order to determine a disposal pathway.

### **Corrective Action**

Characterization of the TCA-1 will require removal of the lid to obtain visual and radiological surveys. Due to anticipated levels of contamination and radiation, this work is presumed to pose a high radiological risk that requires mitigation by use of containments, temporary shielding and ventilation, and mockup training to complete the task. Engineering assessments along with advanced worker involvement will be necessary to plan the disposition of the TCA. Radiological engineering modeling indicates that if a dose rate measurement taken 10 inches above the bottom of the inner vessel exceeds 6 rem/hour, then the sludge heel will have to be removed and processed separately, most likely being directed to the north loadout pit VPC (if not grouted yet) or pumped into a separately approved container for disposition. If

this condition does not exist, then the residual water and material can be solidified and the TCA transferred to the Environmental Restoration Disposal Facility for grouting and disposal. This approach will then be used to process TCA-2 after it is removed from the FTS annex.

**Status**

Results from an NDA performed on a shielded ion exchange (IX) module staged west of 105K West in December 2019 through January 2020 were evaluated as a test case to determine if the NDA of TCA-1 is feasible for identifying specific radionuclide peaks in a shielded container. While the NDA of the IX module was not deemed successful due to the complex configuration of the shielded module, actinide peaks were identified through the heavy shielding, indicating the NDA is a viable method for determining if residual solids/sludge contained within TCA-1 need to be removed versus solidified without performing intrusive characterization. After delays due to the RL-directed PSWO, the support trailer and area around TCA-1 have been set up to facilitate the NDA work. Initial measurements have been taken for TCA-1, and the results are being compiled and reviewed. Following review of the results, NDA personnel will review the feasibility of performing additional NDAs on TCA-2. Results of the NDA will be used to support FY2022 planning and engineering activities for dispositioning the contents of both TCAs.

**Issue**

On November 14, 2019, an individual at the 324 Building Disposition Project was discovered with radiological contamination on the skin after exiting the airlock. The individual was decontaminated and cleared. However, due to the event, CHPRC management suspended radiological work beyond essential mission-critical operation activities, pending identification and implementation of revised strategies and controls to reduce the potential of future contaminations.

**Corrective Action**

The evaluation of 324 Building practices as documented in the Root Cause Analysis and associated Corrective Action Plan identified 65 corrective actions. These corrective actions are broken into the following categories: Prestart Phase 1 (general CA/HCA activities), prestart Phase 2 (Room 18 activities), prestart Phase 3 (airlock activates), and post-start corrective actions.

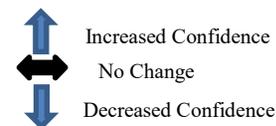
**Status**

Twenty of these corrective actions are pre-starts to general CA/HCA activities (Phase 1). Of these 20 Phase 1 prestart corrective actions, six have been completed with the general HCA/ARA activities anticipated to start on December 4, 2020.

## 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>																									
<p><b>Explanation of major changes to the project monthly spotlight chart:</b> The following changes have been made to the risk spotlight chart:</p> <ol style="list-style-type: none"> <li>1. Risk ID's have been updated to align with the transition from CHPRC's Access Risk Database to the new Hanford Site wide Enterprise Risk and Opportunity Management System Risk Database.</li> <li>2. Risk <i>RL41 RCC-0008-T: 300-296 Failure of a Radiochemical Engineering Cells (REC) Cranes (B Cell, A Cell, A/D &amp; Airlock, and/or Cask Handling Area [CHA] Cranes)</i> was updated to reflect the change in the Recovery Assessment based on updates the FC dates thru October. No significant impact to the recovery plan was identified as a result of those changes.</li> <li>3. Risk <i>RL41 RCC-0027-T: 300-296 Radiation &amp; Contamination Experienced During REC Cell Operations</i> was updated to reflect the change in the Recovery Assessment based on FY2021 Q1 risk review, which reduced the probability from Very Likely to Likely due to incorporation of risk mitigation actions.</li> <li>4. Risk <i>RL41 RCC-0024-T: 300-296 Elevated Contamination Encountered While Performing Structural Modifications</i> was updated to reflect the change in the Recovery Assessment based on FY2021 Q1 risk review, which reduced the probability from Likely to Somewhat Likely due to incorporation of risk mitigation actions.</li> <li>5. Risk <i>RL41 RCC-0001-T: 300-296 Latent Conditions Impact Facility Modification</i> was updated to reflect the most current Risk Trigger Metric for FY2021.</li> <li>6. Risk <i>RL41 RCC-0014-T: 300-296 Cell Sealing, Micropile Installation, Interference Removal, Core Drilling and Soil Stabilization Takes Longer Than Planned</i> was updated to reflect changes to the Mitigation Assessment section to capture the updates associated with Micropile bond zone load testing performed by PNNL.</li> <li>7. Risk <i>RL41 RCC-0007-T: 300-296 Remote Equipment Failure During Operations</i> was updated to reflect current Mitigation Assessment status. No significant impact to critical path or mitigation plan was identified.</li> </ol>																									
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>																									
<p>RL41 RCC-0008-T: 300-296 Failure of a Radiochemical Engineering Cells (REC) Cranes (B Cell, A Cell, A/D &amp; Airlock, and/or Cask Handling Area [CHA] Cranes)</p>	<p>Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74 %)</p> <p><b>Worst Case Impacts:</b> \$3,000K, 208 days</p>	<div style="font-size: 24px; color: red; margin: 0 auto;">●</div>	<div style="font-size: 24px; color: black; margin: 0 auto;">↔</div>	<p><b>Risk Event:</b> In August 2019, the REC A/D Crane failed during operations.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: center;">Recovery Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Vendor submit FAT /final data package – B Cell 10-ton crane.</td> <td style="text-align: center;">4/2/2020</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Vendor delivery to acquisition verification service (AVS) – B Cell 10-ton crane.</td> <td style="text-align: center;">3/2/2021</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Perform remote survey and radiological characterization of A/D Crane.</td> <td style="text-align: center;">5/27/2021</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Perform follow-up A/D Crane <i>mechanical</i> investigation.</td> <td style="text-align: center;">7/6/2021</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Perform follow-up A/D Crane <i>mechanical</i> Repairs.</td> <td style="text-align: center;">9/7/2021</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Perform A/D Crane characterization.</td> <td style="text-align: center;">9/21/2021</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> Project planning sessions identified the need to evaluate the mechanical repairs first, since these are less invasive. This scope is not considered critical path. Therefore, the slips to the FC dates are not a significant impact to the recovery plan. Additional radiological characterization/investigation, surveys and decontamination efforts will be performed on the A/D Crane to verify mechanical and electrical components necessary to perform repairs and eventual preventative maintenance (PM). Procurement and fabrication of decontamination equipment has been initiated to decrease further impacts to the project. The vendor is also in the process of fabricating the B Cell Crane bridge to assist with installation. As a result, the current forecast date for delivery to AVS is March 2, 2021.</p>	Recovery Action(s)	FC Date	%	Vendor submit FAT /final data package – B Cell 10-ton crane.	4/2/2020	100	Vendor delivery to acquisition verification service (AVS) – B Cell 10-ton crane.	3/2/2021	0	Perform remote survey and radiological characterization of A/D Crane.	5/27/2021	0	Perform follow-up A/D Crane <i>mechanical</i> investigation.	7/6/2021	0	Perform follow-up A/D Crane <i>mechanical</i> Repairs.	9/7/2021	0	Perform A/D Crane characterization.	9/21/2021	0
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
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<b>RL-0041/WBS-041</b>																			
<p><b>RL41 RCC-0027-T: 300-296 Radiation &amp; Contamination Experienced During REC Cell Operations</b></p>	<p>During REC cell cleanout (e.g., soil/debris removal, waste handling and facility modifications), the CHA, truck lock or other support area becomes contaminated or the background dose is elevated to a level that operations cannot continue as currently planned. Significant cost and schedule impacts are incurred.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$400K, 70 days</p>	●	↔	<p><b>Risk Event:</b> On November 14, 2019, low-level contamination was detected on an individual after exiting a radiological step-off pad (SOP).</p> <table border="1"> <thead> <tr> <th>Recovery 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>Perform project resumption activities – general CA/CHA.</td> <td>12/3/2020</td> <td>25</td> </tr> <tr> <td>Return to Room 18 work – resumption actions.</td> <td>12/29/2020</td> <td>15</td> </tr> <tr> <td>Return to airlock work – resumption actions.</td> <td>1/26/2021</td> <td>15</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> Resuming work scope in radiologically controlled areas (RCAs) within the building is pending resolution of mitigation actions performed under three distinct group sets: general controlled area, Room 18 and the airlock. Upon successful completion of resumption actions and training, each group set will resume fieldwork scope. Based on FY2021 Q1 risk reviews, the worst-case cost impacts have increased based on the known potential impacts of this risk being realized. The probability of this risk occurring has been reduced slightly from Very Likely to Likely due to the incorporation of the mitigation actions identified above. The project anticipates to further reduce the probability of this risk as mitigation actions are completed.</p>	Recovery Action(s)	FC Date	%	Perform CHA floor scabbling and apply epoxy floor coating.	7/17/2019	100	Perform project resumption activities – general CA/CHA.	12/3/2020	25	Return to Room 18 work – resumption actions.	12/29/2020	15	Return to airlock work – resumption actions.	1/26/2021	15
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<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)																			
No critical risks are identified in October.																			
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																			
<p><b>RL41 RCC-0024-T: 300-296 Elevated Contamination Encountered While Performing Structural Modifications</b></p>	<p>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 show that contamination levels are much higher or deeper or the material encountered is different from anticipated, then an alternative approach will require the development and/or fabrication of equipment for contamination mitigation and control. These impacts will limit progress on fieldwork activities.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (24% to 50%) <b>Worst Case Impacts:</b> \$3,318K, 128 days</p>	●	↔	<p><b>Risk Event:</b> Unexpected contamination is found while performing structural modification activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continued resumption/proficiency training for Room 18.</td> <td>4/21/2021</td> <td>0</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> A new mitigation action was identified and a decision was made to no longer accept the residual impacts of this risk in October. Based on FY2021 Q1 risk reviews, the probability of this risk occurring has been reduced slightly from Likely to Somewhat Likely due to the incorporation of the mitigation action identified above. The project anticipates furthering reducing the probability of this risk once proficiency training is complete. Increased personal protective equipment and additional control measures were successfully implemented.</p>	Mitigation Action(s)	FC Date	%	Continued resumption/proficiency training for Room 18.	4/21/2021	0									
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0041/WBS-041</b>																
<p><b>RL41 RCC-0001-T:</b> 300-296 Latent Conditions Impact Facility Modification</p>	<p>Latent conditions, poor visibility in REC cells or drawing omissions, inconsistencies or errors impact facility modifications (e.g., mechanical, electrical industrial hygiene/RCAs), resulting in unplanned work and subsequently, cost and schedule impacts.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$1,116.5K, 128 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> The 324 Building and REC cells have been used for numerous missions since 1965. Available drawings may not reflect the actual conditions in the building or REC cells. Additionally, debris may obscure in-cell features making removal more complex than planned. Radiological control hazards may be more extensive than assumed, increasing the complexity of facility modifications necessary for soil removal activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in October. 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 (CHPRC-1801178), this risk will be monitored continuously as routine PM activities are in place to reduce the likelihood of occurrence.</p>	Mitigation Action(s)	FC Date	%	Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities.	Ongoing	N/A						
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<p><b>RL41 RCC-0014-T:</b> 300-296 Cell Sealing, Micropile Installation, Interference Removal, Core Drilling and Soil Stabilization Takes Longer Than Planned</p>	<p>Unexpected field conditions are 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.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%) <b>Worst Case Impacts:</b> \$3,317.6K, 96 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> The project experiences unexpected field conditions outside its control, impacting cell sealing, core drilling and soil stabilization, micropile installation, and interference removal, making it 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>Mobilize and train a second soil stabilization crew.</td> <td>12/19/2019</td> <td>100</td> </tr> <tr> <td>Perform pilot hole drilling to aid as a mitigation action for micropile installation.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Perform micropile bond zone load testing.</td> <td>1/5/2020</td> <td>0</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> Additional testing to verify compatibility with grouting material will aid in mitigating risk from occurring. The FC completion date for performing micropile bond zone load testing was delayed to support revised work instructions with offsite vendor. In addition, resources availability has been limited due to COVID-19 related impacts.</p>	Mitigation Action(s)	FC Date	%	Mobilize and train a second soil stabilization crew.	12/19/2019	100	Perform pilot hole drilling to aid as a mitigation action for micropile installation.	Ongoing	N/A	Perform micropile bond zone load testing.	1/5/2020	0
Mitigation Action(s)	FC Date	%														
Mobilize and train a second soil stabilization crew.	12/19/2019	100														
Perform pilot hole drilling to aid as a mitigation action for micropile installation.	Ongoing	N/A														
Perform micropile bond zone load testing.	1/5/2020	0														
<b>FY2020 Key Risks</b>																
<p><b>RL41 RCC-0009-T:</b> 300-296 Failure of Cell Shield Door</p>	<p>Failure of shield door(s) or crane shield door(s) shuts down cleanout of REC cells/airlock, penetration sealing in the airlock and 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.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Unlikely (10% to 25%) <b>Worst Case Impacts:</b> \$460K, 96 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> The cell shield door fails, resulting in a shutdown of cleanout activities until repairs can be completed, similar to the event that occurred in September 2019.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform B Cell and D Cell door pin isolations.</td> <td>4/21/2021</td> <td>0</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in October. To maintain REC shield door operability, engineering evaluations were conducted, resulting in the implementation of monthly PM and the procurement of spare parts. These mitigation efforts will reduce the likelihood of cost and schedule consequences, as applicable.</p>	Mitigation Action(s)	FC Date	%	Perform B Cell and D Cell door pin isolations.	4/21/2021	0						
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Perform B Cell and D Cell door pin isolations.	4/21/2021	0														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0041/WBS-041</b>																
<p><b>RL41 RCC-0007-T:</b> 300-296 Remote Equipment Failure During Operations</p>	<p>Failures of the following procured equipment: the floor saw, master slave manipulators (MSMs) used in REC cells, REAs, through supports, cell dams, transfer mechanism and cameras and lights.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Unlikely (10% to 25%) <b>Worst Case Impacts:</b> \$1,336K, 90 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> Failure of remote equipment will result in schedule delays due to equipment replacement and repairs because of radiation damage to other equipment installed in the REC cells. These factors may shorten the operational life of equipment and result in replacing damaged equipment or components.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure MSMs and storage carts.</td> <td>12/30/2019</td> <td>100</td> </tr> <tr> <td>Procure spare upper REA.</td> <td>12/3/2020</td> <td>89</td> </tr> <tr> <td>Procure universal cutting tool.</td> <td>12/10/2020</td> <td>81</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> Procurement of a spare upper REA and universal cutting tool will mitigate potential impacts to the project in the event of an REA failure. Potential impacts continue to be monitored and assessed for mitigation as project evolutions continue. The work scope these mitigation actions support are not on critical path. The delay in FC finish date does not affect the effectiveness of mitigation actions. Mitigation actions will be monitored closely to assure the effectiveness of these mitigation actions remains intact.</p>	Mitigation Action(s)	FC Date	%	Procure MSMs and storage carts.	12/30/2019	100	Procure spare upper REA.	12/3/2020	89	Procure universal cutting tool.	12/10/2020	81
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Procure universal cutting tool.	12/10/2020	81														
<p><b>RL41 RCC-0029-T:</b> Increased Rad Exposure to Workers</p>	<p>High dose in the airlock causes excessive radiation exposure to personnel, resulting in in-scope unplanned work impacts of cost and/or schedule.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat Likely (25% to 74%) <b>Worst Case Impacts:</b> \$400K, 72 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> During REC entries, background and present dose could cause workers to reach allowable dose limits sooner than anticipated, resulting in cost and schedule impacts.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continue the use of increased shielding and ALARA controls.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procurement of specialized containers – GC/44-inch bins.</td> <td>12/30/2020</td> <td>75</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in October. Mitigation efforts have reduced the probability of risk occurrence to low. Procurement of specialized waste containers, shield lids and decontamination efforts has significantly minimized dose potential; however, the uniqueness of the work scope provides the potential for unexpected delays and/or cost impacts.</p>	Mitigation Action(s)	FC Date	%	Continue the use of increased shielding and ALARA controls.	Ongoing	N/A	Procurement of specialized containers – GC/44-inch bins.	12/30/2020	75			
Mitigation Action(s)	FC Date	%														
Continue the use of increased shielding and ALARA controls.	Ongoing	N/A														
Procurement of specialized containers – GC/44-inch bins.	12/30/2020	75														
<p><b>RL41 SR-0004-T: 100K</b> Unexpected Site Conditions</p>	<p>Unexpected site conditions are encountered during soil excavation activities, resulting in recovery actions, causing unplanned and project in-scope work and schedule delays.</p> <p><b>Risk Handling Strategy:</b> Mitigate</p> <p><b>Probability:</b> Somewhat likely (26% to 74%) <b>Worst Case Impacts:</b> \$1,007K, 32 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> During soil excavation activities, different site conditions including underground utilities (i.e., wiring, fiber cable, pipes, asbestos), unknown construction material and greater-than-expected quantities of contamination could be encountered, resulting in increased volume of remediated soil. In addition, the overburden soil planned for backfill contains contaminants, resulting in the need to create a new clean-fill pit.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Data collection (includes review of the Waste Information Data System information, review of historical drawings, identify contaminants of concern, civil survey, etc.).</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Ground penetrating radar.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Develop/issue an approved excavation permit before remediation begins.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant change in October. The mitigation actions identified above are standard business practices when performing excavation activities on the Hanford Site. These steps are designed to minimize the probability of encountering unknown utilities, structures or contamination.</p>	Mitigation Action(s)	FC Date	%	Data collection (includes review of the Waste Information Data System information, review of historical drawings, identify contaminants of concern, civil survey, etc.).	Ongoing	N/A	Ground penetrating radar.	Ongoing	N/A	Develop/issue an approved excavation permit before remediation begins.	Ongoing	N/A
Mitigation Action(s)	FC Date	%														
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Ground penetrating radar.	Ongoing	N/A														
Develop/issue an approved excavation permit before remediation begins.	Ongoing	N/A														
<b>Unassigned Risks (Pending ownership of identified risks/opportunities)</b>																
No unassigned risks identified in October.																

## 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	6.7	7.1	7.3	0.4	5.6%	(0.3)	-4.0%

Numbers rounded to the nearest \$0.1 million.

#### CM Schedule Performance (+\$0.4M/+5.6%)

The CM schedule variance is within reporting thresholds.

#### CM Cost Performance (-\$0.3M/-4.0%)

The CM negative cost variance was due to the labor absence adder pool that was not fully liquidated in FY2020 (September 2020), and therefore was processed in October. The negative cost variance is due to the liquidation of this cost and/or associated G&A pool cost that was distributed back to all projects in October.

## 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	814.9	787.4	788.6	(27.5)	-3.4%	(1.2)	-0.2%	917.8	928.3	139.7	-10.5

Numbers are rounded to the nearest \$0.1 million.

#### CTD Schedule Performance (-\$27.5/-3.4%)

The CTD schedule variance is within reporting thresholds.

#### CTD Cost Performance (-1.2/-0.2%)

The CTD cost variance is within reporting thresholds.

#### Variance at Completion (-\$10.5/-1.1%)

The variance at completion is within reporting thresholds.

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

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

RL-0041 Nuclear Facility D&D – River Corridor	FY2021		
	Projected Funding	Spending Forecast	Variance
RL-0041 Spending Forecast	146.1	143.3	2.8
Numbers are rounded to the nearest \$0.1 million.			

### Funds/Variance Analysis

The FY2021 variance of \$2.8 million reflects projected funding of \$146.1 million and a spend forecast of \$143.3 million. The spending forecast is based on the FY2021 performance measurement baseline implemented in October and carryover work scope.

### Critical Path Analysis

Critical path analysis can be provided upon request.

## MILESTONE STATUS

The following table is a one-year look ahead of project breakdown structure RL-0041, *Hanford Federal Facility Agreement and Consent Order*-enforceable milestones, nonenforceable target due dates and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-093-27-T01	Initiate Earthwork for the Construction of the 105-KE Safe Storage Enclosure	09/30/2021		On schedule	Work scope is not currently funded.
M-016-85A	Complete Remote Excavation of 300-296 Waste Site	9/30/2021		3/26/2024	At risk.
M-016-86	Complete Remedial Actions for 618-11 Burial Ground in accordance with DOE/RL-2014-13-ADD1	9/30/2021		To be determined	At risk.

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

None currently identified.

## DOE ACTIONS/DECISIONS

None currently identified.

# Section G

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

**CH2MHILL**  
**Plateau Remediation Company**  
*a Jacobs company*



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

October 2020  
CHPRC-2020-10, 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 (S&M) condition by the Central Plateau Risk Management Project. During the October reporting period, FFTF continued to maintain essential mission-critical operations consistent with the U.S. Department of Energy (DOE), Richland Operations Office (RL)-approved CH2MHILL Plateau Remediation Company (CHPRC) resumption of work plan developed in response to the March 24, 2020, RL-directed partial stop work order (PSWO). The PSWO, which was issued as a part of the Hanford Site response to the novel coronavirus (COVID-19), ended September 30, 2020, and CHPRC is in the process of returning to normal work activities consistent with the resumption of work plan and prudent COVID-19 protections for the CHPRC workforce.

## 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

- Completed the electrical system and pump test flows, as well as sanitizing, flushing and sampling for the 480D/P-16 pump replacement.
- Completed the Site Preparation Work Package for pumps T-58 and T-87 in support of the tank inspections fieldwork.
- Completed 400 West one-year periodic testing of water system valves and gauges.
- Completed the 400 Area six-month winterization/summerization building inspection.

## MAJOR ISSUES

### Issue

Initiated development of an engineering change request to replace the aging diesel engine fire pump P-28. However, work was stopped 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 is to replace the diesel engine fire pump P-61 in the 481-A Building. However, this work would require additional efforts to restore power to the building and install additional valves to connect the P-61 replacement to the area-wide water.

### Status

Development of functional requirements for an engineering evaluation has been completed and the project has received direction to proceed from RL. A request for proposal has been issued to solicit prospective engineering firms for evaluation performance. The contract award was issued August 24, 2020. The vendor has initiated the draft evaluation report and is 50 percent complete as of October.

## 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	0.2	0.2	0.3	0.1	34.0%	(0.1)	-31.6%

Numbers are rounded to the nearest \$0.1 million.

### CM Schedule Performance: (+\$0.1M/+34.0%)

The CM schedule variance is within reporting thresholds.

### CM Cost Performance: (-\$0.1M/-31.6%)

The CM 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	32.5	32.1	27.0	(0.3)	-1.1%	5.1	15.9%	35.5	30.3	3.3	5.2

Numbers are rounded to the nearest \$0.1 million.

### CTD Schedule Performance: (-\$0.3M/-1.1%)

The CTD schedule variance is within reporting thresholds.

### CTD Cost Performance: (+\$5.1M/+15.9%)

The CTD favorable cost variance is due to reduction in S&M requirements at FFTF because the facility was deactivated. In addition, the efficient use of resources supporting deactivation activities within the project scope of work contributed to this favorable cost variance.

### Variance at Completion: (+\$5.2M/+14.6%)

The VAC reflects efficient use of resources supporting deactivation activities.

Contract Performance Report Formats are provided in Appendix A.

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

RL-0042 FFTF Closure	FY2021		Variance
	Projected Funding	Spend Forecast	
Spending Forecast	4.4	3.5	0.8

Numbers are rounded to the nearest \$0.1 million.

### Funds Analysis

The fiscal year (FY) 2021 variance of \$0.8 million reflects funding of \$4.4 million and a spend forecast of \$3.5 million. The spending forecast is based on the FY2021 performance measurement baseline implemented in October and carryover work scope.

### Critical Path Analysis

Critical path analysis is not applicable to this project. The contract scope is the performance of interim S&M 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**

*a Jacobs company*



October 2020  
CHPRC-2020-10, 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) 2020 / 10 / 01											
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2020 / 10 / 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 6,947,114	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 407,709	d. TARGET PROFIT/FEE 302,760	e. TARGET PRICE 7,249,874	f. ESTIMATED PRICE 7,613,120	g. CONTRACT CEILING 7,249,874	h. ESTIMATED CONTRACT CEILING 7,613,120	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 7,266,871						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)									
b. WORST CASE 7,323,213																	
c. MOST LIKELY 7,310,360		7,354,823		44,464													
<b>8. PERFORMANCE DATA</b>																	
CAPN.PBS  ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION			
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)							
RL-0011 Nuclear Mat Stab & Disp PFP	3,605	200	607	-3,406	-408	1,137,889	1,132,073	1,243,160	-5,816	-111,087	0	0	0	1,152,752	1,265,566	-112,814	
RL-0012 SNF Stabilization & Disp	0	0	0	0	0	759,593	759,593	729,813	0	29,780	0	0	0	759,593	729,813	29,780	
RL-0013 Solid Waste Stab & Disp	11,012	13,347	14,343	2,335	-996	1,688,065	1,668,129	1,579,549	-19,936	88,580	0	0	0	1,860,511	1,774,793	85,718	
RL-0030 Soil &Water Rem-Grndwtr/Vadose	6,034	8,113	7,432	2,079	681	1,761,160	1,741,311	1,684,860	-19,849	56,451	0	0	0	1,859,375	1,801,847	57,528	
RL-0040 Nuc Fac D&D - Remainder Hanfrd	5,104	7,914	9,412	2,810	-1,498	647,716	623,301	627,233	-24,415	-3,932	0	0	0	725,768	736,264	-10,496	
RL-0041 Nuc Fac D&D - RC Closure Proj	6,676	7,053	7,333	377	-280	814,920	787,390	788,616	-27,530	-1,226	0	0	0	917,820	928,276	-10,456	
RL-0042 Nuc Fac D&D - FFF Proj	151	203	267	51	-64	32,466	32,121	27,029	-345	5,092	0	0	0	35,484	30,313	5,171	
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	32,583	36,829	39,394	4,246	-2,565	6,841,808	6,743,919	6,680,260	-97,889	63,658	0	0	0	7,311,303	7,266,871	44,432	
f. MANAGEMENT RESERVE	43,488																
g. TOTAL	32,583	36,829	39,394	4,246	-2,565	6,841,808	6,743,919	6,680,260	-97,889	63,658	0	0	0	7,354,792			
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																	
a. VARIANCE ADJUSTMENT																	
b. TOTAL CONTRACT VARIANCE										-97,889	63,658				7,354,792	7,266,871	87,920

\*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) 2020 / 10 / 01	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2020 / 10 / 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)								
34 - Env Program & Strategic Plng	957	965	994	7	-29	113,777	113,785	105,095	7	8,690	0	0	0	126,693	117,936	8,757		
35 - Business Services	0	0	0	0	0	476,879	476,879	453,595	0	23,284	0	0	0	476,879	453,595	23,284		
36 - Prime Contract & Proj Integr	0	0	160	0	-160	1,111	1,111	77,622	0	-76,511	0	0	0	1,111	77,622	-76,511		
37 - Resource Mgmt & Strategic Intg	86	86	71	0	16	10,012	10,012	6,604	0	3,409	0	0	0	11,223	7,826	3,397		
38 - Project Technical Services	0	0	0	0	0	124,400	124,400	105,303	0	19,097	0	0	0	124,400	105,303	19,097		
3B - PFP Closure Project	5,547	3,218	3,860	-2,330	-643	1,072,480	1,055,596	1,172,134	-16,884	-116,538	0	0	0	1,112,935	1,234,150	-121,215		
3C - Waste & Fuels Management Project	8,314	9,968	10,674	1,654	-706	1,466,928	1,450,063	1,352,977	-16,866	97,085	0	0	0	1,606,060	1,510,477	95,583		
3D - Soil & Groundwater Remediation	5,054	7,126	6,232	2,071	894	1,545,326	1,525,470	1,460,524	-19,856	64,946	0	0	0	1,630,312	1,564,352	65,960		
3G - K Basin Oper & Plateau Remediation Project	3,610	4,045	4,777	435	-732	1,029,947	1,020,177	979,320	-9,769	40,857	0	0	0	1,087,579	1,049,218	38,361		
3H - River Risk Management Project	5,720	6,343	6,553	623	-210	372,791	351,961	355,750	-20,830	-3,789	0	0	0	450,760	462,637	-11,877		
3K - Central Plateau Risk Reduction	3,294	5,079	6,073	1,785	-994	628,156	614,464	611,335	-13,692	3,129	0	0	0	683,352	683,756	-403		
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)	32,583	36,829	39,394	4,246	-2,565	6,841,808	6,743,919	6,680,260	-97,889	63,658	0	0	0	7,311,303	7,266,871	44,432		
f. MANAGEMENT RESERVE														43,488				
g. TOTAL	32,583	36,829	39,394	4,246	-2,565	6,841,808	6,743,919	6,680,260	-97,889	63,658	0	0	0	7,354,792				

CONTRACT PERFORMANCE REPORT																	Form Approved			
FORMAT 3 - BASELINE																	OMB No. 0704-0188			
DOLLARS IN THOUSANDS																	4. REPORT PERIOD			
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						a. FROM: 2020/10/01 b. TO: 2020/10/25					
5. CONTRACT DATA																				
a. ORIGINAL NEGOTIATED COST \$4,312,366			b. NEGOTIATED CONTRACT CHANGE \$2,634,747			c. CURRENT NEGOTIATED COST (A + B) \$6,947,114		d. ESTIMATED COST AUTH UNPRICED WORK \$407,709		e. CONTRACT BUDGET BASE (C + D) \$7,354,823			f. TOTAL ALLOCATED BUDGET \$7,354,792			g. DIFFERENCE (E - F) \$32				
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008			j. PLANNED COMPL DATE 9/30/2021			k. CONT COMPLETION DATE 9/30/2021			l. EST COMPLETION DATE 9/30/2021								
6. PERFORMANCE DATA																				
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)										UNDISTRIB BUDGET (19)	TOTAL BUDGET (20)
			+1 Nov-20 (4)	+2 Dec-20 (5)	+3 Jan-21 (6)	+4 Feb-21 (7)	+5 Mar-21 (8)	+6 Apr-21 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)	FY20 (17)	FY21 (18)			
a. PM BASELINE (BEGIN OF PERIOD)	6,809,225	47,962	4,305	3,008	2,130	2,107	97	7	3,391,477	391,653	471,323	504,826	485,028	470,649	563,065	531,205	15,260	0	6,824,485	
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																				
BCR-000-21-001R0 - Implementation of FY2021 PMB - Indirect																	0		0	
BCR-PRC-21-002R0 - Implementation of FY2021 Performance Measurement Baseline																	486,819		486,819	
BCRA-PRC-21-001R0, HPIC Updates October 2020																	0		0	
c. PM BASELINE (END OF PERIOD)	6,841,808	32,583	41,664	34,546	38,360	38,939	38,505	52,065	3,391,477	391,653	471,323	504,826	485,028	470,649	563,065	531,205	502,078	0	7,311,303	
7. MANAGEMENT RESERVE																			43,488	
8. TOTAL																			7,354,792	

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)	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		2020 / 10 / 01	
		c. TYPE CPAF		d. SHARE RATIO		b. TO (YYYYMMDD)	
				c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> X <input type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18		2020 / 10 / 25	

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 NOV 2020 (4)	+2 DEC 2020 (5)	+3 JAN 2021 (6)	+4 FEB 2021 (7)	+5 MAR 2021 (8)	+6 APR 2021 (9)	MAY 2021 (10)	JUN 2021 (11)	JUL 2021 (12)	AUG 2021 (13)	ATCOMPLETE (14)		
300 - Office of the President	23	2,329	15	15	16	13	13	13	13	13	13	13	13	13	2,477
303 - Internal Audit	4	648	4	4	4	5	5	5	5	5	5	5	5	5	698
304 - General Counsel	4	596	4	4	4	4	4	4	4	4	4	4	4	4	639
32 - Safety Health Security & Quality	62	9,233	62	64	66	65	65	65	65	65	65	65	65	65	9,948
34 - Env Program & Strategic Plng	45	6,298	49	46	46	48	47	45	45	44	43	45	45	45	6,802
35 - Business Services	52	8,752	55	56	62	64	64	64	64	64	65	65	65	64	9,439
36 - Prime Contract & Proj Integr	51	8,732	38	38	39	39	39	40	40	40	40	40	40	40	9,167
37 - Resource Mgmt & Strategic Intg	43	3,843	46	46	46	46	46	46	46	46	46	46	46	46	4,346
38 - Project Technical Services	38	9,384	41	40	38	40	40	40	40	40	40	40	40	40	9,825
38 - PFP Closure Project	171	55,588	186	221	206	213	194	174	210	137	167	174	309	57,778	
3C - Waste & Fuels Management Project	372	62,609	380	387	389	424	421	410	416	409	408	400	435	67,090	
3D - Soil & Groundwater Remediation	226	45,494	273	281	289	285	271	265	258	263	252	252	318	48,501	
3G - K Basin Oper & Plateau Remediation Project	190	35,491	211	218	222	248	237	238	209	195	189	182	224	37,863	
3H - River Risk Management Project	200	9,834	216	225	222	218	217	218	218	220	218	213	218	12,236	
3K - Central Plateau Risk Reduction	239	24,620	251	266	248	227	229	223	251	248	237	226	686	27,711	
<b>g. TOTAL DIRECT</b>	<b>1,717</b>	<b>283,450</b>	<b>1,832</b>	<b>1,912</b>	<b>1,897</b>	<b>1,938</b>	<b>1,892</b>	<b>1,850</b>	<b>1,883</b>	<b>1,793</b>	<b>1,792</b>	<b>1,769</b>	<b>2,513</b>	<b>304,521</b>	

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

**CLASSIFICATION (When Filled In)**

**CONTRACT PERFORMANCE REPORT**

FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>			
<b>a. NAME</b> CH2M HILL Plateau Remediation Company		<b>a. NAME</b> Plateau Remediation Contract		<b>a. NAME</b> Plateau Remediation Contract		<b>a. FROM (YYYYMMDD)</b> 2020/10/01			
<b>b. LOCATION (Address and ZIP Code)</b> Richland, WA		<b>b. NUMBER</b> DE-AC06-08RL14788		<b>b. PHASE</b>		<b>b. TO (YYYYMMDD)</b> 2020/10/25			
		<b>c. TYPE</b> CPAF	<b>d. SHARE RATIO</b>	<b>c. EVMS ACCEPTANCE</b> 2009/09/18 <b>NO</b> <b>YES</b> <b>X</b>					

	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI
Current:	32,583	36,829	39,394	4,246	13.0%	(2,565)	-7.0%	1.13	0.93
Cumulative:	6,841,808	6,743,919	6,680,260	(97,889)	-1.4%	63,658	0.9%	0.99	1.01
	BAC	EAC	VAC in \$	VAC in %	TCPI				
At Complete:	7,311,303	7,266,871	44,432	0.6%	0.97				

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

Current Period Schedule and Cost Variance:

The labor absence adder pool was not fully liquidated in FY2020 (September 2020), and therefore was processed in October. Approximately \$4.9 million of the current month (CM) negative cost variance is due to the liquidation of this cost and/or associated general and administrative (G&A) pool cost that was distributed back to all projects. Additionally, a large accrual at REDOX was overstated. These negative cost variances were partially offset by an error in the processing of October 2020 labor accruals, which resulted in costs for fiscal month of October being understated. Labor accrual costs were incorrectly calculated by the business management system (BMS) during cost processing resulting in the error that impacted all Hanford contractors using the BMS. This error caused October costs to be understated by approximately \$2.3 million. The error will be corrected by fiscal month November cost processing when October accruals are reversed and the associated actual costs are incorporated.

T The CM positive schedule variance is primarily the result of schedule recovery for scope that was planned in FY2020 and delayed due to the PSWO. Large drivers that recovered schedule in this period include well drilling activities at S&GRP, the fulfillment of procurements at the W-135 MCSC Project and stabilization activities for CPRM and WARP. This was partially offset by limited performance at PFP where work has not resumed and at W&FMP where large box repacks were delayed due to delayed procurement of Standard Waste Boxes and a NDA with higher than expected readings resulting in an Evaluation of the Safety of the Situation.

Cumulative Schedule Variance: The variance is within reporting thresholds.

Cumulative Cost Variance: The variance is within reporting thresholds.

**Impact:**

Current Period Schedule: The current month schedule variance is not expected to impact the overall contract schedule.

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

Cumulative Schedule: N/A

Cumulative Cost: N/A

**Corrective Action:**

Current Period Schedule: No corrective actions have been identified.

Current Period Cost: No corrective action necessary.

Cumulative Schedule: N/A

Cumulative Cost: N/A

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

CHPRC continues to track completion of the contract within budget. Currently, a variance at completion of \$44.4 million is projected, with an additional \$43.5 million of management reserve (MR) for a total positive variance of \$87.9 million. For October, the project was 13.0 percent ahead of schedule and 7.0 percent over planned cost. Contract to date; the project was 1.4 percent behind schedule and 0.9 percent under planned cost.

There was no difference between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of October. The \$32K delta is a result

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

of rounding over time for implementation of multiple change order definitizations.

Three BCRs were implemented in the current period:  
 BCR-000-21-001R0, Implementation of FY2021 PMB – Indirect  
 BCRA-PRC-21-001R0, HPIC Updates October 2020  
 BCR-PRC-21-002R0, Implementation of FY2021 Performance Measurement Baseline

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

Variance in Performance BAC and EAC: The VAC between the BAC and EAC this month is a +\$44.4 million, +.06% and is within reporting thresholds.

**Format 1 and 3 Contract Data:**

**Contract Price Adjustments**

<b>CPs - In Process</b>		
	Total Authorized Unpriced Work	\$407,709.5
<b>Approved Adjustments to Contract Price (not reflected in B.4-1 Table)</b>		
	Total Negotiated Cost Changes	\$407,709.5
<b>Grand Total Adjustments</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	2021	N/A

**Management Reserve Activity**

BCR Number	Title	PBS	Fiscal Year	MR
N/A	N/A	N/A	2021	N/A

**Fee Activity**

BCR Number	Title	PBS	Fiscal Year	Fee
BCR-PRC-21-002R0	<i>Implementation of FY2021 Performance Measurement Baseline</i>	RL-0011 RL-0013 RL-0030 RL-0040 RL-0041 RL-0042	2021	\$4,590.0K

**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.

<b>Prepared by:</b> Project Controls Staff	<b>Date:</b> 11/16/2020	<b>Approved by:</b>	<b>Date:</b>
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# Appendix B

## Project Services and Support (WBS 000)

**CH2MHILL**  
Plateau Remediation Company



**M. T. Hughey**  
Vice President for  
Safety, Health, Security  
and Quality

**M. A. Wright**  
Vice President for  
Project Technical  
Services

October 2020  
CHPRC-2020-10, 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**  
Vice President for  
Business Services  
Chief Financial Officer

**D. A. Gray**  
Vice President for  
Resource Management  
and Strategic Integration

This section is reported quarterly.

# Appendix C

## Capital Asset Project

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

*a Jacobs company*



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

October 2020  
CHPRC-2020-10, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

# Appendix C.2

## Capital Asset Project

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

**CH2MHILL**  
**Plateau Remediation Company**  
*a Jacobs company*



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

October 2020  
CHPRC-2020-10, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

In October, the Plutonium Finishing Plant (PFP) Closure Project team continued Phase 2 operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) approved CH2MHILL Plateau Remediation Company resumption of work plan developed in response to the RL-directed March 24, 2020, partial stop work order that ended September 30, 2020. Work performed included surveying PFP radiological boundaries and performing equipment maintenance. The PFP senior management team began preparations and planning to support the resumption of Plutonium Reclamation Facility (PRF) work scope.

<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
<b>COMPLETE</b> Cold and Dark/Demo Ready activities for the PFP Ancillary Facilities	-	-	15	15
<b>COMPLETE</b> Demolition of 234-5Z	-	-	1	1
<b>COMPLETE</b> Demolition of 236-Z	-	-	1	-
<b>COMPLETE</b> Demolition of 242-Z	-	-	1	1
<b>COMPLETE</b> Demolition of 291-Z	-	-	1	1
<b>COMPLETE</b> Demolition of PFP Ancillary Facilities	-	-	15	15
Turnover Facility to Long-Term Surveillance & Maintenance	-	-	1	-

## KEY ACCOMPLISHMENTS

### RL-0011.C2 Accomplishments:

- October operations consisted of the completion of required surveillance and maintenance (S&M) activities to protect government property and maintain safety and environmental compliance. These efforts included surveying PFP radiological boundaries and performing equipment maintenance.
- Crews continued work on the disposition of legacy waste.
- The PFP senior management team began preparations and planning to support the resumption of PRF work scope.

## 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/C.2</b>																		
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risk identification numbers were updated to align with identification system used in the Enterprise Risk and Opportunity Management System for fiscal year (FY) 2021.																		
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)																		
No realized risks identified in <b>October</b> .																		
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)																		
No critical risks identified in <b>October</b> .																		
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																		
No high threat risks identified in <b>October</b> .																		
<b>FY2021 Key Risks</b>																		
RL11 PFP-0003-T: Stop Work From Concerned Workers	Concerned workers can implement 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> Mitigate  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$0, 16 days	● ↔	<p><b>Risk Trigger:</b> During PFP demolition activities, an increase in stop works could result in delays.</p> <table border="1"> <thead> <tr> <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> <p><b>Mitigation Assessment:</b> No major changes in <b>October</b>. Increased communication and worker involvement to avoid confusion and concern to minimize stop works have continued; stop works may impact the project schedule going forward.</p>	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																
RL11 PFP-0013-T: Weather Impacts During 236-Z Demolition	Inclement weather, including moderate winds, low or high temperatures, and above average snowfall or thunderstorms will result in in-scope unplanned work and schedule impacts to the project.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$0, 20 days	● ↔	<p><b>Risk Trigger:</b> High winds and cold weather may impact the project in the winter and spring seasons. Average winds above 15 mph shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and, therefore, shuts down fieldwork activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in <b>October</b>. No weather events impacted the project in <b>October</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																
RL11-PFP-0017-T: Delay of PRF Debris Loadout	The loadout of PRF debris is delayed.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$0, 32 days	● ↔	<p><b>Risk Trigger:</b> The project experiences delays to PRF debris loadout, impacting project completion.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communicate PRF loadout options with RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in <b>October</b>. PRF debris loadout has not resumed due to the phased return to work from the coronavirus (COVID-19).</p>	Risk Recovery Action(s)	FC Date	%	Communicate PRF loadout options with RL.	Ongoing	N/A	Encourage additional worker involvement.	Ongoing	N/A						
Risk Recovery Action(s)	FC Date	%																
Communicate PRF loadout options with RL.	Ongoing	N/A																
Encourage additional worker involvement.	Ongoing	N/A																
<b>Unassigned Risks</b> (Pending ownership of identified threats/opportunities)																		
No unassigned risks identified in <b>October</b> .																		

## CRITICAL PATH ANALYSIS

The PFP critical path schedule begins with the completion of PRF loadout, which is forecast to occur by March 9, 2021, 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 S&M and project closeout activities, completing by June 24, 2021.

## 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	6/24/2021	Work resumption was planned in the revised DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, Critical Decision (CD)-2 and CD 3 package for early October based on a phased resumption approach and to conserve PPE in response to COVID 19 impacts. The forecast date reflects the unanticipated continuing impacts of COVID-19, which precluded work resumption as planned in the CD-2 and CD-3 package.

\*Due date reflects Critical Decision-4 (CD-4) due date with RL contingency.

†Forecast date reflects CD-4 completion date (does not include RL schedule contingency).

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

None to report at this time.

# 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**

*a Jacobs company*



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

October 2020  
CHPRC-2020-10, Rev. 0  
Contract DE-AC07-08RL14788  
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 RL_0011_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2020 / 10 / 01											
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2020 / 10 / 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 137,205	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 13,781	d. TARGET PROFIT/FEE 5,000	e. TARGET PRICE 142,205	f. ESTIMATED PRICE 200,444	g. CONTRACT CEILING 142,205	h. ESTIMATED CONTRACT CEILING 200,444	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		189,142			c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)										
b. WORST CASE		195,444																
c. MOST LIKELY		195,444	150,986	-44,458														
<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		3,605	200	-3,406	-236	133,029	127,627	-5,402	-43,361	0	0	0	144,683	189,142	-44,458			
b. COST OF MONEY		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			
d. UNDISTRIBUTED BUDGET																		
e. SUBTOTAL		3,605	200	-3,406	-236	133,029	127,627	-5,402	-43,361	0	0	0	144,683	189,142	-44,458			
f. MANAGEMENT RESERVE													6,302					
g. TOTAL		3,605	200	-3,406	-236	133,029	127,627	-5,402	-43,361	0	0	0	150,986					
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																		
a. VARIANCE ADJUSTMENT																		
b. TOTAL CONTRACT VARIANCE																150,986	189,142	-38,156

**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)  2020 / 10 / 01	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD)  2020 / 10 / 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	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)							
ITEM (1)																	
3B - PFP Closure Project	3,605	200	436	-3,406	-236	133,029	127,627	170,988	-5,402	-43,361	0	0	0	144,683	189,051	-44,368	
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
d. UNDISTRIBUTED BUDGET														0	0	0	
e. SUBTOTAL (Performance Measurement Baseline)	3,605	200	436	-3,406	-236	133,029	127,627	170,988	-5,402	-43,361	0	0	0	144,683	189,051	-44,368	
f. MANAGEMENT RESERVE														6,302			
g. TOTAL	3,605	200	436	-3,406	-236	133,029	127,627	170,988	-5,402	-43,361	0	0	0	150,986			

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT										DOLLARS IN THOUSANDS								Form Approved OMB No. 0704-0188		
FORMAT 3 - BASELINE																				
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: 2020/10/01 b. TO: 2020/10/25									
5. CONTRACT DATA																				
a. ORIGINAL NEGOTIATED COST 51,683			b. NEGOTIATED CONTRACT CHANGE \$85,522		c. CURRENT NEGOTIATED COST (A + B) \$137,205		d. ESTIMATED COST AUTH UNPRICED WORK \$13,781		e. CONTRACT BUDGET BASE (C + D) \$150,986		f. TOTAL ALLOCATED BUDGET \$150,986		g. DIFFERENCE (E - F) \$0							
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2021		k. CONT COMPLETION DATE 9/30/2021				l. EST COMPLETION DATE 9/30/2021									
6. PERFORMANCE DATA										BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)										
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST																UNDISTRIB BUDGET (19)	TOTAL BUDGET (20)
			+1 Nov-20 (4)	+2 Dec-20 (5)	+3 Jan-21 (6)	+4 Feb-21 (7)	+5 Mar-21 (8)	+6 Apr-21 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)	FY20 (17)	FY21 (18)			
a. PM BASELINE (BEGIN OF PERIOD)	129,424	-9,281	4,305	3,008	2,130	2,107	97	7	0	0	6,090	29,182	19,407	628	66,598	7,519	15,260	0	144,683	
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																				
None																		0	0	
c. PM BASELINE (END OF PERIOD)	133,029	3,605	4,305	3,008	2,130	2,107	97	7	0	0	6,090	29,182	19,407	628	66,598	7,519	15,260	0	144,683	
7. MANAGEMENT RESERVE																			6,302	
8. TOTAL																			150,986	

**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) 2020 / 10 / 01	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2020 / 10 / 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 NOV 2020 (4)	+2 DEC 2020 (5)	+3 JAN 2021 (6)	+4 FEB 2021 (7)	+5 MAR 2021 (8)	+6 APR 2021 (9)	MAY 2021 (10)	JUN 2021 (11)	JUL 2021 (12)	AUG 2021 (13)	TCOMPLETE (14)		
3B - PFP Closure Project	2	4,988	11	98	134	152	122	72	55	1	0	-	-	5,633	
<b>g. TOTAL DIRECT</b>	<b>2</b>	<b>4,988</b>	<b>11</b>	<b>98</b>	<b>134</b>	<b>152</b>	<b>122</b>	<b>72</b>	<b>55</b>	<b>1</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>5,633</b>	

CLASSIFICATION (When Filled In)									
CONTRACT PERFORMANCE REPORT								FORM APPROVED	
FORMAT 5 - Explanations and Problem Analysis								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) 2020/10/01	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE				b. TO (YYYYMMDD) 2020/10/25	
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:	3,605.4	199.7	435.6	-3,405.8	-94.5%	-235.9	-118.2%	0.06	0.46
Cumulative:	133,029.0	127,626.6	170,988.1	-5,402.3	-4.1%	-43,361.5	-34.0%	0.96	0.75
	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:	144,683.3	189,141.7	-44,458.4	-30.7%	0	0.94			
<b>Explanation of Variance/Description of Problem:</b>									
<p><b>Current Month Schedule Variance:</b> PFP demolition was scheduled to resume in October, however, due to the COVID 19 pandemic, reliability of PPE is uncertain. Resumption of demolition activities is currently scheduled to begin January 2021 when it is believed a reliable supply of PPE will be available to continue and complete demolition of PFP.</p> <p><b>Cost Variance:</b> The current month cost variance is within thresholds.</p> <p><b>Cumulative to Date Schedule Variance:</b> The cumulative to date schedule variance is within thresholds.</p> <p><b>Cost Variance:</b> 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 &amp; Administrative (G&amp;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.</p> <p>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.</p>									
<b>Impact:</b>									
<p><b>Schedule Impact:</b> Completion of all demolition activities followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities forecast to occur in June 2021. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of November 30, 2017, was not met.</p> <p><b>Cost Impact:</b> A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017.</p>									
<b>Corrective Action:</b>									
<b>Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):</b>									
<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 October.</p> <p>The following items are addressed, as applicable:</p> <ol style="list-style-type: none"> <li>Schedule Margin Analysis: No drawdowns of schedule margin were made in the month of October.</li> <li>Data dictionary Changes: No change in the month of October.</li> <li>Forecast Schedule with No Baseline: No change in the month of October.</li> <li>UB Balance: No change in the month of October.</li> <li>Negative Actual Cost of Work Performed (ACWP): No change in the month of October.</li> <li>Earned Actual Cost (EAC) Analysis: Best Case = \$189,142; Most Likely = \$195,444; Worst Case = \$195,444. The Best Case EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no realization of remaining risks. The Most Likely EAC is the ACWP plus what management believes is the most likely outcome based on a knowledgeable estimate of all authorized work, known risks, unknown risks, and probable future conditions. The Worst Case EAC is the ACWP plus the ETC plus realization of all identified risks, plus the scope identified in the Trend Log. The Best/Worst and Most Likely EAC values are documented in the Format 1 Report.</li> <li>Negative CV &gt; VAC: No change in the month of October.</li> <li>Management Reserve Transactions: No management reserve transactions were made in the month of October.</li> <li>Freeze Period Changes: No change in the month of October.</li> <li>Retroactive Changes: No change in the month of October.</li> <li>Earned Value Type Changes: No change in the month of October.</li> </ol>									
<b>Prepared by:</b> Kerri Scott			<b>Date:</b> 11/11/2020			<b>Approved by:</b>			<b>Date:</b>