

Monthly Performance Report

February 2019

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

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

CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

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APPROVED
By Janis D. Aardal at 1:56 pm, Mar 21, 2019

Release Approval

Date

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CH2MHILL
Plateau Remediation Company



L. Ty Blackford
President and Chief
Executive Officer

Monthly Performance Report

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February 2019
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EXECUTIVE SUMMARY

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

- **Waste and Fuels Management Project (W&FMP):** At the Waste Encapsulation and Storage Facility (WESF), the W-135 management of the Cesium and Strontium Capsules Project team has been reviewing and working with the subcontractor to incorporate comments to the final Cask Storage System design. Work continued on the Maintenance and Storage Facility (MASF) mockup design and remains on schedule to complete by the end of March. Crews made excellent progress performing radiological surveys and removal of radiological contamination in the WESF G Hot Cell. Engineering and work activities to address the historical use of the WESF crane to lift the truckport cover blocks, which were recently determined to exceed the rated capacity of the crane, are in progress. A replacement truckport cover plate is in fabrication at the Mission Support Alliance, LLC (MSA) fabrication shop. Also at WESF, crews completed the hydrostatic leak testing on January 28, 2019, on Tank 100, a tank outside WESF that currently contains 3,400 gallons of liquid that has a higher cesium 137 concentration than normal. The CSB team performed the annual multi-canister overpack sampling proficiency training using the sample simulator. The T Plant crew completed scheduled maintenance of the canyon crane ahead of schedule to support the receipt of the 105 KW basin sludge filled Sludge Transport & Storage Container (STSC) 9 on February 25, 2019.
- **Soil and Groundwater Remediation Project (S&GRP):** In the U Plant Area drilling was initiated for the first of three new wells scheduled for completion in fiscal year (FY) 2019. In the 300 Area, S&GRP completed the final transport model calibrations, supporting the development of the 300-FF-5 Stage B groundwater modeling, and completed the batch leach tests on Stage B pre-injection samples. At the 200 West groundwater Pump and Treat (P&T) Facility, the team adjusted the pumping rates from the 200-UP-1 site extraction wells to maximize uranium recovery which increased total UP-1 flowrate from 150gpm to 200gpm. In the 100 Area, crews completed construction of Well 199-H3-13, and offloaded resin from Vessel F1 in preparation for distributor replacement at the HX P&T Facility. Also in the 100 Area, crews disconnected and removed old equipment near the KW reactor to prepare for the delivery and installation of soil flushing equipment.
- **Plutonium Finishing Plant (PFP) Closure Project:** Workers continued removing demolition debris from the north side of the 234-Z Building. Removal of the remaining debris is expected to be completed in March. The PFP team also began preparations for the upcoming April 22, 2019, Management Assessment that is required prior to the resumption of higher-risk demolition. The project began providing briefings on the PFP status and path forward to several neighboring projects and other interested groups on Site.
- **K Basins Operations (KBO):** The Sludge Removal Project was recognized by the Columbia River Basin Chapter of the Project Management Institute with the Project of the Year and People's Choice Awards at a ceremony held February 22, 2019. The ninth STSC was safely filled with 105KW basin sludge and is scheduled to be delivered to T Plant for placement into interim storage on February 25, 2019. Moving the radioactive sludge out of the K West Reactor Basin will eliminate one of the largest remaining risks along the Columbia River. KBO also completed removal of the 116-K East crib and contaminated soil below.



Workers will soon begin training on a radiological assay system recently installed at the 324 mockup. The system will enable operators to remotely characterize waste during remediation of the 324 Building.

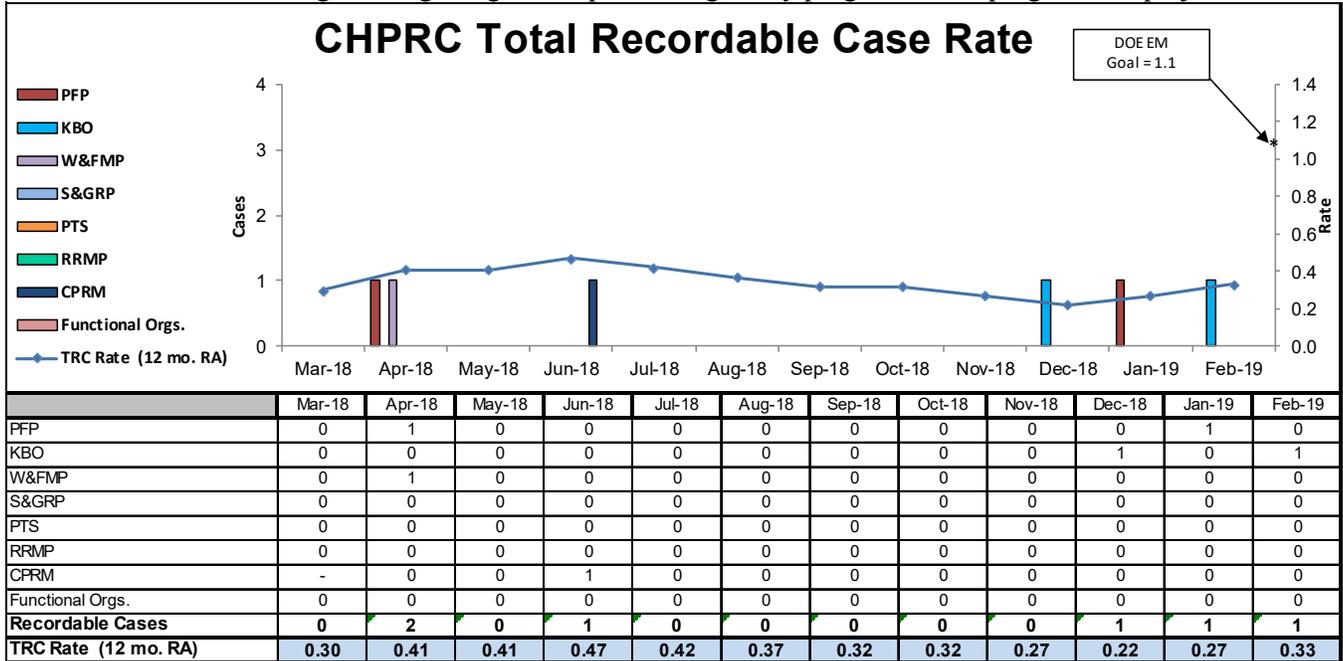
Sampling of the former site of the crib is currently underway to confirm that all the contaminated soil has been removed. The project began preparations to remediate the 100-K-47:1 process sewer line.

- River Risk Management Project (RRMP): Progress continued on work required for readiness to remediate the 300-296 Waste Site beneath the 324 Building. Crews at the 324 Building drilled through a 4-foot-thick concrete wall to install a video camera in 324 Building's D Cell to support remote operations and completed airlock core drilling for light installation. Workers completed the installation of the remote operator control trailer and the instrumentation and controls connections for the remote equipment to be utilized to excavate the waste site. At the 324 Building mockup, crews began the Master Slave Manipulator repair training and initiated the installation of the Radiological Assay System that workers will test at the mockup prior to installing at 324 Building.
- Central Plateau Risk Management Project (CPRM): CPRM personnel completed the electrical and mechanical isolation indices for the cold and dark work package as well as the asbestos and Hazardous Material removal work packages for the 242-B/BL Facility in support of preparing it for deactivation and demolition. The project completed additional combustible load out from the Reduction and Oxidation Plant (REDOX) Facility, steam line abatement outside of REDOX and mobilized to begin removing steam line crossovers in the 200E Area. Workers used a single-boom pump truck to support the continued filling of Plutonium Uranium Extraction Plant (PUREX) Tunnel 2 with grout. At month end, PUREX Tunnel 2 was 78 percent filled with grout.

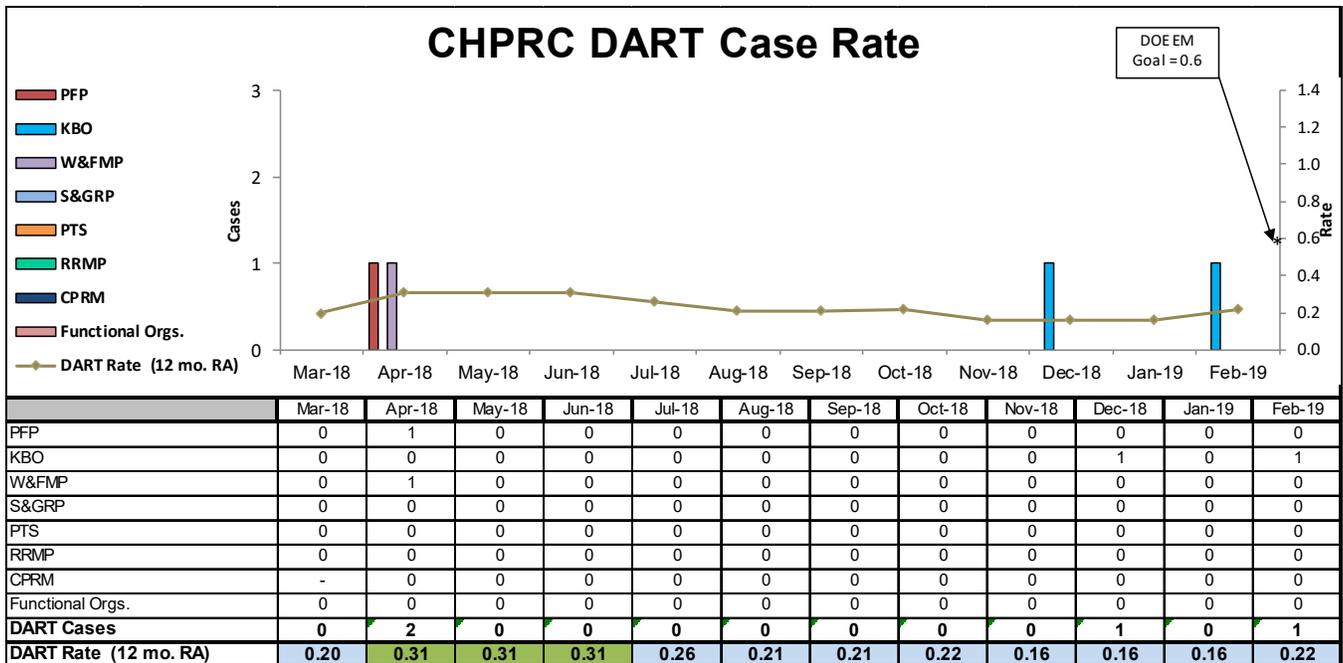
- The President's Zero Accident Council (PZAC) meeting for February was hosted by the CPRM. The three main ideas were:
 - o Situational Awareness.
 - o Work Control.
 - o Hazard Mitigation.
- Four "Thinking Target Zero" (TTZ) bulletins were published to convey important occupational, safety, health, and environmental messages:
 - o Environmental Management System 2019 Aspects.
 - o Healthy Heart-Mind.
 - o Fit for Duty.
 - o Voluntary Protection Program Safety Improvement.
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
 - o Four Lessons Learned in the Researcher's Questioning Attitude Mitigates Hazard:
 - Yields Electrical Design Improvement (offsite).
 - Are You Wearing Your Hearing Protection? (offsite).
 - Notify Hanford Fire Department of All Fires Including Smoking Receptacles (CHPRC).
 - Pre-signing Documents (offsite).
 - o Injuries.
 - o Weekly Ethics Moments.
 - o Vehicle Events.
 - o Plastic Recycling.
 - o Preventing Slips, Trips and Falls.
 - o Hearing Protection PPE.
 - o February – Heart Health Month.
 - o Medications at Work.
 - o Special Safety Bulletin, February 20, 2019, *It is Critical to Maintain Awareness of the Hazards of a Task to Prevent Injury*.
 - o Sentinel Implementation.

TARGET ZERO PERFORMANCE

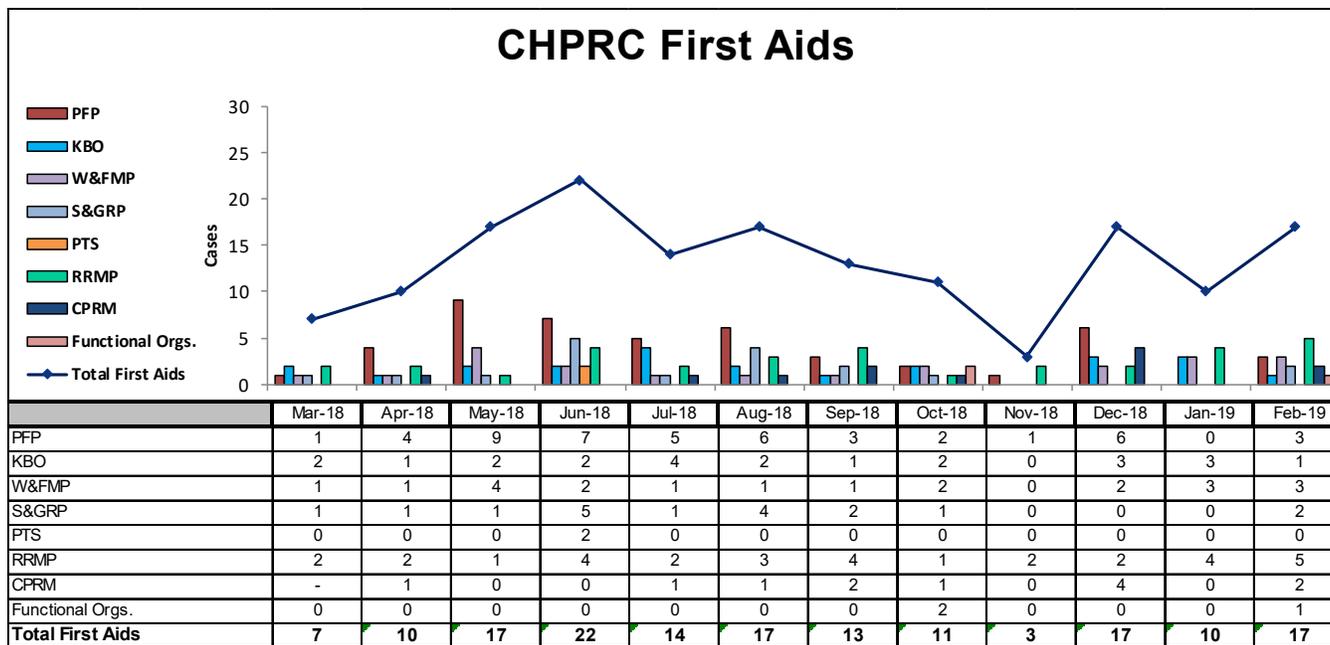
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.33 is based on a total of 6 Recordable injuries. February had one reported Recordable case.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.22 is based upon a total of four Days Away cases. February had one reported DART case.



First Aid Case Summary: CHPRC reported 17 first aid cases in February. The contributors were nine sprains/strains/pains, six abrasions/bruises/contusions, one undescribed/precautionary and one foreign bodies/irritation in the eye injury. There was one self-treat case reported in February.

KEY ACCOMPLISHMENTS

Projects

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

Project Services and Support

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

MAJOR ISSUES

Projects

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

Project Services and Support

Issue:

On December 18, 2017, the U.S. Department of Energy (DOE) published in the Federal Register (82 FR 59947) an update to Title 10, Code of Federal Regulations, Part 851, “Worker Safety and Health” (10 CFR 851). The update incorporated the current consensus safety and health standards with an effective date of January 17, 2018, with compliance required starting January 17, 2019.

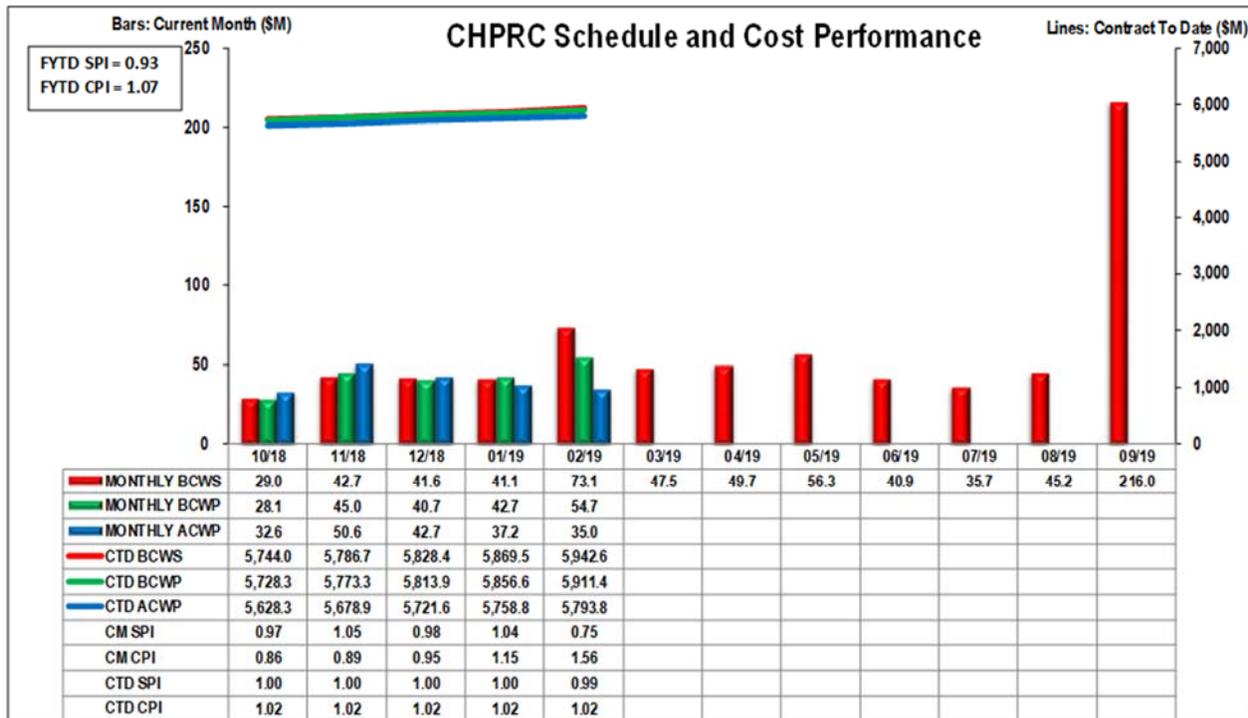
Corrective Action:

Proceed with implementation of the technical amendment to 10 CFR 851; however, compliance by the directed deadline of January 17, 2019, was not achieved. Prepare addendum to the FY2019 Change Proposal addressing the impacts and submit to RL for inclusion in the negotiation and definitization of the FY2019 Change Proposal.

Status:

Engineering has evaluated the impacts and effort to obtain compliance. This data was compiled and a draft proposal addendum for FY2019 10 CFR 851 technical amendment implementation impacts and a rough order of magnitude cost estimate for the out years was submitted to RL for review.

EARNED VALUE MANAGEMENT



*September includes \$175.4 million of budgeted cost of work scheduled (BCWS) in undistributed budget.

	\$M					\$M					\$M		
	Current Period					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			
RL-0011 - Nuclear Materials Stab & Disp PFP	29.5	22.0	3.9	(7.5)	18.1	1024.8	1006.0	1165.2	(18.7)	(159.1)	1,055.1	1,219.8	(164.6)
RL-0012 - SNF Stabilization & Disposition	1.4	0.9	1.0	(0.5)	(0.1)	750.8	749.8	719.9	(1.0)	29.9	762.0	730.9	31.1
RL-0013 - Solid Waste Stab & Disposition	12.1	10.7	9.3	(1.4)	1.4	1403.9	1400.2	1300.2	(3.7)	100.0	1,562.1	1,461.8	100.3
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	9.4	8.0	7.4	(1.4)	0.6	1571.0	1570.3	1514.0	(0.6)	56.4	1,717.2	1,658.7	58.5
RL-0040 - Nuc Fac D&D - Remainder	7.1	4.7	4.7	(2.4)	0.1	521.1	522.6	496.6	1.5	25.9	576.9	553.9	22.9
RL-0041 - Nuc Fac D&D - RC Closure Project	13.4	8.3	8.6	(5.1)	(0.3)	644.0	635.3	575.3	(8.7)	60.0	732.2	671.6	60.6
RL-0042 - Nuc Fac D&D - FFTF Project	0.1	0.1	0.1	0.0	0.0	27.1	27.1	22.7	(0.0)	4.4	28.2	24.3	3.9
Total	73.1	54.7	35.0	(18.3)	19.8	5,942.6	5,911.4	5,793.8	(31.2)	117.6	6,433.8	6,321.0	112.7

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

*Per e-mail direction received December 6, 2017, from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. A contract alignment settlement has been reached and baseline change requests (BCRs) will be processed to align the Performance Measurement Baseline (PMB) with the settlement values in March 2019.

Performance Summary

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$112.7 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$176.0 million. For February, the project was 25.1 percent behind schedule and 36.1 percent under planned cost. Contract to date (CTD); the project was 0.5 percent behind schedule and 2.0 percent under planned cost.

The current month (CM) negative schedule and cost variance is primarily due to project breakdown structure (PBS) RL-0011 due to the implementation of BCR-011C-18-005R2 approved in February 2019, which implemented the revised scope, cost, and schedule baseline for the completion of the RL-0011.C2 project as approved by DOE. The baseline change request (BCR) set the remaining historical budgeted cost of work scheduled (BCWS) equal to budgeted cost of work performed (BCWP) as of June 24, 2018, consistent with DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets guidance for establishing a revise “to go” baseline for projects that have experienced a Performance Baseline Deviation such that the project cannot be completed within its’ existing performance goals. DOE’s establishment of a new performance measurement baseline (PMB) for the RL-0011.C2 project and DOE’s direction to CHPRC to implement it was documented by RL correspondence number 19-AMRP-0049 dated January 28, 2019, *Approval of Plutonium Finishing Plant Capital Asset Project 2 Project Completion, Baseline Change Request, BCR-011C-18-005R1*. The BCWS revisions reflected in BCR-011C-18-005R2 established a new “to go” baseline from the June 25, 2018, start date for re-planning of work through February 2019 fiscal month end were consistent with the DOE Baseline Change Proposal (BCP) which established the new DOE baseline for the RL-0011.C2 project. The revised baseline did not incorporate schedule delays experienced since the June 2018 starting point for planning the revised DOE project baseline for completion of the project. These delays have and continue to impact schedule performance. Schedule delays in February included the continued impacts of the unforeseen loss of Decontamination and Decommissioning (D&D) workers due to other Hanford Contractor hiring. Additionally, the project experienced a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities in February, where non-essential personnel were advised not to report to work or weather conditions preclude execution of work as planned.

Also contributing to the negative schedule variance is PBS-0041 due to 324 Structural Modifications and the 324 Facility Modifications accounts. In January, Baseline Change Request (BCR), BCR-041-19-006R0, 324 Building Disposition Project Carryover Scope and Latent Conditions, incorporated the necessary budget for this scope. Within that BCR, the budgeted cost of work scheduled (BCWS) for this scope was planned in February as the project assumed the additional scope could not be planned within the current month. This has created an unfavorable current month schedule variance in February as the performance was taken in January. In addition, penetration sealing within the airlock was unable to begin as the project experienced a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were advised not to report to work.

FUNDING ANALYSIS

FY2019 Funds vs. Fiscal Year Spend Forecast

(\$M)

PBS	Project	FY2019		Variance
		Projected Funding	Spending Forecast	
Estimate at Complete				
RL-0011	Nuclear Materials Stabilization and Disposition	70.0	65.0	5.0
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	17.8	2.3
RL-0012	15-D-401 Sludge Retrieval Project	11.3	0.0	11.3
RL-0013	Waste and Fuels Management Project	173.5	156.8	16.7
RL-0013	Management of Cesium and Strontium Capsules	6.6	2.9	3.7
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	122.9	10.0
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	70.7	11.1
RL-0041	Nuclear Facility D&D, River Corridor	148.3	128.5	19.9
RL-0042	Fast Flux Test Facility Closure	4.3	2.5	1.8
Total Estimate at Complete		649.0	567.2	81.8
Scope Pending Change Management				
RL-0013	Waste and Fuels Management Project	0.0	0.8	(0.8)
RL-0013	Management of Cesium and Strontium Capsules	0.0	0.0	(0.0)
RL-0030	Soil, Groundwater and Vadose Zone Remediation	0.0	0.1	(0.1)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	2.9	(2.9)
RL-0041	Nuclear Facility D&D, River Corridor	0.0	0.4	(0.4)
Total Incremental Work Scope		0.0	4.2	(4.2)
Total Fiscal Year Spend Forecast				
RL-0011	Nuclear Materials Stabilization and Disposition	70.0	65.0	5.0
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	17.8	2.3
RL-0012	15-D-401 Sludge Retrieval Project	11.3	0.0	11.3
RL-0013	Waste and Fuels Management Project	173.5	157.6	15.9
RL-0013	Management of Cesium and Strontium Capsules	6.6	2.9	3.7
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	123.0	9.9
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	73.7	8.1
RL-0041	Nuclear Facility D&D, River Corridor	148.3	128.8	19.5
RL-0042	Fast Flux Test Facility Closure	4.3	2.5	1.8
Total		649.0	571.4	77.6

Funds/Variance Analysis

For February, there was no change to overall FY2019 projected funding of \$649 million. There is no significant change in forecast.

BASELINE CHANGE REQUESTS

In February 2019, CHPRC approved and implemented three Baseline Change Requests (BCRs) into the PMB budget. Two of the three BCRs impacted the PMB. Each change request is identified in the table below:

Change Request #	Title	PBS	Summary of Change
BCR-011C-18-005R2	<i>PFP CAP 2 Project Completion</i>	RL-0011	This BCR implemented the changes to the RL-0011 C2 CAP PMB as authorized by RL. This BCR increased the PMB value by \$49,134K.
BCR-013-19-005R0	<i>Remove Tritium Study Scope</i>	RL-0013	This BCR removed scope from the FY2019 plan related to Hanford Federal Facility Agreement and Consent Order Milestones M-026-07 and C-026-07 in accordance with the Interagency Management Integration Team determination. This BCR decreased the PMB value by \$71K.
BCRA-PRC-19-009R0	<i>HPIC Updates February 2019</i>	000, RL-0011, RL-0041	This BCR incorporated February FY2019 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

The allocated (distributed) budget increased by \$49,063K.

Undistributed Budget (UB) Activity

BCR Number	Title	PBS	Fiscal Year	UB
N/A	N/A	N/A	2019	N/A

There was no change to UB in February.

Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
BCR-011C-18-005R2	<i>PFP CAP 2 Project Completion</i>	RL-0011, RL-0030	2019	\$0

There was no change to MR in February.

Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2019	N/A

There was no change to fee during February.

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

February 2019 Summary of Changes

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	Contract Period Total	Total PMB
January 2019 Estimate										
PMB	3,391,477	391,653	471,323	504,826	485,028	470,649	2,323,478	669,765	6,384,720	6,384,720
MR	0	0	0	0	0	0	0	63,278	63,278	63,278
Fee	155,504	14,325	14,501	27,804	10,612	18,860	86,101	0	241,605	241,605
Total	3,546,981	405,978	485,824	532,630	495,639	489,509	2,409,579	733,043	6,689,603	6,689,603
February 2019 Change										
PMB										
Change to PMB	0	0	0	0	0	0	0	49,063	49,063	49,063
MR										
Change to MR	0	0	0	0	0	0	0	0	0	0
Fee										
Change to Fee	0	0	0	0	0	0	0	0	0	0
Total Change	0	0	0	0	0	0	0	49,063	49,063	49,063
February 2019 Estimate										
PMB	3,391,477	391,653	471,323	504,826	485,028	470,649	2,323,478	718,828	6,433,783	6,433,783
MR	0	0	0	0	0	0	0	63,278	63,278	63,278
Fee	155,504	14,325	14,501	27,804	10,612	18,860	86,101	0	241,605	241,605
Total	3,546,981	405,978	485,824	532,630	495,639	489,509	2,409,579	782,106	6,738,666	6,738,666

Changes to/Utilization of Management Reserve in February 2019

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	FY2019	Total
January 2019 MR Totals									
RL-0011	0	0	0	0	0	0	0	5,828	5,828
RL-0012	0	0	0	0	0	0	0	8,163	8,163
RL-0013	0	0	0	0	0	0	0	6,185	6,185
RL-0030	0	0	0	0	0	0	0	17,863	17,863
RL-0040	0	0	0	0	0	0	0	8,700	8,700
RL-0041	0	0	0	0	0	0	0	16,350	16,350
RL-0042	0	0	0	0	0	0	0	189	189
Total	0	0	0	0	0	0	0	63,278	63,278
February 2019 MR Changes/Utilization									
RL-0011	0	0	0	0	0	0	0	10,101	10,101
RL-0012	0	0	0	0	0	0	0	0	0
RL-0013	0	0	0	0	0	0	0	0	0
RL-0030	0	0	0	0	0	0	0	(10,101)	-10,101
RL-0040	0	0	0	0	0	0	0	0	0
RL-0041	0	0	0	0	0	0	0	0	0
RL-0042	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
February 2019 MR Totals									
RL-0011	0	0	0	0	0	0	0	15,928	15,928
RL-0012	0	0	0	0	0	0	0	8,163	8,163
RL-0013	0	0	0	0	0	0	0	6,185	6,185
RL-0030	0	0	0	0	0	0	0	7,762	7,762
RL-0040	0	0	0	0	0	0	0	8,700	8,700
RL-0041	0	0	0	0	0	0	0	16,350	16,350
RL-0042	0	0	0	0	0	0	0	189	189
Total	0	0	0	0	0	0	0	63,278	63,278

SELF-PERFORMED WORK

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

Contract-to-Date Actual Awards & Mods (\$M) 10/1/2008 - 2/28/2019					
Reporting Category					
	\$ Value	%	Goal %		
SB	\$1,579.6	55.57%	49.3%	PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
SDB	\$283.0	9.96%	8.2%		
SWOB	\$290.7	10.23%	7.5%	CHPRC Contract Value:	\$5,824.8
HUB	\$90.6	3.19%	2.2%	SB actual:	\$1,579.6
VOSB	\$242.6	8.53%	3.5%	SB Performed %:	27.12%
SDVO	\$152.9	5.38%	1.3%	PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed	
NAB	\$75.6	2.66%	N/A	CHPRC Contract Value:	\$5,824.8
Large	\$761.9	26.80%	N/A	CHPRC Self Performed:	\$3,213.2
UNK	\$0.2	0.01%	N/A	CHPRC Self Performed %:	55.16%
GOVT	\$5.0	0.18%	N/A		
GOVT CONT	\$483.2	17.00%	N/A		
EDUCATION	\$0.2	0.01%	N/A		
NONPROFIT_	\$4.1	0.15%	N/A		
FOREIGN	\$8.4	0.29%	N/A		
Total	\$2,842.6	100.00%	N/A		

Notes:

1. Since the CHPRC contract award in October 2008, CHPRC has subcontracted more than \$2.8 billion in goods and services, with more than 55 percent going to small businesses. All subcontracting goals have been exceeded.
2. Approximately 91 percent of the total dollars arise from service and staffing contracts and contract amendments, with six percent of the remaining expenditures arising from PCard purchases and three percent from the balance in purchase orders for materials and equipment.
3. Data is summarized by business categories (Women Owned Minority Business Enterprise codes) in accordance with socioeconomic reporting requirements. Small business categories overlap and should not be added together.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
CONTRACT			
J.12/C.2.2, C.2.3	PBS-11, Plutonium Finishing Plant Closure Project PBS-13, Solid and Liquid Waste Treatment and Disposal	Offsite Transportation of Radioactive Material: RL provides equipment and government drivers to transport transuranic (TRU) materials outbound/inbound between the Hanford Site and Perma-Fix Northwest locations. RL is the authorized shipper, acts as signatory on the shipping papers and ensures compliance with DOE Manual 460.2-1. RL arranges for Commercial Motor Vehicle Safety Alliance Level VI Vehicle Inspections and verifies that the government drivers meet the applicable 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, Transuranic Waste Certification	Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico: Provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office.	No WIPP shipments are planned within the remaining contract period of performance.

DOE ACTIONS/DECISIONS

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

Section A

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

CH2MHILL
Plateau Remediation Company



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

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Loadout of existing 234-5Z Facility debris was slowed due to abnormally harsh winter weather in the month of February. Demolition crews were reassigned to snow removal and cold weather mitigation activities. This has caused a four week slip in schedule. Approximately 56 percent of the existing debris pile has been shipped to the Environmental Restoration Disposal Facility (ERDF) for disposal. Low-risk demolition is scheduled to resume in March. Planning has commenced for the higher-risk demolition forecasted to begin in June 2019 and preparations for a second Management Assessment (MA) are in process.

Key Metrics

<i>Key Performance Indicators</i>	<i>Current Month</i>	<i>Contract To Date</i>
COMPLETE Glovebox/Hood Removed or Dispositioned in Place	0	232 gloveboxes/hoods
COMPLETE KPP Rooms/Areas Ready for Demo	0	72 rooms/areas
COMPLETE Asbestos/Asbestos Containing Material (ACM) Removed	0	35,827
COMPLETE Process Vacuum Piping Dispositioned	0	7,231 feet
COMPLETE Process Transfer Line Dispositioned	0	1,525 feet
COMPLETE Pencil Tank Units Removed (Shipped)	0	196 pencil tank units
COMPLETE Buildings Ready for Demo	0	68 structures
Buildings Demolished or Removed	0	63 structures
Non-radioactive Waste Shipped	0	89.8 m ³
Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped	0	5,014 m ³
LLW/MLLW Shipped	0 m ³	18,031 m ³

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-PFP-OBJI-P1	Improve compliance, Environmental Management System (EMS) awareness, employee involvement	Four EMS presentations at minimum; involve one to two employees in compliance review, and facility walk-downs	9/30/19	40%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	3	47	<p>2/21/2019 – First Aid was administered to an employee who fell when they misjudged the distance to the edge of the first step on a set of stairs. The employee slid down approximately two to three stairs on their feet while holding onto the handrail and eventually landed on their buttocks. It was determined the employee was uninjured and they were released to work with no restrictions. (25083)</p> <p>2/27/2019 - An employee was in the process of performing a radiological survey from a kneeling position when they stood up and twisted simultaneously, injuring the inner left knee area. Employee was sent to HPMC for evaluation and returned to work with no restrictions. (25087)</p> <p>2/27/2019 – An employee slipped and fell while attempting to enter a vehicle after attempting to kick off snow and ice from their boots. The employee's right foot slipped off the side step and they fell to the ground, landing on the left side, pushing their cellphone into their groin. Employee was evaluated at HPMC and returned to work with no restrictions. (25088)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments:

- Completed field mentoring activities with the first group of newly hired Decontamination and Decommissioning (D&D) workers.
- Cleared debris from ion exchange exhausters that will be used during higher-risk demolition.
- Loaded eight containers for shipping to ERDF.
- Preparations are being made for a CHPRC MA of the readiness to restart the higher-risk demolition in June 2019. The MA support subcontract proposal has been approved and the final award process is forecast to be completed in March 2019.

MAJOR ISSUES

Issue:

The Plutonium Finishing Plant (PFP) project has realized a loss of approximately 30 D&D workers due to opportunities provided by the Labor Asset Management Program offering Nuclear Chemical Operator (NCO) positions across the Hanford site. Ten of the D&D workers transferred to Washington River Protection Solutions, LLC (WRPS) in December, 10 in January, and the last eight are scheduled to leave in March. The loss of trained and qualified workers will cause a schedule loss of 10 weeks to the PFP project.

Corrective Action:

Work with Labor Relations and Human Resources to fill needed positions.

Status:

In response to the loss of staff and possible additional attrition, PFP has hired 41 D&D workers who will complete classroom training at Volpentest HAMMER Federal Training Center in north Richland with field mentoring training activities to follow. The first group of 31 D&D workers began training on December 3, 2018, and completed field mentoring training activities January 24, 2019. The second group of 10 D&D workers began training on January 28, 2019, and will finish field mentoring training activities March 21, 2019. To prepare new hire D&D workers for safe work activities at PFP, experienced workers and managers have been dedicated to bring new staff up to speed to resume demolition and debris loadout. Furthermore, an additional eight postings are expected to occur in the future.

Issue:

The project lacks adequate Radiological Control Technicians (RCTs) to complete work package development, mock-ups, and field work activities. Efforts to employ adequate RCTs, via contract or otherwise, have been exhausted. The project has not realized planned staffing support for ongoing activities at PFP.

Corrective Action:

CHPRC has teamed with WRPS to hire and train RCTs to fulfill sitewide resource needs.

Status:

The teaming companies have performed initial screening/aptitude testing of applicants. Development of the RCT training course has been completed and the 25 chosen RCTs were given the start date of February 25, 2019. Allocation of RCT resources is subject to the availability and needs of the Company at the time of training completion, later this summer.

Issue:

Harsh weather more extreme than historical averages has impacted PFP's ability to complete scheduled debris disposition activities.

Additionally, in February, there were a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were directed not to report to work.

Corrective Action:

The project has set up an account to collect weather impacts and will pursue a Baseline Change Request (BCR) to address the realization of this risk.

Status:

Work crews normally supporting decontamination and demolition activities have been reassigned to snow removal and weather mitigation activities. Demolition activities will resume after conditions improve.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0011/WBS-011.OA																			
Explanation of major changes to the project monthly spotlight chart: No major changes to the spotlight chart in February.																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
PFP-P2-002: Weather Impacts During 235-Z Debris Disposition	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms will result in in-scope unplanned work and schedule impacts to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 8 days	●	↓	Risk Event: In February, there were a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were directed not to report to work <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Plan for 80% total operation efficiency</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Risk Action Assessment: Work crews normally supporting demolition and demolition support activities have been reassigned to snow removal and weather mitigation activities. Demolition activities will resume after conditions improve.	Risk recovery action(s)	FC Date	%	Plan for 80% total operation efficiency	Ongoing	N/A									
Risk recovery action(s)	FC Date	%																	
Plan for 80% total operation efficiency	Ongoing	N/A																	
PFP-P-014: Bump and Roll, Labor Assets Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit Employees Affecting Productivity	Plutonium Finishing Plant (PFP) Hanford Atomic Metal Trades Council (HAMTC) labor resources are unavailable or unqualified due to the bump and roll, LAMP, or other job postings, resulting in schedule impacts to the project. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 128 days	●	↓	Risk Event: Thirty D&D workers have been hired by other projects on the Hanford Site and have left PFP. The process to hire and train new D&D workers has been initiated. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communication and coordination with other projects, contractors, and unions to reduce or eliminate the impact of the bump and roll process.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 1)</td> <td>1/24/19</td> <td>100%</td> </tr> <tr> <td>Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 2)</td> <td>3/21/19</td> <td>75%</td> </tr> </tbody> </table> Risk Action Assessment: The first group of 31 new D&D workers completed training/field mentoring activities January 24, 2019. The second group of 10 new D&D workers started training January 28, 2019, and will complete field mentoring activities March 21, 2019.	Risk recovery action(s)	FC Date	%	Communication and coordination with other projects, contractors, and unions to reduce or eliminate the impact of the bump and roll process.	Ongoing	N/A	Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 1)	1/24/19	100%	Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 2)	3/21/19	75%			
Risk recovery action(s)	FC Date	%																	
Communication and coordination with other projects, contractors, and unions to reduce or eliminate the impact of the bump and roll process.	Ongoing	N/A																	
Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 1)	1/24/19	100%																	
Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 2)	3/21/19	75%																	
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
No critical risks in February.																			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																			
No high risk threat value risks in February.																			
FY2019 Risk Triggers (Risk could be realized in FY2019)																			
PFP-P-004: Stop Work From Concerned Workers	Concerned workers result in a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project. Risk Handling Strategy: Accept Probability: Very Likely (>90%)	●	↔	Risk Event: During resumption of PFP demolition activities, an increase in stop works could result in delays. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>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>	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																	

	Worst Case Impacts: \$0, 52 days			Mitigation Assessment: No major changes in February . Increased communication and worker involvement has been implemented to avoid confusion and concern in an effort to minimize stop works.												
PFPP-P-007: Demolition Equipment Reliability and Modification	Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment impact the demolition of PFPP. Equipment modification, leasing, or replacement will be required, resulting in cost and schedule impacts. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$1 million, 48 days	●	↔	Risk Trigger: Equipment failures result in delays to fieldwork. <table border="1"><thead><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr></thead><tbody><tr><td>Repurpose other owned equipment on-site.</td><td>Ongoing</td><td>N/A</td></tr><tr><td>Develop and maintain min/max inventory of spares.</td><td>Complete</td><td>100%</td></tr><tr><td>Perform planned preventative maintenance on equipment.</td><td>Ongoing</td><td>N/A</td></tr></tbody></table> Mitigation Assessment: No major changes in February . All mitigations have been sufficient to maintain equipment in working condition.	Mitigation action(s)	FC Date	%	Repurpose other owned equipment on-site.	Ongoing	N/A	Develop and maintain min/max inventory of spares.	Complete	100%	Perform planned preventative maintenance on equipment.	Ongoing	N/A
Mitigation action(s)	FC Date	%														
Repurpose other owned equipment on-site.	Ongoing	N/A														
Develop and maintain min/max inventory of spares.	Complete	100%														
Perform planned preventative maintenance on equipment.	Ongoing	N/A														
PFPP-P5-006: Additional Soil Removal is Required	Prior to the placement of the cover cap, the additional soil added for contamination control is required to be dispositioned, resulting in cost and schedule delays to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 54 days	●	↔	Risk Trigger: Additional soil, above planned value, is required to be removed due to contamination or regulatory concerns. <table border="1"><thead><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr></thead><tbody><tr><td>Engage early with RL to identify a path forward associated with the additional soil.</td><td>11/9/18</td><td>100%</td></tr><tr><td>Collect and provide radiological mapping data to RL.</td><td>TBD</td><td>TBD</td></tr></tbody></table> Mitigation Assessment: No major changes in February . Continued communication with RL on required soil removal. No additional soil above planned quantity is required at this time. RL has requested radiological data to help them determine no additional soil disposition than planned is required.	Mitigation action(s)	FC Date	%	Engage early with RL to identify a path forward associated with the additional soil.	11/9/18	100%	Collect and provide radiological mapping data to RL.	TBD	TBD			
Mitigation action(s)	FC Date	%														
Engage early with RL to identify a path forward associated with the additional soil.	11/9/18	100%														
Collect and provide radiological mapping data to RL.	TBD	TBD														
Unassigned Risks (Pending ownership of identified risks/opportunities)																
No unassigned risks identified in February .																

PROJECT BASELINE PERFORMANCE Current Month (\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFPP	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	29.5	22.0	3.9	(7.5)	-25.4%	18.1	82.1%

Numbers are rounded to the nearest \$0.1 million.

Current Month (CM) Schedule Variance: (-\$7.5M/-25.4%)

The CM unfavorable schedule variance is primarily attributed to the implementation of BCR-011C-18-005R2 approved in February 2019, which implemented the revised scope, cost, and schedule baseline for the completion of the RL-0011.C2 project as approved by DOE. The baseline change request (BCR) set the remaining historical budgeted cost of work scheduled (BCWS) equal to budgeted cost of work performed (BCWP) as of June 24, 2018, consistent with DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets guidance for establishing a revise “to go” baseline for projects that have experienced a Performance Baseline Deviation such that the project cannot be completed within its’ existing performance goals. DOE’s establishment of a new performance measurement baseline (PMB) for the RL-0011.C2 project and DOE’s direction to CHPRC to implement it was documented by RL correspondence number 19-AMRP-0049 dated January 28, 2019, *Approval of Plutonium Finishing Plant Capital Asset Project 2 Project Completion, Baseline Change Request, BCR-011C-18-005R1*. The BCWS revisions reflected in BCR-011C-18-005R2 established a new “to go”

baseline from the June 25, 2018, start date for re-planning of work through February 2019 fiscal month end were consistent with the DOE Baseline Change Proposal (BCP) which established the new DOE baseline for the RL-0011.C2 project. The revised baseline did not incorporate schedule delays experienced since the June 2018 starting point for planning the revised DOE project baseline for completion of the project. These delays have and continue to impact schedule performance. Schedule delays in February included the continued impacts of the unforeseen loss of D&D workers due to other Hanford Contractor hiring. Additionally, the project experienced a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities in February, where non-essential personnel were advised not to report to work or weather conditions preclude execution of work as planned.

CM Cost Variance: (+\$18.1M/+82.1%)

The CM favorable cost variance is primarily attributed to BCR-011C-18-005R2, approved in February 2019, which implemented a revised scope, cost and schedule baseline for the completion of the RL-0011.C2 project as approved by DOE. The BCR set the remaining historical BCWS equal to BCWP as of June 24, 2018, consistent with DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets guidance for establishing a revised “to go” baseline for projects that have experienced a Performance Baseline Deviation such that the project cannot be completed within its’ existing performance goals. DOE’s establishment of a new performance measurement baseline (PMB) for the RL-0011.C2 project and DOE’s direction to CHPRC to implement it was documented by RL correspondence number 19-AMRP-0049 dated January 28, 2019, *Approval of Plutonium Finishing Plant Capital Asset Project 2 Project Completion, Baseline Change Request, BCR-011C-18-005R1*. The schedule delays noted above partially offset the positive cost variance caused by the implementation of BCR-011C-18-005R2 due to the incurrence of continuing overall project “hotel cost” without the ability to perform work in February as planned.

Contract-to-Date (\$M)

WBS 011/ RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,024.8	1,006.0	1,165.2	(18.7)	-1.8%	(159.1)	-15.8%	1,055.1	1,219.8	54.6	(164.6)
Numbers are rounded to the nearest \$0.1 million											

Contract-to-Date (CTD) Schedule Variance: (-\$18.7M/-1.8%)

The CTD schedule variance is within threshold.

CTD Cost Variance: (-\$159.1M/-15.8%)

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

Other contributors to the negative cost variance include resumption actions associated with the December 2017 contamination event: fixative applications, performance of radiological surveys, revising radiological postings, infrastructure modifications, and stabilization activities. Reassignment of CHPRC personnel to support the Radiological Control Area and programmatic assessments also contributed to the variance.

After resumption activities were completed, slower progress on size reduction and waste loadout has contributed to the variance. Process improvements, planning, and training activities to replenish D&D and RCT staffing support has resulted in increased costs with less than optimal project performance.

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

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

Variance at Completion (VAC): (-\$164.6M/-15.6%)

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

As a result of wall removals and electrical isolations, approximately 10,000 additional feet of asbestos was discovered between the walls that required removal. CHPRC is working with RL to use contingency for the additional 10,000 feet of identified asbestos, impacts from the criticality alarm, and relief from the 30 days of weather delays experienced from December 2016 through March 2017.

Overtime was used to ready the 234-5Z Facility for demolition by September 2017. Also, unplanned work on the HDPE water loop contributed to this variance. This unfavorable variance is partially offset by recognized efficiencies due to characterization data in the 234-5Z duct level, allowing piping and ducting to be left in place for demolition, and the 291-Z demolition activities.

After a stop work was called due to the December 2017 contamination event, the estimate at completion (EAC) and VAC was adjusted to reflect the projected date to reach slab-on-grade in October 2019. The EAC is reflective of resumption activities, impacts of craft personnel awarded positions to WRPS, and revised demolition approach implementation.

In February 2019, BCR-011C-18-005R2 implemented the DOE approved revised scope, cost, and schedule baseline for the completion of the RL-0011.C2 project. The BCR set the remaining historical BCWS equal to BCWP as of June 24, 2018, consistent with DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, and DOE approving authorities' determination to

establish a new performance baseline as documented by 18-AMRP-0062, dated February 27, 2018, Performance Baseline Deviation Notification of Plutonium Finishing Plant (PFP) Demolition Project – RL-0011.C2.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	FY2019		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	70.0	65.0	5.0
RL-0011 - Total	70.0	65.0	5.0

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

Fiscal year (FY) 2019 spending forecast for PBS RL-0011 is \$65.0 million to allow for continuation of demolition activities to achieve slab-on-grade. Projected funding is \$70.0 million.

Critical Path Schedule

The PFP Critical Path Schedule begins with debris disposition of the 234-5Z rubble piles starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of Zones 2 and 7, with the exception of the drain line. Remote Mechanical C process line demolition, Remote Mechanical A process line demolition, and loadout of glovebox HA-46, in parallel with completion of the basement of 234-5Z demolition, will begin after a second MA and concurrence is obtained to resume high-risk demo from RL. The 234-5Z demolition is projected to complete August 12, 2019. The 236-Z Canyon demolition will then resume with completion scheduled for October 10, 2019, meeting the requirements for the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-083-00A – PFP Facility Transition and Selection Disposition Activities. Completion of demolition is followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities completing in January 2020.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-083-00A	PFP Facility Transition and Selection Disposition Activities	9/30/2017		10/10/2019	Transition and disposition activities slipped 14 days from September 16, 2019, as a result of weather delays. Approximately 56 percent of the total debris pile shipped to ERDF for disposal.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
CONTRACT			
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 and acts as signatory on the shipping papers, and ensures compliance with DOE Manual 460.2-1. RL arranges for Commercial Motor Vehicle Safety Alliance Level VI vehicle inspections and verifies that the government drivers meet the applicable 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 approval for ancillary facility status change forms in progress.

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The ninth Sludge Transport & Storage Container (STSC) was filled and is forecasted to be shipped to T Plant on February 25, 2019.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	1	19	2/14/2019 - Employee was attempting to clean snow off of their boots and experienced a popping sensation in a knee. The employee was taken to HPMC and returned to work without restrictions. (25073)
Near Misses	0	1	N/A

KEY ACCOMPLISHMENTS

100K Operations

- The 100K Operations group maintained facilities in a safe and compliant condition. Crews continue to sort, characterize, and relocate/containerize the high-dose sludge material in the center bay.

KW Basin Sludge Removal

- The 100K Operations support team performed preventive maintenance and calibrations on both Engineered Container Retrieval and Transfer System (ECRTS) components and annex utility system components.
- The ninth STSC was filled and is forecasted to be shipped to T Plant on February 25, 2019.
- Submitted the Documented Safety Analysis (DSA) annual update for RL approval, incorporating RL comments, and adding the option to layer sludge from engineered containers (EC) 210/220 with K East sludge. Forecasted approval from RL is the beginning of March.

MAJOR ISSUES

Issue:

Discovered sludge densities may require procurement/processing/storage of additional STSCs beyond the baseline assumption of 22.

Engineered container sludge mass is likely greater than assumed in the baseline. The material-balance calculations completed to forecast the total number of STSCs required to execute the Sludge Removal Project (SRP) may have used sludge density values that do not accurately characterize the sludge stored in the 105KW engineered containers (ECs). If the actual sludge mass in the ECs ($\text{mass} = \text{density} \times \text{volume} = \rho \times V$) is greater than the mass currently projected in source documents, additional STSCs may be required to remove and store the remaining sludge.

Corrective Action:

Video inspections to estimate current volumes of each of the sludge ECs has been completed. Engineering personnel will complete evaluation of settled density values in EC-250, KE sludge, and make final recommendations on the estimated number of STSCs to complete the sludge campaign.

Status:

100K engineering personnel believe the average archived sample density established in PNNL-27704 for sludge material removed from each of the ECs is likely a more accurate representation of existing EC sludge density (rather than the density values produced 24 hours after sample settling). Applying the more conservative settled density values indicates that the existing material will require between 24 to 26 STSCs, rather than the 22 STSCs currently planned. Engineering estimates from STSC 9 continues to estimate the total number of STSCs required at 24. When EC-250 bulk sludge removal is completed following STSC 11 (late-March), engineering will more accurately forecast the total number of STSCs required to complete the sludge removal campaign. In anticipation of potentially needing additional vessels, the Project is analyzing available funding.

Issue:

Attrition of qualified personnel. Since the initiation of sludge removal activities in June 2018, there has been greater than 25 percent attrition of Nuclear Chemical Operators (NCOs) and Radiation Control Technicians (RCTs) who have either left the organization or are on short-term disability. The loss of qualified personnel may potentially impact achieving sludge removal schedule goals.

Corrective Action:

Additional RCTs and NCOs have been hired to backfill vacant RCT and NCO positions. Personnel are being trained and qualified prior to deployment.

Status:

Although there are currently sufficient NCOs/RCTs to support dayshift 105KW Basin and ECRTS operations, the attrition over the last six months has been significant. Additional RCTs and NCOs have been hired and are in the training/qualification process. The Project estimates backfilling of qualified NCOs and RCTs by March 31, 2019. While several exempt employees have left the project in the last six months, replacements were more quickly deployable.

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																			
RL-0012/WBS-012																						
Explanation of major changes to the project monthly stoplight chart: No major changes to the stoplight chart in February .																						
Realized Risks (Risks that are currently impacting project cost/schedule)																						
STP-152: Attrition, Acquisition, & Retention of Qualified Employees	Improving job markets/funding uncertainties or sitewide priorities results in competition for key resources, resulting in schedule delays to the project. Additionally, higher-than-anticipated attrition impacts project baseline costs. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$500K, 36 days	●	↑	<p>Risk Event: Due to the current job market, K Basin Operations (KBO) personnel have elected to leave the project to pursue other opportunities.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #cccccc;"> <th style="width: 80%;">Risk Recovery action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>Monitor employee job satisfaction to evaluate/maintain morale.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Actively pursue filling open positions and train/qualify personnel.</td> <td>3/31/19</td> <td>80</td> </tr> <tr> <td>Establish enhanced work schedule. (KWD7442)</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Action Assessment: Since the initiation of sludge removal activities in June 2018, there has been greater than 25 percent attrition of qualified NCOs and RCTs. The loss of qualified personnel has negatively impacted achieving sludge removal schedule goals. Both operations and radiation protection management have backfilled open positions. Both organizations were expecting to have fully trained and qualified staff to support an enhanced work shift by February 19, 2019, but due to Maintenance and Storage Facility (MASF) work outages and sitewide weather impacts the availability of trained personnel is delayed to the end of March. The Project has crews committed to work 5-day work weeks covering Fridays on overtime.</p>	Risk Recovery action(s)	FC Date	%	Monitor employee job satisfaction to evaluate/maintain morale.	Ongoing	N/A	Actively pursue filling open positions and train/qualify personnel.	3/31/19	80	Establish enhanced work schedule. (KWD7442)	Complete	100						
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STP-153: Sludge Engineered Container End Point Criteria	ECF-100KR2-12-0040 Calculation for 105-KW Substructure Demolition Rubble Environmental Restoration Disposal Facility Compliance specifies the volume of residual sludge that is acceptable to leave in ECs following sludge removal operations. It is possible that the end point criteria cannot be achieved without extensive cost and schedule implications. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$200K, 64 days	●	↑	<p>Risk Triggers: During execution of the sludge removal campaign, personnel have come to understand that standard methods of sludge removal are not able to efficiently achieve EC Sludge End Point Criteria.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #cccccc;"> <th style="width: 80%;">Risk Recovery action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>Perform periodic video camera inspections throughout sludge removal campaign to plan retrieval strategies.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Develop and submit DSA/TSR revisions that facilitate layering KW sludge (SCS-CON-210/220) with KE Sludge (SCS-CON-240/250/260).</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Consider sampling heels in ECs to facilitate achieving end point criteria using more accurate source term.</td> <td>6/30/19</td> <td>5</td> </tr> <tr> <td>Use EC-250 as proof of process to ensure end point criteria can be achieved.</td> <td>3/31/19</td> <td>80</td> </tr> </tbody> </table> <p>Mitigation Assessment: A work package was executed to remove the EC-210 lid to facilitate characterization and/or sampling of the heel. This information confirmed that a substantial portion of the remaining 76 gallons must be retrieved to achieve end point in that EC. In parallel, engineering and nuclear safety personnel have prepared a safety document revision that will facilitate layering EC-210/220 sludge with KE sludge. This modification was submitted to RL on January 7, 2019 and is expected to be approved on March 1, 2019. EC-250 is nearing end point. Operations will remove the lid and attempt to get to end point during STSC #10 or STSC #11 as proof of process.</p>	Risk Recovery action(s)	FC Date	%	Perform periodic video camera inspections throughout sludge removal campaign to plan retrieval strategies.	Ongoing	N/A	Develop and submit DSA/TSR revisions that facilitate layering KW sludge (SCS-CON-210/220) with KE Sludge (SCS-CON-240/250/260).	Complete	100	Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)	Complete	100	Consider sampling heels in ECs to facilitate achieving end point criteria using more accurate source term.	6/30/19	5	Use EC-250 as proof of process to ensure end point criteria can be achieved.	3/31/19	80
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	Month	Trend																			
RL-0012/WBS-012																					
<p>STP-156: Sludge Removal Campaign Impacted by Variations in Engineered Container Sludge Density/Volume</p>	<p>The actual mass of sludge stored in the 105KW Basin ECs is not consistent with the mass assumed in the SRP Technical Basis, resulting in cost and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$1,600K, 48 days</p>		<p>Risk Triggers: The actual sludge mass in the ECs (mass = density x volume = $\rho * V$) is greater than the mass currently projected in source documents, resulting in the need for additional STSCs to remove and store the remaining sludge.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Complete visual inspections of sludge stored in ECs SCS-CON-210/220/230 (at a minimum) to assess volume information specified in technical basis documents.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Evaluate and implement feasible opportunities to more efficiently disposition remaining EC sludge. (KWD7442)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Complete bulk sludge removal from EC-250, which will facilitate establishment of KE Basin sludge density. (KWD6580)</td> <td>4/8/19</td> <td>90</td> </tr> <tr> <td>Revisit Sludge Removal Project Basis Document HNF-SD-SNF-TI-015 R28, Spent Nuclear Fuel Project Technical Databook, Volume 2, Sludge, and HNF-41051 R13, STP Container and Settler Sludge Process Description and Material Balance based upon PNNL-27769, STP K Basin Sludge Sample Archive Status FY2018. Determine if document revisions are required to complete sludge removal campaign. (KWD9010)</td> <td>4/9/19</td> <td>5</td> </tr> <tr> <td>Issue Final Sludge Density Evaluation, establishing total number of STSC necessary to complete sludge removal.(KWD9010)</td> <td>4/9/19</td> <td>50</td> </tr> </tbody> </table> <p>Mitigation Assessment: Engineering personnel are reviewing SRP basis documents to determine how the baseline project assumptions were impacted by sludge density assumptions. After the final review of the documents and completion of visual inspections of sludge currently stored in ECs SCS-CON-210/220/230, set points were evaluated in February and it was determined that the set points for current loading will not change, however, the blending of EC-210/220 with EC-240/250/260 sludge is being added to the baseline document. The final evaluation will occur upon completion of sludge removal from EC-250, forecast for late-March 2019. The data book and other baseline documents will need to be updated for any additional sludge material that is added to the engineered containers.</p>	Risk Recovery action(s)	FC Date	%	Complete visual inspections of sludge stored in ECs SCS-CON-210/220/230 (at a minimum) to assess volume information specified in technical basis documents.	Complete	100	Evaluate and implement feasible opportunities to more efficiently disposition remaining EC sludge. (KWD7442)	Complete	100	Complete bulk sludge removal from EC-250, which will facilitate establishment of KE Basin sludge density. (KWD6580)	4/8/19	90	Revisit Sludge Removal Project Basis Document HNF-SD-SNF-TI-015 R28, Spent Nuclear Fuel Project Technical Databook, Volume 2, Sludge, and HNF-41051 R13, STP Container and Settler Sludge Process Description and Material Balance based upon PNNL-27769, STP K Basin Sludge Sample Archive Status FY2018. Determine if document revisions are required to complete sludge removal campaign. (KWD9010)	4/9/19	5	Issue Final Sludge Density Evaluation, establishing total number of STSC necessary to complete sludge removal.(KWD9010)	4/9/19	50
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Issue Final Sludge Density Evaluation, establishing total number of STSC necessary to complete sludge removal.(KWD9010)	4/9/19	50																			
<p>STP-156-C: Sludge Removal Campaign Extended Due to Discovery of High Dose Material</p>	<p>Additional high-dose “sludge-like” material is discovered on the 105KW Basin floor during 100K Closure Project characterization activities that is best dispositioned with the EC sludge waste stream. Adding this additional “sludge-like” material to the SRP campaign negatively impacts existing SRP cost and/or the schedule baseline.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very Likely (>90%)</p> <p>Worst Case Impacts: \$500K, 24 days</p>		<p>Risk Triggers: Additional sludge may be discovered that must be put into ECs and processed with the balance of the EC sludge as 100K Closure Project personnel conduct characterization efforts in the 105KW Basin.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continue to monitor conditions identified by the baseline characterization efforts.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Collect and quantify the volume and weight of the high-dose material in the 105 KW Basin. (KWD90111)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90276)</td> <td>3/28/19</td> <td>60</td> </tr> </tbody> </table> <p>Mitigation Assessment: During February, 100K Closure personnel continued development of documentation and work package that will be required to allow (double barrel fuel canister) high-dose material to be placed into EC-230 and removed from the 105KW Basin via STSCs.</p>	Risk Recovery action(s)	FC Date	%	Continue to monitor conditions identified by the baseline characterization efforts.	Ongoing	N/A	Collect and quantify the volume and weight of the high-dose material in the 105 KW Basin. (KWD90111)	Complete	100	Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90276)	3/28/19	60						
Risk Recovery action(s)	FC Date	%																			
Continue to monitor conditions identified by the baseline characterization efforts.	Ongoing	N/A																			
Collect and quantify the volume and weight of the high-dose material in the 105 KW Basin. (KWD90111)	Complete	100																			
Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90276)	3/28/19	60																			
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																					
No critical risks identified in February.																					
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																					
No high threat value risks identified in February.																					
FY2019 Risk Triggers (Risk could be realized in FY2019)																					
<p>STP-073-C: Processing Efficiency - Retrieval & Shipping</p>	<p>The realized processing efficiency associated with sludge retrieval and shipping operations does not match the baseline plan.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$0K, 54 days</p>		<p>Risk Triggers: Actual processing efficiency associated with sludge retrieval and shipping operations does not match baseline assumptions. This risk will continue in FY2019 during operations campaign.</p>																		

Unmitigated Risk Impacts	Assessment		Comments																		
	Month	Trend																			
RL-0012/WBS-012																					
			<table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish a production control center to facilitate maximum efficiency integrating SRP operations and maintenance activities.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Review operations and maintenance activities required to produce each sludge STSC and establish a "typical" schedule integrating all activities in the most efficient sequence possible.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Revise plan to establish the appropriate campaign schedule.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in February. Project personnel completed a revised plan to establish the appropriate campaign schedule, taking into account ion exchange module (IXM) change outs and performance of preventive maintenance activities. The revised plan has been provided to RL via the FY2019 Post Contract Baseline submittal, and RL is currently reviewing this plan. Additionally, KBO put the sludge removal campaign personnel on a five day work week (minimum), effective in February 2019.</p>	Mitigation action(s)	FC Date	%	Establish a production control center to facilitate maximum efficiency integrating SRP operations and maintenance activities.	Complete	100	Review operations and maintenance activities required to produce each sludge STSC and establish a "typical" schedule integrating all activities in the most efficient sequence possible.	Complete	100	Revise plan to establish the appropriate campaign schedule.	Complete	100						
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Revise plan to establish the appropriate campaign schedule.	Complete	100																			
<p>STP-108: STP Annex Equipment and ECRS/Ancillary System Reliability</p> <p>Required corrective maintenance on the STP annex and the ECRS equipment is higher than planned due to one-of-a-kind system design or sludge characteristics, resulting in cost and schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$400K, 66 days</p>	●	↑	<p>Risk Triggers: Required corrective maintenance on the SRP and ancillary equipment is higher than planned.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct full-scale testing at the MASF to determine baseline for CM and PM program.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>The project will provide spare parts for critical or long-lead components.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Develop PM activities prior to construction completion to optimize maintenance costs.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform reliability, availability, and maintainability analysis.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Modifications to the skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90091)</td> <td>4/30/19</td> <td>60</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in February. Due to IXM system challenges (potential unavailability), an alternate water supply modification has been generated and hardware procured. Plans are to install this modification in the future to mitigate unavailability of IXM system impact on sludge removal.</p>	Mitigation action(s)	FC Date	%	Conduct full-scale testing at the MASF to determine baseline for CM and PM program.	Complete	100	The project will provide spare parts for critical or long-lead components.	Complete	100	Develop PM activities prior to construction completion to optimize maintenance costs.	Complete	100	Perform reliability, availability, and maintainability analysis.	Complete	100	Modifications to the skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90091)	4/30/19	60
Mitigation action(s)	FC Date	%																			
Conduct full-scale testing at the MASF to determine baseline for CM and PM program.	Complete	100																			
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Modifications to the skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90091)	4/30/19	60																			
Unassigned Risks (Pending ownership of identified threats/opportunities)																					
No unassigned risks identified in February .																					

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	1.4	0.9	1.0	(0.5)	-38.1%	-0.1	-13.8%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$0.5M/-38.1%)

The current month negative schedule variance is due to work delays, early releases, and site work cancellations because of adverse weather conditions, delaying the load and shipment of STSCs to T Plant.

CM Cost Performance (-\$0.1M/-13.8%)

The variance is within reporting thresholds.

Contract-to-Date (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	750.8	749.8	719.9	(1.0)	-0.1%	29.9	4.0%	762.0	730.9	11.0	31.1

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$1.0M/-0.1%)

The variance is within reporting thresholds.

CTD Cost Performance (+\$29.9M/+4.0%)

The variance is within reporting thresholds.

Variance at Completion (+\$31.1M/+4.1%)

The variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2019		Variance
	Projected Funding	Spending Forecast	
Expense – Spending Forecast	20.1	17.8	2.3
Incremental Scope Pending Change Management	0.0	0.0	0.0
Expense – Subtotal	20.1	17.8	2.3
Line Item (LI)	11.3	0.0	11.3
Incremental Scope Pending Change Management	0.0	0.0	0.0
LI – Subtotal	11.3	0.0	11.3
RL-0012 – Total	31.4	17.8	13.6

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

FY2019 funding for project breakdown structure (PBS) RL-0012 is \$31.4 million. FY2019 funding aligns with the RL Integrated Priority List. The variance primarily reflects funding for line item work scope that was completed in FY2018.

Critical Path Schedule

The project critical path schedule runs through completion of retrieval operations, including the filling of STSCs with sludge, transporting to T Plant, and placement in the T Plant cell. The project is on schedule to complete Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestone M-016-176, Complete Sludge Removal from 105KW Fuels Storage Basin, ahead of the December 31, 2019, due date.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-176	Complete Sludge Removal	12/31/2019		10/9/2019	On Schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
Approval of DSA Annual Update	1/7/2019 (A)	3/1/2019

Section C

Solid Waste Stabilization and Disposition (RL-0013)

CH2MHILL
Plateau Remediation Company



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

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

M. A. Wright
Vice President for Project
Technical Services

PROJECT SUMMARY

During the February reporting period, January 28, 2019 – February 24, 2019, Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. The River Risk Management Project (RRMP) operated the Environmental Restoration Disposal Facility (ERDF) and continued document preparation for the Integrated Disposal Facility (IDF) permits.

This month:

- The Management of Cesium and Strontium Capsules (W-135) Project design subcontractor has completed the final design for Waste Encapsulation and Storage Facility (WESF) modifications and initiated their internal review. The final design package is scheduled to be submitted to CHPRC by March 5, 2019, with the formal design review kickoff meeting scheduled for March 6, 2019. The subcontractor has initiated the final design for the maintenance and storage facility (MASF) mockup and is scheduled to be completed by the end of March 2019. Work packages for the Capsule Storage Area (CSA) Utility Test Pits have been completed. The test pits are required to determine the integrity and location of existing firewater pipelines. The subcontractor transmitted all final design comment dispositions to CHPRC for review and approval of the capsule storage system (CSS).
- The sludge receipt team continues to receive sludge transport and storage containers (STSC) from the 100K West Reactor Basin for interim storage at T Plant. The ninth STSC is scheduled to be received February 25, 2019; with the tenth scheduled to be received by March 13, 2019.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-WFMP-OBJ1-P1	Receive 10 STSC sludge shipments at T Plant.	T Plant Complex will receive 10 STSC sludge shipments.	9/30/2019	60%
19-EMS-WFMP-OBJ2-P1	Complete and issue the Preoperational Environmental CSA	Perform sampling and analysis, if needed, as determined by DOE to support the preparation and issuance of the Preoperational Environmental Survey for the CSA. Complete and issue the Preoperational Environmental Survey Report for the CSA.	9/30/2019	100%
19-EMS-WFMP-OBJ3-P1	Complete the CSB Programmable Logic Controller (PLC) Upgrade Project to better avoid exceedance of the air operating permit limits.	Complete PLC Upgrade Project fieldwork. Complete the PLC Upgrade Project test report and final documentation.	9/30/2019	100%
19-ERDF-OBJ1-P1	Track maintenance recycling activities at ERDF.	Monitor and evaluate ERDF maintenance recycling activities for compliance with CHPRC procedures and complete annual review of recycling activities.	9/30/2019	50%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	4	23	<p>2/4/2019 – Employee was performing a G Cell entry associated with the decontamination/paint job. This job was to perform decontamination on all walls/equipment in G Cell area to prep for paint. Upon exit of G Cell while doffing PPE, employee felt stomach muscle strain. Employee was taken to HPMC and returned to work without restrictions. (25064)</p> <p>2/14/2019 – Employee was walking outside to perform surveillance, slipped on a sheet of black ice, and landed on their back and hitting their head. Employee was taken to HPMC and returned to work without restrictions. (25069)</p> <p>2/14/2019 – While walking to the front door on gravel, employee stepped on the edge of the concrete sidewalk that was an approximate a half inch higher than gravel. The employee slid off the concrete edge and twisted knee and felt a pop and pain in the left knee. The employee continued with work at desk and noticed that after approximately a half hour when employee went to stand up, the knee was stiff and tender. Reported injury to CSB management and maintenance manager and then reported to First Aid. Was given two ibuprofen and a cold pack to help with the pain and swelling. Returned to work without restrictions and advised to seek evaluation with medical provider. (25070)</p> <p>2/25/2019 – Employee slipped on a patch of snow/ice and fell to right side. Employee was taken to HPMC and released without restrictions. (25084)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- Incorporated CHPRC and RL comments on the Low Level Burial Grounds (LLBG) Green Islands training addendum and transmitted the document to state of Washington Department of Ecology (Ecology) for review on February 4, 2019.
- Incorporated two sets of Ecology comments into the LLBG Green Islands Part A addendum and transmitted the document to Ecology for lockdown on February 19, 2019.
- Held data quality objective (DQO) workshop number two with Ecology. The DQO workshops address Outside Storage Area (OSA) A and OSA B.

13.02 Capsule Storage & Disposition

- G Cell entries continue in support of the W-135 Project. The WESF team has made excellent progress in decontamination efforts and painting preparations in G Cell.
- Hot cell lifting bail removal work package has been approved and is ready to be scheduled for work pending resource availability.
- Truckport door removal work package has been approved and is ready to work upon removal of the ion exchange module (IXM) from the truckport footprint.
- Performed periodic inspection, testing, and maintenance items, including: several electrical investigations in support of lockout/tagout development; beta monitor verifications, gamma monitor functional testing; and semi-annual calibration testing for pool cell IX conductivity flow transmitters.
- Completed 27 preventative maintenance (PM) packages.

13.03 Canister Storage Building (CSB)

- Performed final preparations needed to implement annual multi-canister overpack (MCO) sampling proficiency demonstration for the week of February 27, 2019 using the sampling simulator.
- Performed periodic inspection, testing, and maintenance items, including: pressure and temperature monitoring of MCO H-176; helium manifold bottle replacements; CRN-001 wire rope and hook inspections; continuous air monitor functional testing; and emergency lighting inspections.
- Completed 14 PM packages.

13.06 Transuranic (TRU) Repackaging

- Completed 121.5 cubic meters of transuranic mixed (TRUM) and Transuranic (TRU) waste fiscal year to date (FYTD).

13.07 Waste Receiving and Processing (WRAP)

- Completed scheduled operations, rad con inspections, safety inspections, weekly fire suppression system surveillance, weekly facility lay-up inspections.
- Completed 213 surveillances and seven PM packages.

13.08 T Plant

- Completed canyon crane trouble shoot and repair.
- Completed 542 surveillances and 30 PM packages.

Sludge Receipt

- The ninth STSC from 105KW to T Plant is scheduled to be received February 25, 2019, and the tenth STSC is scheduled to be received March 13, 2019.

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

- Completed scheduled operations, cold weather inspections, rad con inspections, monthly fire pump test, monthly abnormal container management program surveillance, and Hanford Fire Department one-year fire alarm control units PM for 2403WA, 2403WB and 2403WC.
- Completed 214 surveillances and 20 PM packages.
- Received 16 standard waste boxes from Perma-Fix Northwest (PFNW) into CWC in six shipments.

13.15 TRU Disposition

- Continuing enhancement work on the third waste stream RL325-01 and the fourth waste stream RLBAT-07.

13.16 Offsite Spent Nuclear Fuel Disposition

- Maintained coordination of offsite spent nuclear fuel disposition.

13.21 Mixed Waste Disposal Trenches

- Completed 127 surveillances.
- Received three boxes from PFNW into Mixed Waste Trench 31 in one shipment.

13.24 Management of Cesium and Strontium Capsules Project

- The subcontractor has completed the final design for the WESF modification design and initiated an internal review. The final design package is scheduled to be submitted to CHPRC by March 5, 2019, with the formal design review kickoff meeting scheduled for March 6, 2019.
- The subcontractor has initiated the final design for the MASF mockup and forecasts to be complete by the end of March 2019.
- Work packages for the CSA utility test pits are completed.

13.25 Capsules Interim Storage Operations

- The subcontractor transmitted all final design comment dispositions to CHPRC for review and approval of the CSS. CHPRC is reviewing and completing design media as it is constructed.

River Risk Management Project**13.10 Environmental Restoration Disposal Facility**

- Received 6,476 tons of waste for disposal in February.
- Received 58,403 tons of waste for disposal FYTD.
- Received 40 shipments (252 tons) of Plutonium Finishing Plant (PFP) waste and used the new enhanced radiological controls during disposal operations.

13.12 Integrated Disposal Facility (IDF)

- Care and Custody completed February monthly inspections and one storm event inspection.
- IDF Operational Readiness Resource Conservation and Recovery Act (RCRA) Permit Modifications.
 - Continued development of the Addenda, Groundwater Monitoring Plan by the Soil & Groundwater Remediation Project, with River Risk Management Project input and reviews.
 - Continued resolution of Ecology comments on Addenda, Part A and Addenda, Security.
 - Continued initial development of RCRA Permit Addenda, Process Information; Addenda, Training; Addenda, Closure Plan; Addenda, Post-Closure; Addenda, Inspection; and Addenda, Waste Analysis Plan, and the waste acceptance criteria to support IDF RCRA permit modifications.
 - Initiated development of Addenda F, Preparedness and Prevention.

Project Technical Services Support

- A contract was awarded to Watts Construction for NR-1 reactor surface preparation. Mobilization is scheduled for March 27, 2019.
- The Scope of Work (SOW) was drafted for T Plant west face exterior stairs and firestop wall repair. The Request for proposal (RFP) was issued for contractor bid. The pre-bid walk down is scheduled for March 12, 2019.
- The SOW was drafted for CWC/WRAP and T Plant roof repair. RFP issued for contractor bid.

MAJOR ISSUES

Issue:

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

Corrective Action:

Work with Ecology to issue the permit with the design information that is available at the time of permit issuance.

Status:

The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information as agreed in the permitting plan. Ecology's completeness review for the WESF permit modification request was received on February 5, 2018. Ecology's completeness review for the Capsule Interim Storage (CIS) permit application was received on February 13, 2018. Ecology concluded that the permit applications were incomplete. Additional information to address the completeness review was transmitted to Ecology on May 8, 2018. On January 31, 2019, Ecology issued a completeness determination for the Capsule Storage Area Permit Application. Ecology determined that based on additional information submitted by the Permittees, the Permit Application is complete. In conjunction with the letter, Ecology provided formal copies of the technical comments on the addenda. WFM personnel are working to resolve the technical comments.

Issue:

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

Corrective Action:

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

Status:

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

Issue:

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

Corrective Action:

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

Status:

Continuing to use the best-demonstrated available technology to provide adequate configuration and minimize the potential for contamination spread during the long-term storage (i.e., protecting boxes with

tarps or protective shoring; over-packing drums). Streamlined and consolidated container management procedures. RL authorized the additional fiscal year (FY) 2019 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue throughout the year.

Issue:

TK-100 is a collection tank located underground to the south of the 225B Building and collects miscellaneous contaminated or potentially contaminated waste liquids. TK-100 has an approximate capacity of 4,000 gallons. The current volume of waste liquids in TK-100 is approximately 3,200 gallons. Recent sampling of TK-100 indicated a cesium (Cs)-137 sample result higher than the acceptance criteria at the Effluent Treatment Facility (ETF). As a result, disposal of the tank contents via the normal route to the ETF via tanker truck may not be possible.

Corrective Action:

Determine the most cost effective path forward for disposal of the TK-100 contents.

Status:

Planning efforts have been completed which include using an ion-exchange module to reduce the Cs-137 inventory, thereby allowing shipment of the liquid to the ETF. A work package was prepared and passed through a Hazard Review Board. Recirculation activities were conducted throughout February as weather conditions allowed. Samples of the TK-100 contents have been taken and sent to an offsite laboratory for analysis. Based on results, additional recirculation may be necessary in March.

Issue:

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

Corrective Action:

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

Status:

Part of the path includes contacting the crane vendor to discuss known issues with this model of crane and to locate any recalls, etc. The vendor communication resulted in the need to replace the crane gearbox gears due to LL failures with cranes of similar construction/vintage. Procurement of gears is in progress.

Issue:

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

Corrective Action:

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

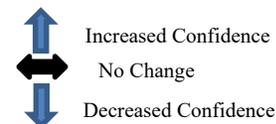
Status:

Analysis of the Hastelloy emissivity has been completed resulting in one additional strontium cask. Analysis for increasing the cesium thermal storage margin will be initiated at the completion of the final design.

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							
RL-0013/WBS-013										
Explanation of major changes to the project monthly stoplight chart: Risk 13-RCRA-REV9-001, <i>RL-13 - Additional Dangerous Waste Management Units (DWMUs)</i> , 13-RCRA-REV9-003, <i>RL-13 - Ecology Delays</i> , WSD-138, <i>Regulatory document (closure plan with ecology) results in significant comments from the regulator</i> , and WSD-TR-04, <i>Weather Delays Shipment</i> , were added to the stoplight chart as a realized risk in February.										
Realized Risks (Risks that are currently impacting project cost/schedule)										
13-RCRA-REV9-001: RL-13 - Additional DWMUs	Unplanned DWMUs are added to the scope requiring additional document support, impacting the project in both cost and schedule. Risk Handling Strategy: Accept Probability: Very Likely (>90%) Worst Case Impacts: \$0K, 48 days	●	↓	Risk Event: Ecology provided technical comments on permit addendum expanding the number of DWMUs. <table border="1" style="width: 100%;"> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> <tr> <td>Incorporating changes to respond to comments.</td> <td>Ongoing</td> <td>N/A</td> </tr> </table> Risk Action Assessment: The impacts associated with the realization of this risk are ongoing. As such, this risk will continue to be reported on for visibility until it no longer poses a threat to the project.	Risk Recovery Action(s)	FC Date	%	Incorporating changes to respond to comments.	Ongoing	N/A
Risk Recovery Action(s)	FC Date	%								
Incorporating changes to respond to comments.	Ongoing	N/A								
13-RCRA-REV9-003: RL-13 - Ecology Delays	Scope supported by Ecology is impacted by delays in Ecology review time that do not align with the Permit Management Schedule. This requires recovery actions to be taken by the project that results in schedule impacts. Risk Handling Strategy: Accept Probability: Very Likely (>90%) Worst Case Impacts: \$0K, 96 days	●	↓	Risk Event: Ecology's review time is impacting the Permit Management Schedule. <table border="1" style="width: 100%;"> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </table> Risk Action Assessment: Preparing resources to respond to comments when they are received. The impacts associated with the realization of this risk are ongoing. As such, this risk will continue to be reported on for visibility until it no longer poses a threat to the project.	Risk Recovery Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Risk Recovery Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
WSD-138: Regulatory document (closure plan with ecology) results in significant comments from the regulator	Significant comments from the regulator on closure plans submitted for approval results in non-approval of the permit or re-work, causing schedule impacts to the project. Risk Handling Strategy: Control Probability: Very Likely (>90%) Worst Case Impacts: \$0K, 96 days	●	↓	Risk Event: Eight closure plans were formally resubmitted to Ecology in August 2018 and November 2018. In January 2019, Ecology provided additional comments changing the closure strategy for several units. <table border="1" style="width: 100%;"> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </table> Risk Action Assessment: RL informed Ecology that additional document revisions would not be completed at this time. The impacts associated with the realization of this risk are ongoing. As such, this risk will continue to be reported on for visibility until it no longer poses a threat to the project.	Risk Recovery Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Risk Recovery Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0013/WBS-013																						
WSD-CSA-007: Delays in CSS Design Impact PDSA	<p>The final development of the Preliminary Documented Safety Analysis (PDSA) is impacted due to delays in completing the CSS final design, resulting in schedule impacts to the CSA construction and CSS fabrication.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$0K, 96 days</p>	●	↔	<p>Risk Event: The CSS final design was delayed due to late identification of the need for additional shielding in the cask design due to the unique nature of the capsules. The final design was revised to reflect a more conservative assumption for Hastelloy emissivity for the strontium capsules. Accident analysis, needed to support development of the PDSA, cannot be completed until the final design is complete. The PDSA development cannot complete until CSS design is complete.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>CHPRC has provided draft PDSA for review and comment to internal reviewers and DOE to allow early feedback and comment incorporation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>CHPRC is working with the CSS design contractor to prioritize accident analysis needed for the PDSA development.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Complete shielding design and accompanying analysis for final design.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Review CSS final design and incorporate into PDSA.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Submit PDSA to DOE for approval.</td> <td>5/24/19</td> <td>0</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in February. The CSS final design (including Hastelloy emissivity revision) was submitted to CHPRC for review in November. Comment disposition and incorporation into the final design media is in progress. Initial input from the final design to the PDSA is complete. PDSA is currently in internal review.</p>	Risk Recovery Action(s)	FC Date	%	CHPRC has provided draft PDSA for review and comment to internal reviewers and DOE to allow early feedback and comment incorporation.	Complete	100	CHPRC is working with the CSS design contractor to prioritize accident analysis needed for the PDSA development.	Complete	100	Complete shielding design and accompanying analysis for final design.	Complete	100	Review CSS final design and incorporate into PDSA.	Complete	100	Submit PDSA to DOE for approval.	5/24/19	0
Risk Recovery Action(s)	FC Date	%																				
CHPRC has provided draft PDSA for review and comment to internal reviewers and DOE to allow early feedback and comment incorporation.	Complete	100																				
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Complete shielding design and accompanying analysis for final design.	Complete	100																				
Review CSS final design and incorporate into PDSA.	Complete	100																				
Submit PDSA to DOE for approval.	5/24/19	0																				
WSD-TR-04: Weather Delays Shipment	<p>Weather conditions do not meet the requirements for shipments and the shipment must be delayed until favorable weather conditions exist, resulting in schedule delays.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$0K, 16 days</p>	●	↑	<p>Risk Event: In February, there were a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were directed not to report to work. Due to these conditions, shipments were not able to be made.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Implement a double shipment.</td> <td>3/21/19</td> <td>0</td> </tr> </tbody> </table> <p>Risk Action Assessment: Pending no further weather associated delays in April, this risk will be removed from the stoplight prior to April's reporting cycle. This risk will continue to be monitored throughout the remainder of its lifecycle.</p>	Risk Recovery Action(s)	FC Date	%	Implement a double shipment.	3/21/19	0												
Risk Recovery Action(s)	FC Date	%																				
Implement a double shipment.	3/21/19	0																				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																						
No critical risks identified in February.																						
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																						
WSD-013B: TRU Waste Volumes or Characteristics - Processing	<p>TRU waste not identified in records or higher-than-planned volumes due to inaccurate records or unexpected soil contamination impacts TRU processing. This waste is derived from retrieval of waste, non-compliant newly generated waste received from generators, TRU waste that is determined to be low-level and requires further treatment, or more waste is generated than in the plan, resulting in unplanned in-scope cost impacts.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$2 million, 0 day</p>	●	↔	<p>Risk Trigger Metric: A significant volume of newly generated waste is received or nonconforming waste results in the need for new capabilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in February. The destruction of two drums with oil from large box shipment TC158 was not performed at the offsite processing facility due to backlog. An exception to 0063 and a waste profile were approved to temporarily store the waste at CWC until the offsite facility is ready to treat the waste.</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													
RL-0013/WBS-013																
WSD-097: Major Equipment Failure – T Plant	<p>T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%)</p> <p>Worst Case Impacts: \$3 million, 96 days</p>	●	↔	<p>Risk Trigger Metric: During planned facility operation activities, a suspected system component is discovered that requires attention or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC (September 30, 2019) contract.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Identify and procure critical spare parts for the T Plant crane.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Implement aggressive CM/PM program.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in February. The project has put into place mitigating strategies (i.e., aggressive surveillance and maintenance [S&M] activities) to help reduce this risk. Mechanical maintenance on the canyon crane was completed in November. The annual electrical crane maintenance, including the camera cable, was completed in February. The canyon crane is currently operational and spare parts have been procured for most critical spares.</p>	Mitigation Action(s)	FC Date	%	Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A	Implement aggressive CM/PM program.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%														
Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A														
Implement aggressive CM/PM program.	Ongoing	N/A														
WSD-136: CWC/WRAP Components Fail	<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>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$2 million, 0 days</p>	●	↔	<p>Risk Trigger Metric: Maintenance activities at CWC increase due to aging facilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct fieldwork for 2727W deactivation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Conducting doorframe replacements and electrical equipment repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in February. The WRAP roof was analyzed for structural integrity following water intrusion. There was insufficient basis for the roof's integrity, which may lead to an eventual roof replacement. The MDSA container stacking requirements are complete. Maintenance work at CWC will be scheduled based on facility work priorities. Additional Fire Alarm Control Units (FACU) spare parts were obtained from the deactivation of 2727W.</p>	Mitigation Action(s)	FC Date	%	Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A	Conduct fieldwork for 2727W deactivation.	Complete	100	Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A
Mitigation Action(s)	FC Date	%														
Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A														
Conduct fieldwork for 2727W deactivation.	Complete	100														
Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A														
WSD-CSA-006: Ecology Temporary Authorization contingent on 90% Design for CSA RCRA Permit Application	<p>Ecology will, as a pre-condition to approve the temporary authorization (TA) for CSA construction, require that the CSA 90 percent detailed design package to be incorporated into the CSA RCRA Permit Application (to issue for public comment), thereby delaying the TA and impacting the CSA construction schedule.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very Likely (>90%)</p> <p>Worst Case Impacts: \$0, 96 days</p>	●	↔	<p>Risk Trigger Metric: Ecology requires the 90 percent design package for the CSA to be completed prior to issuing the permit for public comment.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in February. CHPRC continues to have regular interfaces with Ecology to discuss the issue and are evaluating options should the 90 percent design be required. The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. The project received a determination of incompleteness on February 13, 2018. The determination of incompleteness is primarily associated with the need for additional design information. CHPRC submitted supplemental design information for the WESF Modifications and CSA to RL in May to support Ecology's completeness determination. RL has transmitted this information to Ecology. Ecology has determined that the permit application is complete. The project anticipates that a temporary authorization will be necessary if the permitting process is not timely.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A						
Mitigation Action(s)	FC Date	%														
None identified at this time.	N/A	N/A														
FY2019 Risk Triggers (Risk could be realized in FY2019)																

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0013/WBS-013																						
WSD-125: Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues	<p>A pause in waste processing results in an unexpected container degradation within Solid Waste Operations Complex (SWOC) (excluding TRU retrieval activities) and requires additional resources to respond.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$3 million, 0 day</p>	●	↑	<p>Risk Trigger Metric: Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procuring stainless steel 85-gallon overpacks for alternative storage of containers that show signs of degradation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>FY2019 overpacks planned: 200</td> <td>9/25/2019</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in February. The project continued to perform container surveillances in February to identify container and container cover abnormalities. RL authorized additional FY2019 TRU commercial repacking, allowing shipments to PFNW for repackaging to continue. The remaining containers will continue to require surveillance and enhanced monitoring.</p>	Mitigation Action(s)	FC Date	%	Perform daily/weekly waste container surveillances to identify container abnormalities.	Ongoing	N/A	Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.	Ongoing	N/A	Process waste packages at a rate funded by RL.	Ongoing	N/A	Procuring stainless steel 85-gallon overpacks for alternative storage of containers that show signs of degradation.	Complete	100	FY2019 overpacks planned: 200	9/25/2019	0
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FY2019 overpacks planned: 200	9/25/2019	0																				
WSD-W135-19: Unexpected Contamination is Found in the WESF Facility	<p>More contamination is found at WESF resulting in the need to clean it up to reduce worker exposure or requiring more worker protection.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$2,000K, 32 days</p>	●	↔	<p>Risk Trigger Metric: During WESF preparations for equipment installation (in the G Cell, the canyon, or the truckport) contamination is found that requires decontamination. During equipment installation, contamination is encountered that requires cleanup (e.g. anchoring of equipment inside WESF causes release of contamination).</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Implement lessons learned.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Continuously utilize respiratory protection.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in February. Waste packaging in the canyon is substantially complete; however, waste removal is impacted by WESF canyon crane and truckport coverblock weight issues. To date, no excessive contamination has been discovered in the canyon. Decontamination efforts are underway in G Cell, with no excessive contamination encountered to date.</p>	Mitigation Action(s)	FC Date	%	Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.	Ongoing	N/A	Implement lessons learned.	Ongoing	N/A	Continuously utilize respiratory protection.	Ongoing	N/A						
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Implement lessons learned.	Ongoing	N/A																				
Continuously utilize respiratory protection.	Ongoing	N/A																				
WSD-W135-31: Canyon Crane non-functional/not Serviceable	<p>The existing WESF crane was put back into limited usage for the W-130 Project; however, the crane is found to be unserviceable, cannot be repaired for use, or fails during the W-135 operational activities.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$300K, 96 days</p>	●	↔	<p>Risk Trigger Metric: The canyon crane fails during use or cannot be returned to service after maintenance.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure new crane hook and block.</td> <td>9/30/18</td> <td>100</td> </tr> <tr> <td>Perform preventive/corrective maintenance procedures (i.e. replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.</td> <td>9/30/19</td> <td>50</td> </tr> <tr> <td>Refurbish current crane block.</td> <td>9/30/20</td> <td>0</td> </tr> <tr> <td>Procure critical spares.</td> <td>9/30/21</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in February. Performance of the full annual preventive maintenance package is complete. As part of mitigation actions for canyon crane capacity issue, the crane manufacturer was consulted to gain insight on any issues with this make/model of crane. Manufacturer does not have data on WESF crane, but recommended inspection of the gears for stress fractures. Engineering has determined that the best path forward is replacement of the gears at risk given crane history and prior usage. Planning to perform this work is in progress and will occur in parallel with replacement of the wire rope and hook. Material orders for gear box parts are in progress. Replacement of the wire rope and hook is on hold pending preparations for truckport coverblock removal. If full refurbishment is unsuccessful, replacement of the canyon crane as a like-for-like is not possible, as the original crane manufacturer is no longer in business. A similar replacement hook and block have been procured.</p>	Mitigation Action(s)	FC Date	%	Procure new crane hook and block.	9/30/18	100	Perform preventive/corrective maintenance procedures (i.e. replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.	9/30/19	50	Refurbish current crane block.	9/30/20	0	Procure critical spares.	9/30/21	0			
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0013/WBS-013													
WSD-CSS-002: CSS Subcontractor Change Orders & Claims	<p>The CSS construction contractor submits excessive change orders and claims, resulting in schedule delays and increased subcontractor cost.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$2,900K, 24 days</p>	●	↔	<p>Risk Trigger Metric: The CSS construction contractor will fabricate CSS equipment under a fixed price contract. If changes to the design are found to be necessary during fabrication, change orders may be submitted by the fabricator.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Bid award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure scope is understood and estimated correctly.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Scope of each task will be reviewed prior to initiation to ensure contractor is in alignment for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for face-to-face interface meetings.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in February. CSS final design review comment disposition and comment resolution is in progress. Fabrication of CSS equipment is not planned until FY2020.</p>	Mitigation Action(s)	FC Date	%	Bid award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure scope is understood and estimated correctly.	Complete	100	Scope of each task will be reviewed prior to initiation to ensure contractor is in alignment for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for face-to-face interface meetings.	Ongoing	N/A
Mitigation Action(s)	FC Date	%											
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Scope of each task will be reviewed prior to initiation to ensure contractor is in alignment for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for face-to-face interface meetings.	Ongoing	N/A											
WSD-CSS-011: Greater than Expected Comments on CSS Design are Received	<p>The CSS design receives more comments than originally expected, resulting in schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$600K, 48 days</p>	●	↓	<p>Risk Trigger Metric: CSS final design review comment resolution exceeds the time planned due to volume or difficulty in comments.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>CHPRC will provide recommendations for comment resolution, minimizing the effort to respond.</td> <td>4/30/19</td> <td>90</td> </tr> <tr> <td>CHPRC will work closely with NAC during comment resolution to ensure all comments are understood.</td> <td>4/30/19</td> <td>90</td> </tr> </tbody> </table> <p>Mitigation Assessment: The CSS final design review is in progress. Comments were reviewed prior to transmittal to the design contractor for duplications, editorial comments, and comments, which must be answered internally to minimize effort to respond. CSS design contractor has provided comment disposition and is working on comment incorporation. Some comments generated during the final design review necessitate additional analysis to resolve. These additional analyses are necessary for WESF DSA development and will be completed in parallel with analysis necessary to increase operational margin for cesium casks.</p>	Mitigation Action(s)	FC Date	%	CHPRC will provide recommendations for comment resolution, minimizing the effort to respond.	4/30/19	90	CHPRC will work closely with NAC during comment resolution to ensure all comments are understood.	4/30/19	90
Mitigation Action(s)	FC Date	%											
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CHPRC will work closely with NAC during comment resolution to ensure all comments are understood.	4/30/19	90											
Unassigned Risks (Pending ownership of identified risks/opportunities)													
No unassigned risks identified in February.													

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	12.1	10.7	9.3	(1.4)	-11.5%	1.4	12.8%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$1.4M/-11.5%)

The CM unfavorable schedule variance is primarily associated with weather delays. Several large boxes and one STSC from 100K were scheduled for shipment during this time period but were rescheduled due to weather or unsuitable winter road condition closures. Additionally, WESF preparations are behind

schedule due to uncertainties on a path forward for WESF crane due to the weight capacity issues. Furthermore, the late award of the subcontractor for the LLBG Performance Assessment due to the Intera contract expiring January 31, 2019 and negotiation took longer than planned.

CM Cost Performance (+\$1.4M/+12.8%)

The CM positive cost variance for Waste and Fuels (W&FMP), ERDF, and IDF is attributed to experiencing a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were advised not to report to work. This resulted in a positive cost for level of effort accounts. In addition, PFP TRU commercial repackaging and large box commercial TRUM repack group subcontract pricing contributed to the variance. A new contract was negotiated and the new pricing went into effect for shipments starting in November 2018. This cost savings should continue through the year.

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	1,403.9	1,400.2	1,300.2	(3.7)	-0.3%	100.0	7.1%	1,562.1	1,461.9	161.7	100.2

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$3.7M/-0.3%)

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$100.0M/+7.1%)

The CTD favorable cost variance is a result of realizing efficiencies such as organizational flattening and streamlining; right-sizing capabilities for planned scope; optimizing resources with reorganization and consolidation of engineering capabilities across W&FMP; combined administrative/records functions across WESF and CSB; removing waste from building(s) and reducing the need for inspections/surveillances; reducing the size and number of radioactive areas/radioactive material areas (RMA) and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of PM activities; increasing shared resources across all of SWOC; reducing dedicated resources for the Corrective Action System (CAS) and using project-wide support; optimizing maintenance scheduling and execution reducing operations field work supervision; increasing emphasis on managing planned absence coverage within existing resources; simplifying and optimizing acquisition and procurement management within W&FMP; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and the Solid Waste Inventory Tracking System (SWITS). The cost variance is also partially due to significant credits from the transportation and disposal of other Hanford contractor waste at ERDF.

Variance at Completion (+\$100.2M/+6.4%)

The favorable VAC is a result of realizing efficiencies such as organizational flattening and streamlining; right-sizing capabilities for planned scope; optimizing resources with reorganization and consolidation of engineering capabilities across W&FMP; combined administrative/records functions across WESF and CSB; removing waste from building(s) and reducing the need for inspections/surveillances; reducing the size and number of radioactive areas/RAM and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of PM activities; increasing shared

resources across all of the SWOC; reducing dedicated resources for CAS and utilizing project-wide support; optimizing maintenance scheduling and execution; reducing operations field work supervision; increasing emphasis on managing planned absence coverage within existing resources; simplifying and optimizing acquisition and procurement management within W&FMP; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and SWITS. Significant credits from the transportation and disposal of other Hanford contractor waste at ERDF, as well as the optimization of ERDF project resources, also contribute to the variance at completion.

Contract Performance Report Formats are provided in Appendix A

FUNDS vs. SPEND FORECAST (\$M)

WBS 013/RL-0013	FY2019		Variance
	Projected Funding	Spending Forecast	
Waste Stabilization & Disposition	173.5	156.8	16.7
Management of Cesium and Strontium Capsules (Line Item)	6.6	2.9	3.7
Incremental Scope Pending Change Management	0.0	0.8	(0.8)
RL-0013 – Total	180.1	160.5	19.6

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The FY2019 projected funding level for project baseline summary (PBS) RL-0013 of \$180.1 million is based on the RL integrated priority list. The fiscal year spending forecast of \$160.5 million includes actions anticipated to achieve funding targets.

Critical Path Schedule

Critical path analysis will be provided upon request.

MILESTONE STATUS

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-53	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste	4/30/2019		4/30/2019	On schedule Negotiation extended
M-091-03M	Submit Revision of TRUM Waste and MLLW PMP to Ecology	6/30/2019			Deleted via TPA CN M-91-19-01
M-091-52-T01B	Remove 10 Additional Mixed Waste Containers from Outside Storage Area A and/or B	11/30/2019	1/17/2019 (A)		Complete

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
CSB – Obtain RL DSA Approval	1/31/2018 (A)	4/30/2019
Retrieve RSW EE/CA for CH & RH – RL Complete Review of Draft Document	3/7/2019	4/5/2019
DOE Review IDF DSA	4/19/2019	8/16/2019
CSS Final Design – RL Direction to Implement Impacts of Operating Margin Increases per RL: 18-AMRP-0151	5/3/2019	5/16/2019
CSA CD2/3 – RL: Review/Approve PDSA (1 st FY)	5/9/2019	7/21/19
DOE Final IDF DSA Review and SER Prep	9/26/2019	10/23/2019

Section D

Soil and Groundwater Remediation Project (RL-0030)

CH2MHILL
Plateau Remediation Company



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

M. A. Wright
Vice President for
Project Technical
Services

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

PROJECT SUMMARY

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

Treatment Facility	Million Gallons Treated		Chrome (kg)		Carbon Tet (kg)		Tech-99 (pCi)		Uranium (kg)	
	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD
DX P&T	23.1	133.7	2.3	13.2						
HX P&T	19.8	116.2	1.8	11.5						
KR-4 P&T	10.2	54.3	0.2	0.6						
KW P&T	9.0	60.7	0.3	2.5						
KX P&T	36.9	192.6	2.1	11.0						
200 West P&T	79.3	451.6	6.0	39.8	157	872	1.5x10 ¹¹	9.2x10 ¹¹	4.7	26.3
Combined	178.2	1,009.8	12.7	78.7	157	872	1.5x10¹¹	9.2x10¹¹	4.7	26.3
FY2019 KPG	--	1,800.0	--	N/A	--	N/A	--	N/A	--	N/A

Well Drilling by Area	FY2019 Planned	Current Month	FY2019 Cumulative
100-KR-4	2	0	2
100-HR-3	9	2	2
200-BP-5	4	0	0
200-UP-1	3	0	0
200-ZP-1	5	0	0
M-24 Milestone	5	0	0
100-F/IU	6	0	0
Total Wells	34	2	4
Site Wide Boreholes	9	0	0

EMS Objectives and Target Status

Objective Action Plan #	Objective	Due Date	Status
19-EMS-SGRP-OBJ1-P1	Reduce adverse environmental impact to health and the environment by monitoring and confirming low-carbon tetrachloride emissions at the 200 West P&T Facility. Evaluate treated off-gas analytical results from compliance sampling and process sampling each quarter.	7/31/2019	50%
19-EMS-SGRP-OBJ2-P1	Installation and testing of a high-density polyethylene (HDPE) pipeline between Modular Storage Units (MSU) and the 200 West P&T. Objective will eliminate the need to truck the MSU water to the P&T and thereby reduce greenhouse gas emissions and other waste production from vehicle use.	12/31/2018	100%

Objective Action Plan #	Objective	Due Date	Status
19-EMS-SGRP-OBJ3-P1	Use of electronically completed Groundwater Sampling Reports (GSR) in FLEDGE 3.0. This will lead to a reduction in paper use and waste through completion and record storage of GSRs electronically.	9/30/2019	90%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	2	18	2/15/2019 – While getting out of a personal vehicle, employee slipped on snow-covered ice, landed on back and hit head on the ice. Employee informed manager and was taken to 200W HPMC to be evaluated. Employee was released without restrictions. (25071) 2/26/2019 – Employee was supporting well logging and tripped on an instrument cable that was on the ground. Employee tripped and fell face first onto the gravel, sustaining abrasions to their face. A witness took the employee to HPMC where they were treated for an open wound and then released back to work with no restrictions related to this incident. (25086)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Strategic Integration

- Submitted the cumulative impact evaluation (CIE) approach document Chapter 4 (Saturated Zone Fate and Transport Models) to RL for review.
- Completed installation of the new modeling computing system in the Hanford Local Area Network environment. Troubleshooting and testing will be initiated in March 2019. The new computing system will replace the aging (Tellus) system.

River Corridor

300-FF-5 Operable Unit (OU)

- Issued sampling instructions for the Stage B post injection sampling and testing on February 19, 2019.
- Issued Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) change notice on February 12, 2019, to add a new well that will be drilled down gradient of the 324 Building into the waste control plan.

100-BC-5 OU

- Met with U.S. Environmental Protection Agency (EPA) on January 31, 2019, to restart work on the Draft Rev 0 RI/FS and Draft Rev 0 Proposed Plan
- Met with RL and EPA on February 6, 2019, and completed conceptual resolution of EPA legal and policy comments on the Draft Rev 0 Proposed Plan.

100-FR-3 OU

- Supported RL at the monthly Cultural Affairs meeting on February 20, 2019, where RL provided a presentation that summarized plans for installing six groundwater monitoring wells.

100-HR-3 OU

- Completed construction at well 199-H3-13 on February 6, 2019.
- Initiated well development activities at well 199-H3-21 on February 5, 2019.
- Provided a presentation to RL and Department of Ecology (Ecology) on February 19, 2019, that summarized the content and layout of the Draft A remedial design/remedial action work plan (RD/RAWP), which was provided to Ecology for review on January 15, 2019.
- Completed drilling at Ringold Upper Mud (RUM) well 199-H3-32 on February 26, 2019.
- Completed well development at RUM well 199-H3-22 on February 20, 2019.

100-KR-4 OU

- Received final comments from RL on the Draft Revision 1 100-KR-4 RD/RAWP on January 29, 2019.
- Presented 100-K feasibility study alternatives to EPA and RL on February 4, 2019.
- Received additional comments from EPA on the draft 100-KR-4 technical impracticability (TI) waiver document and TI evaluation checklist on February 19, 2019.

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

- Resolved EPA comments on the Draft A Southeast Chromium Plume Remedial Design Investigation Report and developed a path forward while meeting with EPA on February 7, 2019.

200-ZP-1 OU

- Monitoring well drilling on the first of three wells began on February 20, 2019. Drilling began on the second of three wells on February 21, 2019.
- Met with EPA to review 200 West P&T fourth quarter calendar year (CY) 2018 performance on February 18, 2019. Highlights included:
 - Throughput averaged 2,085 gallons per minute (gpm) and ranged between 2,005 and 2,157 gpm.
 - Treated over 1,089 million gallons, a six percent increase over 2017 production.
 - Replaced ferric chloride with ferric sulfate to reduce manganese from 30-50 µg/L to 2-3 µg/L.
 - Carbon tetrachloride continues to decline. To date, the reduction in concentration is 58 percent.
- Briefed EPA February 18, 2019, on the data gap analysis that was performed in 2017. The data gap analysis shows how the future monitoring wells are ranked and prioritized to optimize the well network.
- Briefed EPA on February 21, 2019, on the data quality objectives (DQO) Ringold A Analytical Approach being proposed. The overall goal is to obtain additional data with an emphasis on Ringold A to provide for reliable predictive transport modeling to support P&T/monitored natural attenuation remedy optimization.
- Met with EPA on February 7, 2019, to brief them on cyanide in groundwater on the Central Plateau. Generally, cyanide concentrations are decreasing at the T/TX/TY Waste Management Area (WMA)

and the B/BX/BY WMA for total and free cyanide, but still exceed 200 µg/L and 4.8 µg/L, respectively.

200-EA-1 OU

- Provided Interagency Management Integration Team (IAMIT) issue forms to RL on February 7, 2019. Forms outline RL's position on two unresolved Ecology comments. The first unresolved comment is analyzing for polychlorinated biphenyl congeners at 20 sites within the 200-EA-1 OU. The second unresolved comment is Ecology's request to use a groundwater recharge rate based on cheat grass vegetation rather than a steppe shrub vegetation recharge rate. Both issues will be presented at the March 2019 IAMIT meeting.

Central Plateau Closure Plans

- Submitted the 216-A-29 Ditch Closure Plan to RL and Ecology for review on February 21, 2019.

Project Technical Services

- Training and Procedures worked with facility subject matter experts to identify inappropriate procedural direction related to electrically-powered emergency exit signs. Updated associated procedure to reflect the use of tritium exit signs on the project.
- Operations Program supported the Soil and Groundwater Remediation Project (S&GRP) lockout/tagout management assessment by conducting interviews and field observations.
- Project Delivery
 - o Commenced with KW soil flushing greenfield work, bonding (20 percent complete), and excavation of leach field area.
 - o In preparation for 200-ZP-1 injection/extraction well drilling, continued with mechanical rack fabrication for injection well 699-47-78B (YJ-35) and commenced shop work on filter housing for extraction well 699-48-70 (YE-33).
 - o For KW soil flushing monitoring wells KX/XE4, completed electrical and mechanical disconnects, commenced with XE4 rack relocation and shop fabrication of splice boxes.

Groundwater P&T Facilities

200 West P&T

- Operated the 200 West P&T at an average of 1,967 gpm in February.

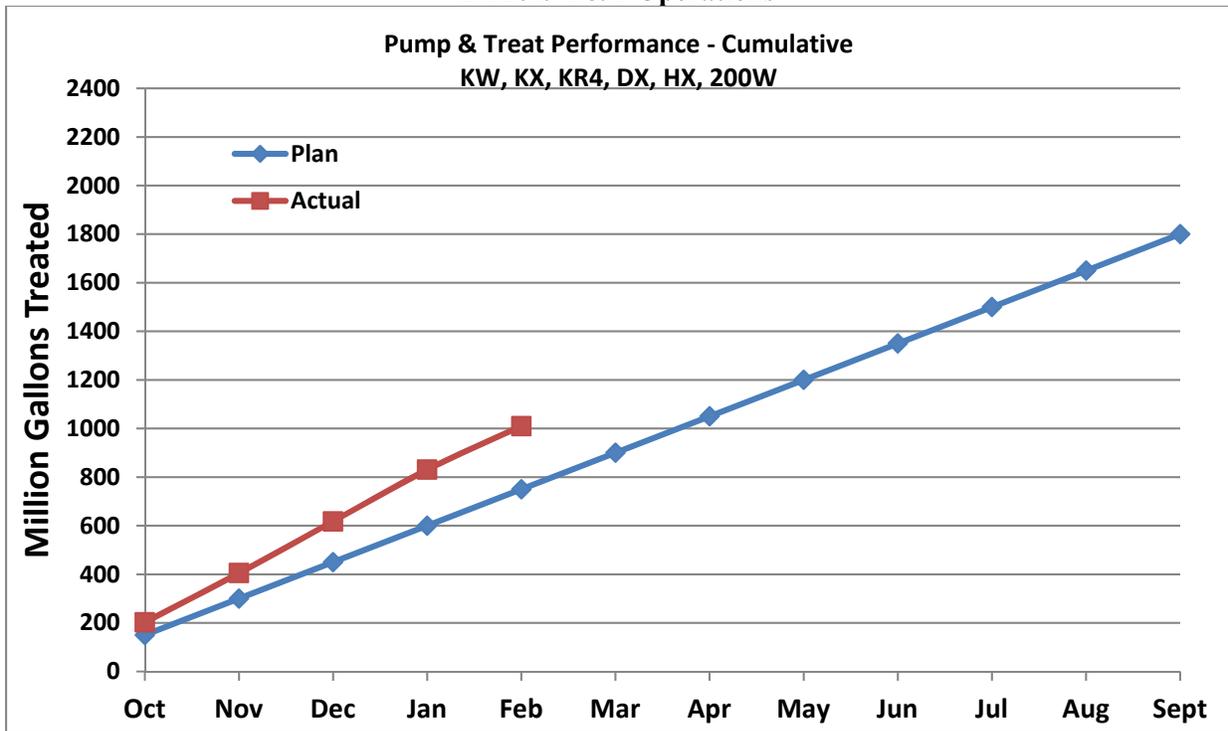
100 Area P&Ts

- Operated the DX P&T at 573 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 252 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 222 gpm, below the facility capacity of 330 gpm.
- Operated the KX P&T at 915 gpm, above the facility capacity of 900 gpm.
- Operated the HX P&T at 491 gpm, below the facility capacity of 900 gpm.

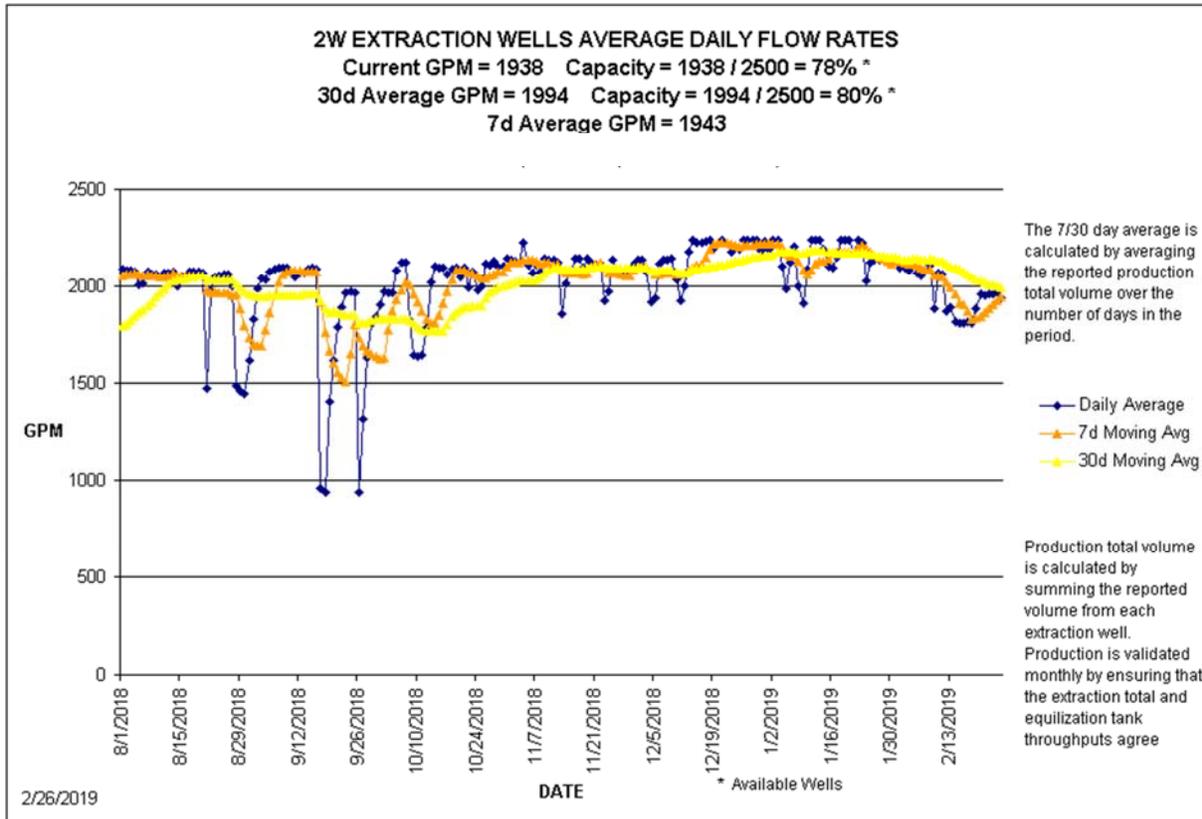
Groundwater P&T Facilities

- Overall, the P&T systems operated above the targets as depicted in the P&T performance graph below.

FY2019 P&T Operations



200 West P&T Operations



MAJOR ISSUES

Issue:

A partial government shutdown started on December 22, 2018, and temporarily ended on January 25, 2019, that affected the EPA. Key meetings and document reviews that required EPA attendance did not occur due to the furlough. Impacted documents and key meetings were associated with the 100-BC-5 RI/FS and PP, 100-NR-2 TI waiver, 200-UP-1 Remedial Design Investigation Report for the SE Chromium Plume, CP Groundwater Tracer Study sampling and analysis plan (SAP), and establishing the path forward for the 200-ZP-1 ROD modification. The EPA furlough also affected the schedule for the IAMIT, which delayed issue resolution for the 200-EA-1 work plan and SAP.

Corrective Action:

Re-schedule key regulatory meetings with the EPA and adjust document review times accordingly. Evaluate impacts to fiscal year (FY) 2019 work scope and schedule.

Status:

Issue closed. The partial government shutdown ended on January 25, 2019. CHPRC notified RL of potential impacts on February 6, 2019, via letter CHPRC-1900478, *Notification of Potential Impacts due to Government Shutdown December 23, 2018 Through January 26, 2019*. Key agency meetings and document reviews were rescheduled. The pricing disclosure update table being prepared for negotiations for the FY2019 change proposal has been updated to describe any work that slipped into FY2020 as a result of the shutdown.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- Increased Confidence
- No Change
- Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
Explanation of major changes to the project monthly spotlight chart:										
No major changes in February.										
Realized Risks (Risks that are currently impacting project cost/schedule)										
No realized risks identified in February.										
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No critical risks identified in February.										
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
SGW-ZP1-02: ZP1 - Well Re-Alignment Design Differs from Planning Assumptions	The final design for a given well realignment or connection exceeds the planning assumptions, resulting in cost impacts. Risk Handling Strategy: Accept Probability: Very Likely (>90%) Worst Case Impacts: \$1,512K, 16 days	●		Risk Trigger Metric: Planning assumption quantities are exceeded or design maturity changes material type, requiring additional material and labor to complete the scope. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Mitigation action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">None identified at this time.</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> Mitigation Assessment: Although the risk is accepted, the project will work diligently to see design solutions that are the most cost effective.	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								
FY2019 Risk Triggers (Risk could be realized in FY2019)										
No FY2019 risk triggers identified in February.										
Unassigned Risks (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in February.										

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	9.4	8.0	7.4	(1.4)	-15.1%	0.6	7.5%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$1.4M/-15.1%)

Adverse weather conditions and facility delays and closures prevented completion of routine groundwater sampling, post-treatment sampling at 300-FF-5, and associated sample analyses, causing a negative schedule variance in February. Engineering evaluation report regulator review draft preparation, 200-BP-5 pipeline construction, and Tellus computer system replacement procurement activities were performed early in prior periods, further contributing to the negative current period schedule variance as the schedule variance returns to zero.

CM Cost Performance (+\$0.6M/+7.5%)

The CM positive cost variance is primarily attributed to experiencing a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were advised not to report to work. This resulted in a positive cost variance for level of effort accounts. Conversely, adverse weather conditions such as snow drifts, prevented samplers from reaching numerous well locations, and created safety obstacles that prevented routine groundwater sampling from being completed, causing offsetting negative cost performance. CHPRC and RL review of the CIE Technical Approach Document chapters 1 and 2 resulted in more comments with greater complexity than were assumed in the baseline, causing re-work of those chapters, further offsetting the positive cost variance for the project.

Contract-to-Date

(\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,571.0	1,570.3	1,514.0	(0.6)	-0.0%	56.4	3.6%	1,717.2	1,658.7	144.7	58.5

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$0.6M/-0.0%)

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

CTD Cost Performance (+\$56.4M/+3.6%)

The contract to date positive cost variance is within reporting thresholds.

Variance at Completion (+\$58.5M/+3.4%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0030 Soil and Groundwater Remediation	FY2019		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	132.9	122.9	10.0
Incremental Scope Change Pending Change Management	0.0	0.1	(0.1)
RL-0030 - Total	132.9	123.0	9.9

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

The FY2019 projected funding for project breakdown structure (PBS) RL-0030 is \$132.9 million. The FY spending forecast of \$123 million includes actions anticipated to achieve funding targets. FY2019 funding aligns with the RL Integrated Priority List.

Critical Path Schedule

Critical path analysis will be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
Milestones on Schedule					
M-015-21A	Submit 200 BP-5 & 200 PO-1 OU FS Report and PP(s) to Ecology	3/31/2019		3/23/2019	On Schedule
M-024-58L	Initiate Discussions of Well Commitments	6/1/2019		6/1/2019	On Schedule
M-024-70-T01	Conclude Discussions of Well Commitments Initiated Under M-024-58	8/1/2019		8/1/2019	On Schedule
Milestones at Risk					
M-015-93C	Initiate Characterization Field Work for 200-SW-2 Operable Unit Landfills	9/30/2018		TBD	Dispute resolution initiated on July 9, 2018 (18-AMRP-0135).

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-98	Complete Remedial Investigation of U Plant Related Waste Sites Located in 200-WA-1	6/30/2019		TBD	At Risk. Work not funded in FY2019 (19-AMRP-0056).
M-085-70	Submit to Ecology a Remedial Investigation/Feasibility Study WP for 200-CB-1	9/30/2019		TBD	At Risk. Work not funded in FY2019.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review Decisional Draft Rev 1 200-UP-1 RD/RAWP	10/1/2018 (A)	3/28/2019
RL Review Decisional Draft B 100-NR-2 RI/FS	11/5/2018 (A)	3/2/2019
RL Review Decisional Draft Biomobilization and Biointrusion SAP	2/6/2019 (A)	3/7/2019
RL Review 300-FF-5 ECF for CY2019 Groundwater Performance Monitoring	2/28/2019	3/12/2019
RL Review CIE Approach Document Chapter 3	3/5/2019	3/12/2019
RL Review Decisional Draft Rev 1 200-BP-5 Groundwater Monitoring Plan	3/5/2019	4/3/2019
RL Transmit Rev 1 Draft A 200-UP-1 PMP to Regulator Review	3/6/2019	3/19/2019
RL Review CIE Approach Document Chapter 4	3/7/2019	4/15/2019
RL Review Draft Rev 1 100- HR-3 Revised Primary Drilling SAP	3/20/2019	4/18/2019
RL Transmit Rev. 0 IDF Engineering Evaluation Report to Ecology	3/21/2019	3/25/2019
RL Transmit Draft B 100-KR-4 RI to EPA for Review	3/28/2019	4/11/2019
RL Transmit Draft A 200-ZP-1 RD/RAWP to EPA for Review	4/2/2019	4/15/2019
RL Review CIE Approach Document Chapter 5 and 6	4/3/2019	4/15/2019
RL Review Decisional Draft 200-DV-1 PNNL Lab Test Plan	4/4/2019	5/3/2019
RL Submit Interim status RCRA S/SX Groundwater Monitoring Plan to Ecology	4/6/2019	4/6/2019
RL Transmit Rev. 0 SST WMA A-AX-Engineering Evaluation Report to Ecology	4/8/2019	4/19/2019
RL Transmit Draft A 200-BP-5 Proposed Plan to Regulator Review	3/21/2019	3/31/2019
RL Submit NRDWL Rev. 9 Groundwater Monitoring Plan to Ecology	4/10/2019	4/10/2019
RL Review Decisional Draft Ringold A DQO/SAP	4/10/2019	4/29/2019
RL Transmit Draft A 200-ZP-1 RD/RAWP to EPA for Review	4/16/2019	4/29/2019
RL Submit Draft A Biomobilization and Biointrusion SAP to Regulator Review	4/17/2019	4/18/2019
RL Review informal Draft B 100-KR-4 Remedial Investigation	4/19/2019	5/18/2019
RL Transmit Draft Rev 0 200-UP-1 CR Remedy Remedial Design Investigation Report to Regulators for check review	4/19/2019	5/3/2019
RL Submit IDF 8C Groundwater Monitoring Plan to Ecology	4/20/2019	4/20/2019
RL Submit Interim Status RCRA TX/TY Groundwater Monitoring Plan to Ecology	4/20/2019	4/20/2019
RL Transmit Draft A 200-BP-5 Proposed Plan Regulator Review	4/23/2019	4/26/2019

Description	CHPRC Delivery Date	Expected RL Due Date
RL Transmit Interim Status RCRA SST WMA C Engineering Evaluation Report to Ecology	4/23/2019	5/6/2019
RL Review 100-KR-4 FY20 Drilling SAP Addendum	4/26/2019	5/25/2019
RL Submit Rev 0 100-BC-5 RI/FS Report to Regulators	5/3/2019	5/17/2019
RL Review 100-HR-3 Final Waste Site Closeout Forms	5/6/2019	6/3/2019
RL Transmit T-Farm Groundwater Monitoring Plan to Ecology	5/7/2019	5/16/2019
RL Transmit Draft A 200 Area Pump and Treat PMP to EPA for Review	5/9/2019	5/22/2019

Section E

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

CH2MHILL
Plateau Remediation Company



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

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

M. A. Wright
Vice President for
Project Technical
Services

PROJECT SUMMARY

Inclement weather experienced in February negatively impacted performance for a number of Central Plateau Risk Management (CPRM) projects and maintenance activities. The Plutonium Uranium Extraction Plant (PUREX) Tunnel 2 stabilization efforts were placed on hold due to the severe weather allowing only one week of grout placement during the reporting period. The grout contractor was directed to stand down until daytime temperatures reached above freezing. The Reduction-Oxidation Plant (REDOX) waste cleanout was impacted as snow accumulation prevented waste load out to Environment Restoration Disposal Facility (ERDF) containers. Hazardous weather conditions also prevented field walk downs necessary for the REDOX road, trailer, and ventilation procurements. Demolition preparation activities for 242-B/BL and removal of the 200 Area steam lines were also impacted as snow prevented accessibility to site locations.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-CPRM-OBJ-P1	Increase EMS awareness	Present or facilitate a discussion of Environmental Management System (EMS) topics to personnel on a minimum of four different occasions in fiscal year (FY) 2019 and recruit personnel (other than environmental) to participate in at least two compliance review/programmatic walk downs.	9/30/2019	32%

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	1	N/A
First Aid Cases	2	12	2/12/2019 – Employee stepped out of vehicle and slipped on newly plowed parking area. As a precaution, employee was examined at HPMC and released to work with no restrictions. (25067) 2/12/2019 – While walking from their car to the building, individual slipped and fell to one knee. Individual made notification to manager and as a precaution escorted to HPMC for evaluation. Employee returned to work with no restrictions. (25068)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0040 Accomplishments

CPRM Surveillance and Maintenance (S&M)

- Performed annual surveillances at U-Plant, 222-T, 224-T, 215-C and 241-CZ-40 miscellaneous facilities.
- Completed annual Staplex air sampler calibration.
- Completed the quarterly (first of four) temporary storage and disposal waste site surveillances.
- Responded to confirmed subsidence event on the 218-A-2A Burial Ground and backfilled area per standard subsidence management practices.
- Completed dismantling and disposal of B Plant containment tents.
- Performed “inspect and lube” preventative maintenance on B Plant exhaust fans.
- Performed down posting and sign removal around 242-B/BL and conducted ground scans.
- Performed disposition of nickel-cadmium batteries from PUREX.
- Performed troubleshooting of PUREX exhaust fan damper actuator for exhaust fan EF-V11-1.
- Performed 252-AB PUREX electrical substation replacement of uninterruptible power supply battery cells.
- Performed inspection verification of fall protection equipment.

PUREX Tunnel 2 Stabilization Project

Project Technical Services Support

- Grout placement at PUREX Tunnel 2 was performed through February 1, 2019. Approximately 3,000 cubic yards of grout was placed this month and 31,166 cubic yards of grout have been placed fiscal year to date. Grout placement is on hold due to inclement weather. Placement activities are anticipated to resume the week of March 11, 2019.
- Completed batch plant, heater, pumping equipment and trailer maintenance during winter conditions.
- Performed snow removal activities to support grouting restart.

REDOX Canyon Risk Mitigation

- Completed radiological survey of entire canyon cover block deck and commenced beryllium sampling of deck.
- Completed silo emergency light installation in fifth, seventh, and eighth floors.
- Routed work change notice incorporating size reduction into the routine work package for approval.
- Initiated entry into crane way platform (sixth floor) REDOX silo.
- Held in process as low as reasonably achievable review in response to radiological work permit (RWP) void event during entry into REDOX silo crane way.
- Continued release of equipment and beryllium samples from REDOX.
- Revised all RWPs and incorporated into work packages.
- Re-entered north stairwell and verified sample gallery water intrusion has expanded.
- Verified locations for radio communications equipment and held job hazard analysis with Mission Support Alliance, LLC.
- Removed waste items from north annex to clear location for communications equipment.
- Completed lead testing on legacy waste box to help finalize disposal path.

242-B/BL Demo Preparation

- Completed cold and dark index.
- Completed asbestos and hazardous material (HAZMAT) removal work packages.
- Awarded contracts for 242-B/BL trailer set-up.

MAJOR ISSUES

Issue

On January 11, 2018, State of Washington, Department of Ecology (Ecology) Nuclear Waste Program performed a Dangerous Waste Compliance Inspection at B Plant. During their review of the “2017 B Plant Complex Annual Surveillance Issue List,” it was noted in the B Plant 221-B “Issue” column, “White residue on the floor (not new).” In addition, the “issue” column also noted “Expansion joint crack, white residue on floor.” As a result of these observations, Ecology has requested that within 90 days upon receipt of the compliance report, designation results of the white residue on the floor of the Canyon Building, 221-B pipe, and operating gallery be submitted.

Corrective Action

RL and CH2MHILL Plateau Remediation Company (CHPRC), with legal representation, have met to establish a path forward.

1. Perform a records search to determine when the white powder was first identified.
2. During upcoming entries, as part of the annual surveillance, data (photos and description of surroundings) will be obtained and evaluated to determine if it is sufficient to support designation based on process knowledge.
3. Actual cost information associated with sampling and analysis of the white powder at PUREX will be used to develop a cost estimate for sampling and analysis of the white powder at B Plant.
4. The PUREX Sample Analysis Plan (SAP) will be revised to support sampling and analysis of the white powder in the event that it is determined as part of item number two that process knowledge is not sufficient to support designation.
5. If sampling is required to support designation, CHPRC will determine if designation can be accomplished in the required 90-day period, and notify RL if an extension is needed.

Status

CHPRC has received Contracting Officer direction to remedy environmental and regulatory documents. The initial cost and schedule estimate indicates the committed May cleanup date does not appear achievable at this time based on delays in preparing and approving the environmental documents. RL has indicated that although the May deadline for cleanup will not be met, the powder will be cleaned up within FY2019.

In addition, a waste designation was provided to RL for the B Plant white residues. CHPRC provided clarification to Ecology that although substance does contain lead, it is not considered hazardous waste.

Issue

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

Corrective Action

Fire Protection Engineering will evaluate as-found condition against National Fire Protection Association requirements for combustible material loading.

Status

Entries into the REDOX Canyon have been performed and more hazardous combustible material has been discovered. Waste loadout has been initiated and work package for sampling of liquid hazardous material is complete. A cost and schedule addendum to the FY2019 change proposal was submitted in January 2019. There is a high likelihood of further discoveries of combustible material in the east end of the canyon once further entries are performed.

Issue

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

Corrective Action

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

Status

Structural integrity analysis is ongoing, continuing to track water level in catch tank (current water level tracking consistent with rainfall).

Issue

In November, the project realized a loss of all but three Decontamination & Decommission (D&D) workers due to hiring by Washington River Protection Solutions, LLC (WRPS), another Hanford contractor. Additional losses are expected in FY2019 based on WRPS staffing projections for nuclear chemical operator (NCO) positions.

Corrective Action

In response to the loss of staff, 17 D&D workers were hired and began training on December 3, 2018.

Status

Received notification of additional NCO positions to be opened by WRPS on March 11, 2019. In response, additional D&D workers have been hired at CHPRC and are proceeding through training.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0040/WBS-040																						
Explanation of major changes to the project monthly stoplight chart: No major changes to the stoplight chart in February .																						
Realized Risks (Risks that are currently impacting project cost/schedule)																						
PRXT-S2-004: Design Maturity	Inadequate design results in changes to the construction subcontractors, resulting in cost and schedule impacts. Risk Handling Strategy: Control Probability: Very Low (<10%) Worst Case Impacts: \$0, 16 day			<p>Risk Event: Design assumed the six identified injection points to be sufficient. Due to equipment placement, the grout is not able to flow as anticipated.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Work 5/10 shift to accelerate schedule.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Use of overtime before and after shift.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Fabricate and install 10 new injection points.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Action Assessment: <i>No major changes in February.</i> Implementation of the topping off plan was achieved in January, as the insertion devices were installed and grout placement successfully resumed. The “topping off plan” required the grout contractor to fabricate and install insertion devices for 10 new injection points on the PUREX Tunnel and place grout via the pumper truck for the last phase of grout placement. Additionally, two PTZ70 cameras were purchased and installed in new risers.</p>	Risk Recovery action(s)	FC Date	%	Work 5/10 shift to accelerate schedule.	Ongoing	N/A	Use of overtime before and after shift.	Ongoing	N/A	Fabricate and install 10 new injection points.	Complete	100						
Risk Recovery action(s)	FC Date	%																				
Work 5/10 shift to accelerate schedule.	Ongoing	N/A																				
Use of overtime before and after shift.	Ongoing	N/A																				
Fabricate and install 10 new injection points.	Complete	100																				
PRXT-S2-010: Inclement Weather	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms will result in in-scope unplanned work and result in schedule impacts to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 68 day			<p>Risk Event: The work was assumed to be performed in fall weather conditions per the contract with the grouting contractor.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Purchase freeze protection equipment.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Drain booms after each shift.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Running extension boom heater off shift.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Renegotiate unit rate with contractor for grout placement.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Negotiate cost impacts to grout contractor for inclement weather delays.</td> <td>April 2019</td> <td>0</td> </tr> </tbody> </table> <p>Risk Action Assessment: <i>In February.</i> To mitigate potential bad weather, grout placement has been working a 5/10 schedule. Additionally, the project team and grout contractor worked with facility support (Radcon) in order to perform startup and shut down sequence of activities as efficiently as possible, thus maximizing the hours available to grout during shift. CHPRC procurement and the grout contractor renegotiated the unit rate for grout placement after December 9, 2018. The contract change was initiated to incorporate impacts for cold weather grout placement and redefine standby/conveyance system maintenance usage and rates in an attempt to minimize stand down/delay time change orders but still incentivize the contractor to complete as quickly as possible.</p> <p><i>Due to adverse winter weather conditions, the grout placement was put on a temporary hold beginning February 4, 2019. CHPRC project management and the grout contractor proactively worked to mitigate cost impacts, which included layoffs of drivers and cancellation of some equipment rentals. The stand down time is estimated at 20 working days. The final cost impact remains to be negotiated with CHPRC procurement.</i></p>	Risk Recovery action(s)	FC Date	%	Purchase freeze protection equipment.	Complete	100	Drain booms after each shift.	Ongoing	N/A	Running extension boom heater off shift.	Ongoing	N/A	Renegotiate unit rate with contractor for grout placement.	Complete	100	Negotiate cost impacts to grout contractor for inclement weather delays.	April 2019	0
Risk Recovery action(s)	FC Date	%																				
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Negotiate cost impacts to grout contractor for inclement weather delays.	April 2019	0																				

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0040/WBS-040																						
REDOX-11: Unexpected Discovery - Hazmat	<p>Unexpected or late discovery of hazardous material is discovered during deactivation and decommissioning of 202-S REDOX.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$11K, 48 day</p>	●	↓	<p>Risk Event: During D&D activities, there is an unexpected discovery of hazardous material.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform investigative entries into silo, NSG, and canyon.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Characterization in progress.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Innovative methods (i.e. robots) to further understand conditions.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in February. Investigative entries and characterizations are furthering the understanding of the current conditions of REDOX.</p>	Risk Recovery action(s)	FC Date	%	Perform investigative entries into silo, NSG, and canyon.	Ongoing	N/A	Characterization in progress.	Ongoing	N/A	Innovative methods (i.e. robots) to further understand conditions.	Ongoing	N/A						
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Characterization in progress.	Ongoing	N/A																				
Innovative methods (i.e. robots) to further understand conditions.	Ongoing	N/A																				
REDOX-16: Facility Integrity	<p>Problems with aging building systems/components (e.g. roofing/structures, etc.) result in inoperability or requires unscheduled maintenance/outages impacting planned D&D activities resulting in schedule delays and cost impacts.</p> <p>Risk Handling Strategy: Transfer</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$0, 0 day</p>	●	↓	<p>Risk Event: Leaking roof results in unsafe working conditions for personnel.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform cold and dark activities to shut off building power.</td> <td>Sep 2019</td> <td>35</td> </tr> <tr> <td>Repair minor roof defects.</td> <td>May 2019</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in February. Integrity failures could lead to water issues within radiological contaminated areas causing a hazard to personnel. Going cold and dark will minimize the risk for electrical shock due to water. Making minor repairs to leaking parts of the roof can significantly reduce water intrusion.</p>	Risk Recovery action(s)	FC Date	%	Perform cold and dark activities to shut off building power.	Sep 2019	35	Repair minor roof defects.	May 2019	N/A									
Risk Recovery action(s)	FC Date	%																				
Perform cold and dark activities to shut off building power.	Sep 2019	35																				
Repair minor roof defects.	May 2019	N/A																				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																						
REDOX-05: Collapse of Sand Filter	<p>Due to the close proximity of equipment driving by (cranes, forklifts for waste loadout, steam lines), age, and structural integrity, the project experiences a collapse of a sand filter, resulting in cost and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very Low (<10%)</p> <p>Worst Case Impacts: \$260K, 48 day</p>	●	↔	<p>Risk Triggers: Due to the close proximity of equipment driving by (cranes, forklifts for waste loadout, steam lines), age, and structural integrity, the project experiences a collapse of a sand filter.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish project boundary.</td> <td>June 2019</td> <td>50%</td> </tr> <tr> <td>Use bracing when digging.</td> <td>Not yet digging</td> <td>N/A</td> </tr> <tr> <td>Implement communication plan between other Hanford contractor and other CHPRC projects.</td> <td>Ongoing</td> <td>NA</td> </tr> <tr> <td>Engineering to conduct structural integrity and equipment stand-off evaluations.</td> <td>Ongoing</td> <td>NA</td> </tr> <tr> <td>Follow the critical lift process, and hoisting and rigging manual.</td> <td>Ongoing</td> <td>NA</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in February. The project is working to ensure that the steam line removal efforts consider sand filters while planning. The project has been in communication with the 222-S Labs about future work scope at REDOX. Engineering has also been involved in structural evaluations of the sand filters. These evaluations will be used for establishing an equipment stand-off distances. Additionally, discussions for the initial planning of the critical lift process has started.</p>	Mitigation Action(s)	FC Date	%	Establish project boundary.	June 2019	50%	Use bracing when digging.	Not yet digging	N/A	Implement communication plan between other Hanford contractor and other CHPRC projects.	Ongoing	NA	Engineering to conduct structural integrity and equipment stand-off evaluations.	Ongoing	NA	Follow the critical lift process, and hoisting and rigging manual.	Ongoing	NA
Mitigation Action(s)	FC Date	%																				
Establish project boundary.	June 2019	50%																				
Use bracing when digging.	Not yet digging	N/A																				
Implement communication plan between other Hanford contractor and other CHPRC projects.	Ongoing	NA																				
Engineering to conduct structural integrity and equipment stand-off evaluations.	Ongoing	NA																				
Follow the critical lift process, and hoisting and rigging manual.	Ongoing	NA																				
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																						
No high risk threat value risks in February .																						
FY2019 Risk Triggers (Risk could be realized in FY2019)																						
PRXT-S2-009: Resources Unavailable	<p>Other higher CHPRC priority work results in reallocation of resources, improving job markets, funding uncertainties, or bump and roll result in competition for key resources. In addition, higher than anticipated attrition impacts project cost.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Low (10% to 25%)</p> <p>Worst Case Impacts: \$102K, 64 day</p>	●	↔	<p>Risk Triggers: Due to the current job market, in addition to the need for specialized resources to complete the planned PUREX stabilization activities, qualified and trained resources are needed to support planned activities.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct full time equivalent personnel analysis and identify corrective actions to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: The project has hired D&D workers in anticipation of another 25 NCO openings at WRPS in second quarter FY2019.</p>	Mitigation action(s)	FC Date	%	Conduct full time equivalent personnel analysis and identify corrective actions to ensure adequate resource profiles.	Ongoing	N/A												
Mitigation action(s)	FC Date	%																				
Conduct full time equivalent personnel analysis and identify corrective actions to ensure adequate resource profiles.	Ongoing	N/A																				

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0040/WBS-040				
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified in February.				

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	7.1	4.7	4.7	(2.4)	-33.6%	0.0	1.5%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance: (-\$2.4M/-33.6%)

The current month negative schedule variance is primarily due the adverse winter weather conditions experienced in the month.

PUREX (-\$1.28 million): Grout placement activities at Tunnel 2 were put on hold as of February 4, 2019, as a result of the adverse winter weather conditions. A three-week delay was realized in the reporting period with two more weeks anticipated in March. As a result, the completion of grout placement has slipped a month with a targeted completion of April 18, 2019.

REDOX (-\$0.68 million): Snow build up prevented waste load out into ERDF containers. Equipment surveys were also impacted because of the cold weather; crews could not open doors for ventilation to remove Radon from the building in the 202-S Facility. Additionally, field walk-downs for the haul road, trailer, and ventilation procurements were halted due to snow and ice accumulation.

242-B/BL (-\$0.26 million): The 242-B/BL demolition preparation experienced delays due to accessibility issues including: snowplows were required for road accessibility to work sites and hand shoveling was required to gain access to the underwater camera viewing and radiological investigations in the 242-B/BL basin.

200 West and 200 East Steam Lines (-\$0.15 million): The removal of the 200 West steam lines experienced delays due to accessibility to work areas requiring snow clearance, exterior freezing temperatures not conducive to water application for glove bag abatement, and heavy equipment operators working higher priority snow removal on the Hanford Site.

CM Cost Performance: (+\$0.0M/+1.5%)

The current month cost variance is within threshold.

Contract-To-Date (\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	521.1	522.6	496.6	1.5	0.3%	25.9	5.0%	576.9	553.9	57.3	22.9

Numbers are rounded to the nearest \$0.1 million

Contract to Date (CTD) Schedule Performance: (+\$1.5M/+0.3%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$25.9M/+5.0%)

The majority of the CTD cost variance is from legacy work dating back to the American Recovery and Reinvestment Act time period. A large contributor to the positive variance within this fiscal year is the Tunnel 2 Stabilization Project. Approximately \$2.8 million of budget was allocated for a September to December 2018 stand down period while awaiting the issuance of the modified Resource Conservation and Recovery Act (RCRA) permit from Ecology. However, the delay period was never fully incurred as RL granted temporary authorization to start grouting on September 28, 2018 (versus December 3, 2018 baseline). Additionally contributing to the positive cost variance is the PUREX grout contract has incurred less than the 20 percent of the estimated change orders to date.

Variance at Completion (+\$22.9M/+4.0%)

The variance at completion (VAC) is within reporting thresholds.

Contract performance report formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 040/RL-0040 Nuclear Facility D&D	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0040 Spending Forecast	81.8	70.7	11.1
Incremental Scope Pending Change Management	0.0	2.9	(2.9)
RL-0040 – Total	81.8	73.7	8.1

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

FY2019 funding for project breakdown structure (PBS) RL-0040 is \$81.8 million. FY2019 funding aligns with the RL Integrated Priority List (IPL). The variance primarily reflects the work scope included in the IPL that is pending authorization.

Critical Path Schedule

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-250D	Submit to Ecology a 3-Year Rolling Prioritized Schedule to Implement Waste Site Removal Actions.	3/31/2019		3/30/2019	On schedule.
M-016-256	Complete Removal of All Waste Sites for FY2019 as Updated/Modified in M-16-17-01.	9/30/2019		TBD	In negotiation with RL to adjust schedule to FY2020.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
224-B (B Plant) Removal Action Work Plan (RAWP) (2017-34) RL Review	8/16/2017 (A)	3/30/2019
202-A PUREX (2016-15) Draft B Engineering Evaluation/Cost Analysis (EE/CA) Ecology Review	12/11/2017 (A)	3/30/2019
REDOX RAWP (2017-06) Rev. 0 Complete	3/15/2018 (A)	3/30/2019
REDOX Sampling Analysis Plan (SAP) (2017-05) Rev. 0 Complete	4/11/2018 (A)	3/30/2019
Tier 2 Misc. (B Plant North) SAP (2017-47) Rev. 0 Complete	4/17/2018 (A)	3/30/2019
Tier 2 Misc. Fac. (B Plant North) RAWP (2016-50) Rev. 0 Complete	5/2/2018 (A)	3/30/2019

Section F

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

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

M. A. Wright
Vice President for
Project Technical Services

PROJECT SUMMARY

K Basin Operations (KBO):

100K Closure received RL and U.S. Environmental Protection Agency (EPA) approval of Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Notice 0839 that documented interim stabilization activities completed at waste sites 300-5, 331-LSLT1, and 331-LSLT2. The 100K Closure remediation team completed excavation and loadout of contaminated soil beneath the crib, groomed the side slopes, installed a walking ramp at Waste Site 116-KE-2, and continued excavation and loadout of Waste Site 100-K-47:1. The 100K Closure basin characterization team verified that several debris bins were empty, obtained dose rates, staged the bins, and updated the basin debris map. The team also completed gamma camera surveys on the first 12 of 25 high-dose debris bins. Engineers at the Maintenance and Storage Facility (MASF) modified the prototype-processing unit for found fuel specimens to include a submersible motor and gear system. The 100K Closure Interim Safe Storage (ISS) team completed geophysical and topographical surveys around the 105KE Reactor building to support reducing the site soil classification and International Building Code seismic classification from D to C in support of reactor Safe Shutdown Enclosure installation.

River Risk Management Project (RRMP):

At the 324 Building, the RRMP team drilled through a four-foot-thick concrete wall to install a camera in 324 Building's D Cell to support remote operations and completed airlock core drilling for additional light installation. Workers completed installation and testing of the remote operation control trailer with three stations allowing remote excavator arm (REA) operations outside the 324 Building. At the 324 Mockup, crews completed the master slave manipulator repair training and initiated the installation of the Rad Assay System that workers will install and test at the mockup prior to installing at the building.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-RRMP-OBJ1-P1	Increase Environmental Management System (EMS) awareness	Present or facilitate a discussion of EMS topics to 324 Building Disposition Project personnel on a minimum of five different occasions in fiscal year (FY) 2019 and recruit personnel from 324 Building Disposition Project organizations (other than environmental) to participate in at least five compliance review/programmatic walk downs.	9/30/2019	50%
19-EMS-KBOPR-OBJ1-P1	Improve compliance/pollution and spill prevention	Monitor and evaluate universal waste and recycling accumulation areas for compliance with CHPRC procedures. Survey spill prevention measures.	9/30/2019	40%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	1	1	2/12/2019 - Employee was adjusting fork on a backhoe. The employee pulled the latch causing the tine to release and smashing finger. Employee was transported to Kadlec Medical Center and received sutures. (25072)
Total Recordable Injuries	0	0	N/A
First Aid Cases	5	35	<p>2/14/2019 - Employee was walking from vehicle to MO245 and slipped on ice. Employee's feet went out from under, twisting to the left and fell. The employee reported soreness to the lower back on the right side. The employee was transported to HPMC for evaluation and was returned to work with no restrictions. (25074)</p> <p>2/14/2019 - Employee donned required personal protective equipment (PPE) (including safety glasses) to enter the hot side of 324 in Room 123. A drop of water hit employee on the forehead above the left eye. The water dribbled into left eye and was wiped dry by a tissue. Radiological Control Technician (RCT) checked eye for contamination. Employee continued to work the zone on hot side. Eye was checked again for contamination by RCT. About 30 minutes later, eye was irritated, so employee left the work zone. Doffed PPE and was escorted to MO3105 by Safety to flush eye with First Aid solution. Employee was examined and released with no restrictions. (25076)</p> <p>2/19/2019 - Employee was leaving the office to start a job assignment. Employee slipped on the road and fell down on the right side. The employee complained of pain in the right upper arm, shoulder, right thumb, and upper thigh between the knee and hip. Employee was evaluated at HPMC. HPMC provided ibuprofen and an ice pack. Employee was released to work with no restrictions. (25075)</p> <p>2/20/2019 – Employee slipped on ice and landed on buttocks. No apparent injury. Employee evaluated at HPMC and returned to work without restrictions. (25079)</p> <p>2/26/2019 - Employee fell on snow and ice while exiting personal vehicle. Employee evaluated at HPMC and released to work with no restrictions. (25085)</p>
Near Misses	0	2	N/A

KEY ACCOMPLISHMENTS

K Basin Operations

- 100K Closure Project:
 - o 100K Soil Remediation
 - Completed excavation and loadout of soil below the crib structure, groomed side slopes, and installed walking ramp at Waste Site 116-KE-2.
 - Continued excavation and loadout of Waste Site 100-K-47:1. Excavation is approximately 40 percent complete.
 - EPA approved the Waste Site Reclassification Form (WSRF) for closure of Waste Site 100-K-94.
 - EPA approved the WSRF for closure of waste sites 100-K-13 and 100-K-94. Completed backfill of 100-K-94.
 - Developed a plan to perform additional remediation at Waste Site 100-K-99, for locations identified through verification sampling and Radiation Control surveys.
 - o K West Basin Deactivation
 - Sand Filter Media Removal System (SFMRS):
 - The Facility Modification Package (FMP) and Design Change Notice (DCN) for the SFMRS design are approximately 95 percent complete. Both the FMP and DCN are forecasted to be approved in March.
 - K East Reactor ISS
 - Received revision of 22-1-02904-004, *Geotechnical Engineering Report for 105KE ISS* from the geotechnical contractor and started internal CHPRC reviews. The report revised to incorporate results from the recent geophysical survey and to modify the assigned site soil classification and International Building Code seismic classification from D to C.
 - Finished development of the Safe Shutdown Enclosure design modification Request for Proposal (RFP) and released the RFP for bid.
 - Finished updating the statement of work for the asbestos removal contract and started development of a RFP.
 - K West Basin Below-Water Debris Characterization
 - Completed Gamma Camera surveys on 12 of 25 high-dose debris bins requiring analysis.
 - The characterization team verified that several debris bins were empty, obtained dose rates on several debris bins and fuel canisters, staged the bins and canisters, and updated the basin debris map.
 - Transferred materials (including vacuum sample cells) necessary to initiate settled solids sampling into K West Basin.
 - Provided source term information to CHPRC Transportation Safety supporting their effort to issue a Fuel Special Packaging Authorization (FSPA) and checklist for the fuel specimen shipment to Pacific Northwest National Laboratory (PNNL).
 - CHPRC/Mission Support Alliance, LLC (MSA) issued formal request for Termination of Safeguards (ToS) of fuel specimens to RL. Working to have the formal Defense Determination request for K Basin sludge issued to RL when formal approval of the ToS request is in hand.
 - Completed calculation PRC-KC-CN-G-00015, *Volume of Residual EC-210 Sludge in Engineered Container after Bulk Sludge Removal*.
 - o Ancillary Facility Deactivation and Demolition (D&D)
 - Initiated actions for demolition of 166KE Fuel Storage Basin (FSB) (Waste Site 130-KE-2).

- Performing technical evaluation of contractor proposals to remove residual oil and water from the FSB.
- Resolving Department of Health comments on draft revision of DOE/RL-2005-26 *RAWP for 100K Reactor and Ancillary Facilities* and supporting Air Monitoring Plan.
- o Remaining Closure Operations - 618-10 complex revegetation:
 - RL and EPA approved Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Notice 0839 to document interim stabilization activities completed at Waste Sites 300-5, 331-LSLT1, and 331-LSLT2.

River Risk Management Project, 324 Building Disposition Project

- Equipment Procurement and Fabrication:
 - o Received all rad assay table components for the mockup.
 - o Received replacement filters (top hats) for the cell snorkels at Acquisition Verification Services (AVS).
 - o Continued the design and fabrication of the following 324 systems: rad assay system, waste box shielding, floor saw system, miscellaneous items for the REA and lights and cameras, filter frames, cell dams, water delivery system, and shielded probe collimator.
- Cell Cleanout
 - o Continued size reduction of debris in B Cell.
- Facility Preparations
 - o Completed core drilling D Cell camera location and completed installation of D Cell camera.
 - o Completed instrumentation and controls connections for the control trailer.
 - o Installed dummy post onto the NW Through Support Assembly (TSA) in B Cell. Successfully grouted NW REA TSA.
 - o Removed previous camera system and installed light bar in B Cell.
 - o Completed 10-inch core drill location and NE REA go gauge.
 - o Relocated bull run (with airlock waste) to 300 Area Container Transfer Area.
 - o Completed third tool holder location and set up for the fourth location.
 - o Initiated floor core drilling for pilot holes.
- Structural Modifications
 - o Began mobilization of micropile equipment to 324 Room 18.
 - o Continued horizontal drilling and vertical grouting at Pit 6.
 - o Completed B Cell concrete wall scabbling mockup demonstration at Apollo Facility.
- Mockup
 - o Continued operator proficiency training at the Mockup on equipment.
 - o Continued A Cell snorkel installation testing.
 - o Completed Master Slave Manipulator (MSM) repair training conducted by a Central Research Laboratories master technician.
 - o Tested an alternative method than originally planned for placement of dummy posts on the REA TSAs.
 - o Completed seal breaker testing.
 - o Completed the Rad Assay System installation and initiated the Rad Assay System Construction Acceptance Testing (CAT).

Project Technical Support

- Training and Procedures
 - o Worked with technical authority to perform training needs analysis for the new 324 Waste Storage procedure. Analysis indicated that there would be a need for gap training, which will be rolled into seven qualification cards.
- Readiness and Preparedness

- o Ran a Full Scope Hazardous Material Operational Emergency Drill at 324 for qualification and proficiency purposes. Drill performance was notably better than previous drill and no significant Facility Emergency Response Organization (FERO) issues were identified.

MAJOR ISSUES

Issue

A shortage of radiation control technicians (RCTs), radiation control engineers, radiation control work planners, and radiation control first line managers has hampered 100K Closure Project soil remediation and basin characterization work.

Corrective Action

The project continues to work with Labor Relations and Central Radiation Protection Management to fill needed positions.

Status

The number of RCTs at 100K has improved. 100K radiation control currently has 34 CHPRC and seven contract RCTs onboard. When new hire RCT training has been completed resources will be sufficient to support the project

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0041/WBS-041																
Explanation of major changes to the project monthly spotlight chart: No major changes for February.																
Realized Risks (Risks that are currently impacting project cost/schedule)																
RCC-300-296-08: 300-296 Failure of Cell Shield Door	Failure of shield door(s) or crane shield door(s) shuts down cleanout of REC cells/airlock, penetration sealing in airlock, equipment installation, and other activities for remote soil removal. It may not be possible to repair a shield door due to radiation dose rate and location, resulting in cost and schedule delays. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$460K, 96 days			Risk Event: During operation of cleanout activities on June 19, 2018, the A Cell crane door became restricted from closing, prohibiting airlock entry. <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Airlock entry recovery from A Cell crane door malfunction</td> <td>7/10/2018</td> <td>100</td> </tr> <tr> <td>Clean Airlock Trench for A Call Crane Door Repairs</td> <td>12/5/2018</td> <td>100</td> </tr> <tr> <td>A Cell crane door malfunction recovery</td> <td>1/31/2019</td> <td>100</td> </tr> </tbody> </table> Recovery Assessment: A Cell crane door became restricted from closing, prohibiting airlock entry. No personnel were affected. The remaining repairs were successfully completed January 31. In the upcoming period, this risk will no longer be tracked as realized and will be placed under the high risk section.	Recovery Action(s)	FC Date	%	Airlock entry recovery from A Cell crane door malfunction	7/10/2018	100	Clean Airlock Trench for A Call Crane Door Repairs	12/5/2018	100	A Cell crane door malfunction recovery	1/31/2019	100
Recovery Action(s)	FC Date	%														
Airlock entry recovery from A Cell crane door malfunction	7/10/2018	100														
Clean Airlock Trench for A Call Crane Door Repairs	12/5/2018	100														
A Cell crane door malfunction recovery	1/31/2019	100														

<p>RCC-300-296-30: 300-296 Design Changes Result in Increased Subcontractor Change Order(s) / Claims</p>	<p>Structural modifications estimate is currently based on the vendor's estimate as of the 30 percent design. The 60 percent design through initiation of 90 percent design and testing of the currently identified 324 Building structural modifications to support design are ongoing. Due to the uncertainty and evolution of developments, design changes may be required upon completion of all design phases.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very Likely (>90%) Worst Case Impacts: \$3,318K, 136 days</p>			<p>Risk Event: Upon review of the 30 percent design submittal, it was determined that the cell wall loading/limitations were inadequate and required additional clarification. To reduce the potential impacts associated with conflicting drawing information, applicable design efforts were updated to encompass further analysis of cell footings, load limitations, and field demonstrations to ensure safe and successful completion.</p> <table border="1" data-bbox="862 394 1563 674"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contractor prepare and submit structure modification design - 30%-60% (VE2810)</td> <td>8/15/2018</td> <td>100</td> </tr> <tr> <td>Perform Micropile Demonstration and Verification to Support Structural Mod Design (VS1220A)</td> <td>1/24/2019</td> <td>100</td> </tr> <tr> <td>Structural Mods Design Micro-Pile Comment Resolution (VS1220C)</td> <td>2/25/2019</td> <td>93</td> </tr> <tr> <td>Perform Pilot Holing for Structural Mods (VS5010)</td> <td>3/19/2019</td> <td>10</td> </tr> <tr> <td>Perform Pit 6 Soil Verification Testing / Geotech (VS1220B)</td> <td>4/15/2019</td> <td>64</td> </tr> <tr> <td>Contractor prepare and submit structure modification design (VN1220)</td> <td>6/18/2019</td> <td>87</td> </tr> </tbody> </table> <p>Recovery Assessment: Delays for completing the final structural design have been incurred due to an extended review period from the independent subject matter experts (SME) coupled with CHPRC internal review. Additional efforts through progressing on the final design activities have been incorporated into the field execution schedule, along with the estimate to complete to reflect impacts of risk being realized.</p>	Recovery Action(s)	FC Date	%	Contractor prepare and submit structure modification design - 30%-60% (VE2810)	8/15/2018	100	Perform Micropile Demonstration and Verification to Support Structural Mod Design (VS1220A)	1/24/2019	100	Structural Mods Design Micro-Pile Comment Resolution (VS1220C)	2/25/2019	93	Perform Pilot Holing for Structural Mods (VS5010)	3/19/2019	10	Perform Pit 6 Soil Verification Testing / Geotech (VS1220B)	4/15/2019	64	Contractor prepare and submit structure modification design (VN1220)	6/18/2019	87
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Perform Pit 6 Soil Verification Testing / Geotech (VS1220B)	4/15/2019	64																							
Contractor prepare and submit structure modification design (VN1220)	6/18/2019	87																							
<p>RCC-300-296-03: Mockup Testing and Qualification of Remote Equipment/ Process Identifies Major Modification Requirements</p>	<p>Issues such as equipment interferences, differing as-found conditions than planned, equipment reliability, etc., arise prior to/during mockup testing, leading to re-design of equipment and resulting in cost and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$773K, 80 Days</p>			<p>Risk Event: During vendor FAT and/or mockup testing, issues and conditions were identified with mockup equipment, resulting in additional redesign, materials, and/or fabrication efforts greater than planned. Remote equipment procurements that have resulted in cost and/or schedule impacts include the REA system components (through supports and dummy post assemblies) and transfer mechanism (electrical components).</p> <table border="1" data-bbox="862 1066 1563 1136"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install Rad Assay System and perform CAT at Mockup</td> <td>3/7/2019</td> <td>75</td> </tr> <tr> <td>Install Floor Saw and Support System at Mockup (VN1020)</td> <td>3/27/2019</td> <td>-</td> </tr> </tbody> </table> <p>Recovery Assessment: No major changes in February. The floor saw is planned to be installed immediately following the installation and CAT of the rad assay system at the mockup. Once installed, successful integration with remotely operated equipment, through testing and training at the mockup, will continue with preparations for 324 Building equipment. Impacts continue to be incorporated into the project schedule, along with the ETC, to reflect further impacts of risk being realized.</p>	Recovery action(s)	FC Date	%	Install Rad Assay System and perform CAT at Mockup	3/7/2019	75	Install Floor Saw and Support System at Mockup (VN1020)	3/27/2019	-												
Recovery action(s)	FC Date	%																							
Install Rad Assay System and perform CAT at Mockup	3/7/2019	75																							
Install Floor Saw and Support System at Mockup (VN1020)	3/27/2019	-																							
<p>100K-KWB-102: KW Basin – Resources Unavailable</p>	<p>Other higher CHPRC priority work results in reallocation of key resources (Rad planners, RCTs, Industrial Hygienist, and Nuclear Chemical Operators), which results in cost and schedule delays as projects compete for key CHPRC resources.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$15K, 16 Days</p>			<p>Risk Event: 100K Closure Project soil remediation and basin characterization work is experiencing a shortage of RCTs, radiation control engineers, radiation control work planners, and radiation control first line managers.</p> <table border="1" data-bbox="862 1472 1563 1644"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Radcon and Labor Relations have hired two rad engineers/planners and transferred a Radcon first line manager (experienced in soil remediation and D&D) to 100K. Radcon has also staffed up to 37 RCTs and is in the process of hiring an additional three RCTs, which will provide sufficient resources to cover 100K Closure, 100K Operations, and 100K MinSafe work.</td> <td>3/15/2019</td> <td>25</td> </tr> </tbody> </table> <p>Recovery Assessment: The number of RCTs at 100K has improved and is currently sufficient to perform planned 100K closure work in FY2019.</p>	Recovery action(s)	FC Date	%	Radcon and Labor Relations have hired two rad engineers/planners and transferred a Radcon first line manager (experienced in soil remediation and D&D) to 100K. Radcon has also staffed up to 37 RCTs and is in the process of hiring an additional three RCTs, which will provide sufficient resources to cover 100K Closure, 100K Operations, and 100K MinSafe work.	3/15/2019	25															
Recovery action(s)	FC Date	%																							
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<p>100K-KWB-092: KW Basin - Fuel or Residual Material Discovered</p>	<p>Unexpected fuel is discovered during KW Basin Closure activities. This will result in increased cost and schedule delays to disposition fuel before the basin is deactivated.</p> <p>Risk Handling Strategy: Accept</p>			<p>Risk Event: Additional fuel specimens were discovered that will require removal, dewatering, and packaging in a found fuel cask (FFC) for shipment to the Canister Storage Building.</p>																					

	<p>Probability: Low (10% to 25%) Worst Case Impacts: \$2,000K, 96 Days</p>			<table border="1"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Pursue formal termination of safeguards of existing and any further discoveries up to 10Kg of material. Safeguards termination enables waste classification as Remote-handled transuranic waste (RH TRU), thereby allowing incorporation of the material into KW sludge waste streams in process of being transferred to T Plant.</td> <td>5/31/2019</td> <td>Ongoing</td> </tr> </tbody> </table> <p>Recovery Assessment: No major changes in February. The safeguards termination request is with RL awaiting final approval. Upon termination, the disposition path for the fuel specimens is clear; current holdings as well as any further discoveries will be managed as RH TRU waste.</p>	Recovery action(s)	FC Date	%	Pursue formal termination of safeguards of existing and any further discoveries up to 10Kg of material. Safeguards termination enables waste classification as Remote-handled transuranic waste (RH TRU), thereby allowing incorporation of the material into KW sludge waste streams in process of being transferred to T Plant.	5/31/2019	Ongoing
Recovery action(s)	FC Date	%								
Pursue formal termination of safeguards of existing and any further discoveries up to 10Kg of material. Safeguards termination enables waste classification as Remote-handled transuranic waste (RH TRU), thereby allowing incorporation of the material into KW sludge waste streams in process of being transferred to T Plant.	5/31/2019	Ongoing								
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No critical risks identified in February.										
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
RCC-300-296-07: 300-296 Failure of a REC Cranes (B Cell, A Cell, A-D and Airlock, or CHA cranes)	<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>Risk Handling Strategy: Accept</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$1,561K, 208 Days</p>	●	↔	<p>Risk Trigger Metric: REC crane failure occurs during operations.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Determine B Cell Replacement Crane Options</td> <td>3/28/2019</td> <td>Ongoing</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in February. The project is in the process of reviewing evaluations and recommendations with manufacturers to assist with determining preventive maintenance, spare parts requirements, and corrective maintenance in the event of necessary repairs. Project management was briefed on vendor-assessed data to determine procurements of identified crane parts. The project is determining the potential for acquiring crane replacement. These efforts are expected to reduce the potential for impacts.</p>	Mitigation action(s)	FC Date	%	Determine B Cell Replacement Crane Options	3/28/2019	Ongoing
Mitigation action(s)	FC Date	%								
Determine B Cell Replacement Crane Options	3/28/2019	Ongoing								
RCC-300-296-15: 300-296 Cell sealing, interference removal and/or core drilling takes longer than planned	<p>Unexpected field conditions encountered during interference removal, sealing of cell penetrations, and/or core drilling work scope. The unexpected field conditions subsequently cause in-scope unplanned work and result in schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very Likely (>90%) Worst Case Impacts: \$145.8K, 90 Days</p>	●	↔	<p>Risk Trigger Metric: The project experiences unexpected field conditions outside their control that make cell sealing, interference removal, and core drilling more difficult than planned.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform Core Drilling and Shield Plug Installation (VN1200)</td> <td>3/21/2019</td> <td>Ongoing</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in February. A majority of core drilling interferences have been identified as the project progresses with drilling necessary at the 324 Building in advance of installation of soil remediation equipment. The remaining core drilling efforts are planned to be completed over the upcoming period. Due to the uniqueness involved with work scope, there exists the potential for unexpected delays and additional core drilling efforts.</p>	Mitigation action(s)	FC Date	%	Perform Core Drilling and Shield Plug Installation (VN1200)	3/21/2019	Ongoing
Mitigation action(s)	FC Date	%								
Perform Core Drilling and Shield Plug Installation (VN1200)	3/21/2019	Ongoing								
FY2019 Risk Triggers (Risk could be realized in FY2019)										
RCC-300-296-01: Latent Conditions Impact Facility Modification	<p>Latent conditions, poor visibility in REC cells, or drawing omissions, inconsistencies, or errors impact facility modifications (e.g. mechanical, electrical IH/Radcon hazards), resulting in unplanned work and subsequently, cost and schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$294.5K, 256 Days</p>	●	↔	<p>Risk Trigger Metric: Available drawings may not reflect the actual conditions in the 324 Building or REC cells. Debris within the REC cells, as well as poor visibility may prevent the verification of in-cell features for installing penetrations, removing interferences, and supporting preparation activities for structural modifications.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform routine preventative maintenance activities</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in February. Uncertainties associated with aging 324 Building systems (e.g., stack sampling), sealing penetrations, and electrical outages needed for interference removal; there exists a potential for this risk to be realized. Based on the historical discovery of an elevated latent contamination level (NOC, CHPRC-1801178), corrective actions have been implemented along with additional controls. This risk will continuously be monitored as routine preventative maintenance activities are in place to reduce the likelihood of occurrence.</p>	Mitigation action(s)	FC Date	%	Perform routine preventative maintenance activities	Ongoing	N/A
Mitigation action(s)	FC Date	%								
Perform routine preventative maintenance activities	Ongoing	N/A								
Unassigned Risks (Pending ownership of identified risks/opportunities)										
RCC-300-296-04DOE: 300-296 Seismic	A "Force Majeure" incident, such as a seismic event, results in the loss of structural integrity; causing cost and schedule impacts to the project delivery.									

Event (Force Majeure)	CHPRC Comment: CHPRC cannot manage the geological seismic movement that may impact the structural integrity of a building. Therefore, this risk is proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted, via acknowledgement from the RL Contracting Officer, it will be removed from the stoplight chart.
RCC-300-296-23DOE: 300-296 Large Brush Fire (Force Majeure)	A brush fire ignited on the Hanford Site near the proximity of the 300-296 Waste Site, resulting in cost and schedule delays. CHPRC Comment: This risk was identified as “Force Majeure” and is beyond the capabilities of CHPRC to manage. Therefore, this risk was proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted, via acknowledgement from the RL Contracting Officer, it will be removed from the stoplight chart.
RCC-300-296-27: 300-296 Requirement Changes Result in Additional Work/Entry Prerequisite Training	Due to complex-wide or facility specific changes in requirements outside of CHPRC’s ability to manage (e.g. technical documents, procedures, training), project delivery will be impacted in terms of cost and schedule. CHPRC Comment: Changes to DOE Orders, federal or state regulations, waste acceptance criteria established by another site contractor, or another DOE site could impact the baseline scope/schedule/cost. Although a contract change is required to incorporate changes to DOE Orders, no contract change is required for federal or state regulations or for waste acceptance criteria changes. The potential criteria changes are outside of CHPRC’s ability to manage. Therefore, this risk was proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted, via acknowledgement from the RL Contracting Officer, it will be removed from the stoplight chart.

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	13.4	8.3	8.6	(5.1)	-38.1%	(0.3)	-3.3 %

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$5.1M/-38.1%)

The current month unfavorable schedule variance is mainly attributed to 324 Structural Modifications and the 324 Facility Modifications accounts. In January, baseline change request (BCR), BCR-041-19-006R0, 324 Building Disposition Project Carryover Scope and Latent Conditions, incorporated the necessary budget for this scope. Within that BCR, the budgeted cost of work scheduled (BCWS) for this scope was planned in February as the project assumed the additional scope could not be planned within the current month. This has created an unfavorable current month schedule variance in February as the performance was taken in January. In addition, penetration sealing within the airlock was unable to begin as the project experienced a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were advised not to report to work.

CM Cost Performance (-\$0.3M/-3.3%)

The CM cost variance is within reporting thresholds.

Contract-to-Date (\$M)

WBS 041/ RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	644.0	635.3	575.3	(8.7)	-1.3%	60.0	9.5%	732.2	671.6	96.3	60.6

Numbers are rounded to the nearest \$0.1 million

Contract-to-Date (CTD) Schedule Performance (-\$8.7M/-1.3%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance (+\$60.0M/+9.5%)

The favorable cost variance is primarily due to completing confirmatory sampling - no action (CSNA) waste sites early and under cost. In addition, less demolition was required for the K East Sedimentation Basin and fewer resources are supporting the level of effort (LOE) program management and usage-based services scope. Some resources have been diverted to other priority work scope and some resource sharing has occurred. The favorable cost variance was partially offset by the cost overruns in prior years for the utilities project. The 618-10 Burial Ground Complex also realized favorable cost variances with shared resources, lower drum processing costs, and excavation and backfill efficiencies at the 316-4 Waste Site and the 618-10 Burial Ground. These favorable variances are slightly offset by a negative CTD variance caused by challenges at the 324 Building Disposition Project in execution of cell and airlock cleanout, higher-than-planned engineering costs resulting from mockup, 324 structural design changes, and increased expenditures for the design and fabrication of essential procurements.

Variance at Completion (+\$60.6M/+8.3%)

The 100K Closure positive variance at completion (VAC) is primarily due to labor; fewer resources have been supporting the LOE program management and usage-based services scope. Some resources have been diverted to other priority work scope, and some resource sharing has occurred. Additionally, the VAC is due to completing the CSNA waste sites early and under cost. The remaining VAC is primarily due to the implementation of efficiencies and staffing ramp downs at the 618-10 Burial Ground. Offsetting the positive variance, the 324 Building Disposition Project experienced increased costs associated with airlock cleanout, engineering and design activities, staff ramp up, and equipment procurement activities.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0041 Spending Forecast	148.3	128.5	19.9
Incremental Scope Change Pending Change Management	0.0	0.4	(0.4)
RL-0041 – Total	148.3	128.9	19.5

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis:

The FY2019 projected funding for project breakdown (PBS) structure RL-0041 is \$148.3 million. The projected funding includes carryover from FY2018 and new budget authority. The spending forecast is based on the FY2019 performance measurement baseline annual update submitted to RL with updates through December 2018. FY2019 funding aligns with the RL Integrated Priority List (IPL). The variance primarily reflects the work scope included in the IPL that is pending authorization.

Critical Path Schedule:

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Forecasted Date	Status/ Comment
M-016-85A	Complete Remote Excavation of 300-296 Waste Site	9/30/2019	1/12/2021	Milestone will be missed.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
DOE Authorize SPA SEC for Soils – 300-296	1/7/2019 (A)	3/7/2019
DOE Authorize SPA SEC for Hot Cell Disposal	1/7/2019 (A)	3/7/2019
RL Concur on DSA/TSR Revision Comment Resolution	2/25/2019	3/6/2019
RL Prepare DSA/TSR Revision SER	3/7/2019	3/9/2019
RL Review EPHA Draft	3/8/2019	3/22/2019
SRB Review SER for DSA/TSR Revision	3/27/2019	4/2/2019
RL Issue SER for 324 DSA/TSR	4/3/2019	4/9/2019
DOE Review WCH-539, Treatment Plan for Macro Encapsulation - 324	4/28/2019	5/27/2019
RL Approval EPHA Final	4/9/2019	4/23/2019
DOE Independent Design Review - IFC Structural Modification	5/30/2019	6/18/2019

Section G

Fast Flux Test Facility Closure (RL-0042)

CH2MHILL
Plateau Remediation Company



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

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

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

KEY ACCOMPLISHMENTS

RL-0042 Accomplishments

- Started routing the P-16 pump variable frequency drive (VFD) control circuits disconnection work package for approval. The existing control circuits for the VFD need to be disconnected before the new P-16 VFD and its associated hardware can be installed. Final approval is on hold until an electrical outage, additional circuit verification of the 400 Area water supply electrical system is performed, and lock out tag out documentation is validated. Outage was pushed out to the end of March due to cold weather to avoid affecting the water heaters.
- Continued routing the P-16 pump VFD replacement Engineering Change Request (ECR) for approval.

MAJOR ISSUES

Issue

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

Corrective Action

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

Status

A determination on how to proceed is pending discussion and direction from RL.

RISK MANAGEMENT STATUS

None currently identified.

PROJECT BASELINE PERFORMANCE**Current Month****(\$M)**

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	0.1	0.1	0.1	0.0	0.0%	0.0	12.4%

Numbers are rounded to the nearest \$0.1M

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

The schedule variance is within reporting thresholds.

CM Cost Performance: (+\$0.0M/+12.4%)

The cost variance is within reporting thresholds.

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

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	27.1	27.1	22.7	(0.0)	-0.0%	4.4	16.4%	28.2	24.3	1.6	3.9

Numbers are rounded to the nearest \$0.1 million

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

The schedule variance is within reporting thresholds.

CTD Cost Performance (+\$4.4M/+16.4%)

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

Variance at Completion (+\$3.9M/+13.9%)

The Variance at Completion reflects efficient use of resources to support deactivation activities.

Contract Performance Report Formats are provided in Appendix A.

FUNDS VS. SPEND FORECAST (\$M)

RL-0042 FFTF Closure	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0042 Spending Forecast	4.3	2.5	1.8

Numbers are rounded to the nearest \$0.1 million

Funds Analysis

Fiscal year 2019 funding for project breakdown structure RL-0042 is \$4.3 million. The spending forecast is \$2.5 million, which represents increased support due to electrical component failures and configuration challenges, increased interest by regulators requiring additional inspections, and a recent failure of the water system/water piping.

Critical Path Schedule

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

MILESTONE STATUS

None currently identified.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

None currently identified.

Appendix A

Contract Performance

Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

FORM APPROVED
OMB No. 0704-0188

DOLLARS IN Thousands of \$

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2019 / 01 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 02 / 24	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18			

5. CONTRACT DATA								
a. QUANTITY 1	b. NEGOTIATED COST 5,588,957	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 901,062	d. TARGET PROFIT/FEE 241,605	e. TARGET PRICE 5,830,563	f. ESTIMATED PRICE 6,625,930	g. CONTRACT CEILING 5,830,563	h. ESTIMATED CONTRACT CEILING 6,625,930	i. DATE OF OTB/OTS (YYYYMMDD)

6. ESTIMATED COST AT COMPLETION				7. AUTHORIZED CONTRACTOR REPRESENTATIVE					
MANAGEMENT ESTIMATE AT COMPLETION (1)		CONTRACT BUDGET BASE (2)		VARIANCE (3)		a. NAME (Last, First, Middle Initial) Underwood, Teresa		b. TITLE Prime Contract Compliance Manager	
a. BEST CASE 6,321,047						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)	
b. WORST CASE 6,566,743									
c. MOST LIKELY 6,384,325		6,490,020		105,695					

8. PERFORMANCE DATA																		
CAPN.PBS	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	29,534	22,022	3,940	-7,513	18,081	1,024,757	1,006,020	1,165,164	-18,737	-159,144	0	0	0	1,050,896	1,215,528	-164,632		
RL-0012 SNF Stabilization & Disp	1,383	856	974	-527	-118	750,797	749,809	719,882	-988	29,927	0	0	0	761,876	730,776	31,100		
RL-0013 Solid Waste Stab & Disp	12,084	10,691	9,321	-1,392	1,371	1,403,861	1,400,191	1,300,173	-3,670	100,018	0	0	0	1,498,770	1,398,510	100,259		
RL-0030 Soil & Water Rem-Grndwtr/Vadose	9,447	8,023	7,424	-1,424	599	1,570,977	1,570,340	1,513,982	-637	56,358	0	0	0	1,649,060	1,590,554	58,507		
RL-0040 Nuc Fac D&D - Remainder Hanfrd	7,136	4,740	4,667	-2,396	73	521,064	522,571	496,645	1,507	25,925	0	0	0	556,294	533,352	22,942		
RL-0041 Nuc Fac D&D - RC Closure Proj	13,379	8,284	8,554	-5,095	-269	643,966	635,288	575,250	-8,678	60,038	0	0	0	713,332	652,689	60,643		
RL-0042 Nuc Fac D&D - FFTF Proj	130	130	114	0	16	27,148	27,137	22,694	-11	4,443	0	0	0	28,197	24,281	3,917		
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														175,358	175,358	0		
e. SUBTOTAL	73,093	54,746	34,994	-18,347	19,752	5,942,570	5,911,355	5,793,790	-31,215	117,565	0	0	0	6,433,783	6,321,047	112,736		
f. MANAGEMENT RESERVE														63,278				
g. TOTAL	73,093	54,746	34,994	-18,347	19,752	5,942,570	5,911,355	5,793,790	-31,215	117,565	0	0	0	6,497,061	6,321,047	176,014		
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																		
a. VARIANCE ADJUSTMENT																		
b. TOTAL CONTRACT VARIANCE																		
										-31,215		117,565		6,497,061		6,321,047		176,014

* Per e-mail direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. A contract alignment settlement has been reached and baseline change requests (BCRs) will be processed to align the PMB with the settlement values in March 2019.

*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

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2019 / 01 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 02 / 24	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)								
34 - Env Program & Strategic Plng	1,464	793	970	-672	-177	90,679	90,490	83,295	-189	7,195	0	0	0	98,807	91,704	7,103		
35 - Business Services	0	0	0	0	0	477,296	477,296	453,596	0	23,700	0	0	0	477,296	453,596	23,700		
36 - Prime Contract & Proj Integr	0	0	0	0	0	1,111	1,111	492	0	618	0	0	0	1,111	492	618		
37 - Resource Mgmt & Strategic Intg	123	123	37	0	86	8,322	8,322	5,014	0	3,308	0	0	0	9,314	5,787	3,528		
3B - PFP Closure Project	29,534	22,022	3,940	-7,513	18,081	935,975	917,238	1,084,100	-18,737	-166,861	0	0	0	962,114	1,134,463	-172,349		
3C - Waste & Fuels Management Project	9,342	8,107	6,911	-1,236	1,196	1,245,359	1,241,736	1,152,386	-3,623	89,350	0	0	0	1,319,898	1,229,467	90,431		
3D - Soil & Groundwater Remediation	7,952	7,199	6,448	-752	751	1,378,557	1,378,109	1,323,136	-448	54,973	0	0	0	1,448,264	1,391,106	57,158		
3G - K Basin Oper & Plateau Remediation Project	5,384	3,877	4,046	-1,507	-169	1,066,467	1,063,329	1,002,626	-3,138	60,703	0	0	0	1,112,368	1,049,672	62,696		
3H - River Risk Management Project	12,058	7,787	7,871	-4,271	-85	279,178	272,602	249,283	-6,576	23,318	0	0	0	333,594	311,440	22,154		
3K - Central Plateau Risk Reduction	7,236	4,839	4,770	-2,396	69	459,628	461,123	439,862	1,496	21,262	0	0	0	495,660	477,962	17,698		
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														175,358	175,358	0		
e. SUBTOTAL (Performance Measurement Baseline)	73,093	54,746	34,994	-18,347	19,752	5,942,570	5,911,355	5,793,790	-31,215	117,565	0	0	0	6,433,783	6,321,047	112,736		
f. MANAGEMENT RESERVE														63,278				
g. TOTAL	73,093	54,746	34,994	-18,347	19,752	5,942,570	5,911,355	5,793,790	-31,215	117,565	0	0	0	6,497,061				

* Per e-mail direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. A contract alignment settlement has been reached and baseline change requests (BCRs) will be processed to align the PMB with the settlement values in March 2019.

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE													Form Approved OMB No. 0704-0188				
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA				2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2019/01/28 b. TO: 2019/02/24					
5. CONTRACT DATA																	
a. ORIGINAL NEGOTIATED COST 4,312,366				b. NEGOTIATED CONTRACT CHANGE \$1,276,591		c. CURRENT NEGOTIATED COST (A + B) \$5,588,957		d. ESTIMATED COST AUTH UNPRICED WORK \$901,062		e. CONTRACT BUDGET BASE (C + D) \$6,490,020		f. TOTAL ALLOCATED BUDGET \$6,497,061		g. DIFFERENCE (E - F) (\$7,041)			
h. CONTRACT START DATE 6/19/2008				i. DEFINITIZATION DATE 6/19/2008			j. PLANNED COMPL DATE 9/30/2019			k. CONT COMPLETION DATE 9/30/2019			l. EST COMPLETION DATE 9/30/2019				
6. PERFORMANCE DATA																	
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)							UNDISTRIB BUDGET (17)	TOTAL BUDGET (18)
			+1 Mar-19 (4)	+2 Apr-19 (5)	+3 May-19 (6)	+4 Jun-19 (7)	+5 Jul-19 (8)	+6 Aug-19 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)		
a. PM BASELINE (BEGIN OF PERIOD)	5,869,477	44,734	42,901	44,901	50,822	36,665	34,086	45,122	3,391,477	391,653	471,323	504,826	485,028	470,649	494,407	175,358	6,384,720
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																	
BCR-011C-18-005R2, PFP CAP 2 Project Completion															49,134 (71)		49,134 (71)
BCR-013-19-005R0, Remove Tritium Study Scope															0		0
BCRA-PRC-19-009R0, HPIC Updates February 2019																	
c. PM BASELINE (END OF PERIOD)	5,942,570	73,093	47,533	49,712	56,261	40,852	35,687	45,156	3,391,477	391,653	471,323	504,826	485,028	470,649	543,470	175,358	6,433,783
7. MANAGEMENT RESERVE																	
																	63,278
8. TOTAL																	
																	6,497,061

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2019 / 01 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 02 / 24	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group	ACTUAL CURRENT PERIOD	ACTUAL END OF CURRENT PERIOD (Cumulative)	FORECAST (Non-Cumulative)												AT COMPLETION	
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS							
			+1 MAR 2019	+2 APR 2019	+3 MAY 2019	+4 JUN 2019	+5 JUL 2019	+6 AUG 2019	FY19 END	OCT 2019	NOV 2019	FY20-LC	ATCOMPLETE			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		
300 - Office of the President	5	839	7	7	7	7	7	7	7	7	7	0	0	0	0	886
303 - Internal Audit	4	556	6	6	6	6	6	6	6	6	6	0	0	0	0	597
304 - General Counsel	4	515	4	4	4	4	4	4	4	4	4	0	0	0	0	545
31 - Communications	6	1155	8	8	8	8	8	8	8	8	8	0	0	0	0	1214
32 - Safety Health Security & Quality	49	8064	69	69	69	72	70	69	68	0	0	0	0	0	0	8548
34 - Env Program & Strategic Plng	35	5506	46	48	47	47	47	46	47	0	0	0	0	0	0	5834
35 - Business Services	43	7678	59	59	59	59	59	59	59	0	0	0	0	0	0	8089
36 - Prime Contract & Proj Integr	28	4117	38	41	41	42	42	42	42	0	0	0	0	0	0	4405
37 - Resource Mgmt & Strategic Intg	30	3043	38	42	43	43	43	43	43	0	0	0	0	0	0	3336
38 - Project Technical Services	30	6172	39	43	38	38	38	38	38	0	0	0	0	0	0	6444
3B - PFP Closure Project	164	52281	198	200	200	197	198	199	200	157	157	44	0	0	0	54030
3C - Waste & Fuels Management Project	294	55607	398	395	390	394	390	385	376	14	8	9	0	0	0	58367
3D - Soil & Groundwater Remediation	216	40867	283	300	286	283	285	271	237	3	2	23	0	0	0	42841
3G - K Basin Oper & Plateau Remediation Project	160	35174	225	224	228	248	243	239	230	17	13	24	0	0	0	36865
3H - River Risk Management Project	186	7319	230	231	230	230	221	228	221	13	0	0	0	0	0	8924
3K - Central Plateau Risk Reduction	179	18443	237	224	225	199	183	176	179	13	0	0	0	0	0	19879
g. TOTAL DIRECT	1433	247338	1885	1900	1882	1875	1844	1819	1765	216	180	101	0	0	0	260805

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

CLASSIFICATION (When Filled In)									
CONTRACT PERFORMANCE REPORT FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES							FORM APPROVED OMB No. 0704-0188		
1. CONTRACTOR		2. CONTRACT			3. PROGRAM		4. REPORT PERIOD		
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract			a. NAME Plateau Remediation Contract		a. FROM (YYYY/MM/DD) 2019/01/28		
b. LOCATION (Address and ZIP Code) Richland, WA 99354		b. NUMBER DE-AC06-08RL14788		b. PHASE Base		b. TO (YYYY/MM/DD) 2019/02/24			
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE 2009/09/18 NO YES X					
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI
Current:	73,093	54,746	34,994	(18,347)	-25.1%	19,752	36.1%	0.75	1.56
Cumulative:	5,942,570	5,911,356	5,793,790	(31,215)	-0.5%	117,565	2.0%	0.99	1.02
	BAC	EAC	VAC in \$	VAC in %	TCPI				
At Complete:	6,433,783	6,321,085	112,698	1.8%	0.99				
Explanation of Variance/Description of Problem:									
<p>Current Period Schedule and Cost Variance: The current month (CM) negative schedule and cost variance is primarily due to project breakdown structure (PBS) RL-0011 due to the implementation of BCR-011C-18-005R2 approved in February 2019, which implemented the revised scope, cost, and schedule baseline for the completion of the RL-0011.C2 project as approved by DOE. The baseline change request (BCR) set the remaining historical budgeted cost of work scheduled (BCWS) equal to budgeted cost of work performed (BCWP) as of June 24, 2018, consistent with DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets guidance for establishing a revise "to go" baseline for projects that have experienced a Performance Baseline Deviation such that the project cannot be completed within its' existing performance goals. DOE's establishment of a new performance measurement baseline (PMB) for the RL-0011.C2 project and DOE's direction to CHPRC to implement it was documented by RL correspondence number 19-AMRP-0049 dated January 28, 2019, <i>Approval of Plutonium Finishing Plant Capital Asset Project 2 Project Completion, Baseline Change Request, BCR-011C-18-005R1</i>. The BCWS revisions reflected in BCR-011C-18-005R2 established a new "to go" baseline from the June 25, 2018, start date for re-planning of work through February 2019 fiscal month end were consistent with the DOE Baseline Change Proposal (BCP) which established the new DOE baseline for the RL-0011.C2 project. The revised baseline did not incorporate schedule delays experienced since the June 2018 starting point for planning the revised DOE project baseline for completion of the project. These delays have and continue to impact schedule performance. Schedule delays in February included the continued impacts of the unforeseen loss of Decontamination and Decommissioning (D&D) workers due to other Hanford Contractor hiring. Additionally, the project experienced a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities in February, where non-essential personnel were advised not to report to work or weather conditions preclude execution of work as planned.</p> <p>Also contributing to the negative schedule variance is PBS-0041 due to 324 Structural Modifications and the 324 Facility Modifications accounts. In January, Baseline Change Request (BCR), BCR-041-19-006R0, 324 Building Disposition Project Carryover Scope and Latent Conditions, incorporated the necessary budget for this scope. Within that BCR, the budgeted cost of work scheduled (BCWS) for this scope was planned in February as the project assumed the additional scope could not be planned within the current month. This has created an unfavorable current month schedule variance in February as the performance was taken in January. In addition, penetration sealing within the airlock was unable to begin as the project experienced a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were advised not to report to work.</p> <p>Cumulative Schedule Variance: The variance is within reporting thresholds.</p> <p>Cumulative Cost Variance: The variance is within reporting thresholds.</p>									
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 actions necessary.									
Cumulative Schedule: N/A									
Cumulative Cost: N/A									

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

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

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$112.7 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$176.0 million. For February, the project was 25.1 percent behind schedule and 36.1 percent under planned cost. Contract to date (CTD); the project was 0.5 percent behind schedule and 2.0 percent under planned cost.

There was no increase in the difference between the Contract Budget Base and the Total Allocated Budget on Format 3 since last month.

Two of the three BCRs implemented in the period impacted the PMB:

- BCR-011C-18-005R2, PFP CAP 2 Project Completion
- BCR-013-19-005R0, Remove Tritium Study Scope

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

Variance in Performance BAC and EAC: The variance at complete (VAC) between the BAC and EAC this month is a +\$112.7 million, +1.8% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

CPS - In Process		
	Total Authorized Unpriced Work	\$901,062
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	Grand Total Adjustments	\$901,062

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

Undistributed Budget Activity

BCR Number	Title	PBS	Fiscal Year	UB
N/A	N/A	N/A	2019	N/A

There was no change to UB in February.

Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
BCR-011C-18-005R2	<i>PFP CAP 2 Project Completion</i>	RL-0011, RL-0030	2019	N/A

There was no change in MR during February.

Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2019	N/A

There was no change to Fee during February.

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

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

Prepared by:
Project Control Staff

Date:
03/19/2019

Approved by:

Date:

** Per e-mail direction received December 6, 2017, from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. A contract alignment settlement has been reached and BCRs will be processed to align the PMB with the settlement values in March 2019.*

Appendix B

Project Services and Support (WBS 000)



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

M. A. Wright
Vice President for
Project Technical
Services

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

D. J. Henderson
Director of
Communications

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

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

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

This section is reported quarterly.

Appendix C

Capital Asset Projects

CH2MHILL
Plateau Remediation Company



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

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

CH2MHILL
Plateau Remediation Company



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

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

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

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

KEY ACCOMPLISHMENTS

RL-0011_C1 Accomplishments:

- Stabilization and implementation of new demolition requirements are complete and lower-risk debris disposition has resumed. After completing lower-risk demolition outside of Remote Mechanical A (RMA), glovebox HA-46 will be removed during higher-risk demolition. The higher-risk demolition, scheduled to begin in June 2019 is currently being planned and preparations for a second management assessment (MA) are in progress.

MAJOR ISSUES

Issue:

The Plutonium Finishing Plant (PFP) project has realized a loss of approximately 30 D&D workers due to opportunities provided by the Labor Asset Management Program offering Nuclear Chemical Operator (NCO) positions across the Hanford site. Ten of the D&D workers transferred to Washington River Protection Solutions, LLC (WRPS) in December, 10 in January, and the last eight are scheduled to leave in March. The loss of trained and qualified workers will cause a schedule loss of 10 weeks to the PFP project.

Corrective Action:

Work with Labor Relations and Human Resources to fill needed positions.

Status:

In response to the loss of staff and possible additional attrition, PFP has hired 41 D&D workers who will complete classroom training at Volpentest HAMMER Federal Training Center in north Richland with field mentoring training activities to follow. The first group of 31 D&D workers began training on December 3, 2018, and completed field mentoring training activities January 24, 2019. The second group of 10 D&D workers began training on January 28, 2019, and will finish field mentoring training activities March 21, 2019. To prepare new hire D&D workers for safe work activities at PFP, experienced workers and managers have been dedicated to bring new staff up to speed to resume demolition and debris loadout. Furthermore, an additional eight postings are expected to occur in the future.

Issue:

The project lacks adequate Radiological Control Technicians (RCTs) to complete work package development, mock-ups, and field work activities. Efforts to employ adequate RCTs, via contract or otherwise, have been exhausted. The project has not realized planned staffing support for ongoing activities at PFP.

Corrective Action:

CHPRC has teamed with WRPS to hire and train RCTs to fulfill sitewide resource needs.

Status:

The teaming companies have performed initial screening/aptnitude testing of applicants. Development of the RCT training course has been completed and the 25 chosen RCTs were given the start date of February 25, 2019. Allocation of RCT resources is subject to the availability and needs of the Company at the time of training completion, later this summer.

Issue:

Harsh weather has impacted PFP’s ability to complete scheduled debris disposition activities. Additionally, in February, there were a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were directed not to report to work.

Corrective Action:

The project has set up an account to collect weather impacts and will pursue a Baseline Change Request (BCR).

Status:

Work crews normally supporting decontamination and demolition activities have been reassigned to snow removal and weather mitigation activities. Demolition activities will resume after conditions improve.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

Risk Title Risk Owner	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0011/WBS-011.05.01.01.06 (CAP.1)				
Explanation of major changes to the project monthly spotlight chart:				
No major changes to the spotlight chart in February .				
Realized Risks (Risks that are currently impacting project cost/schedule)				
No realized risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in February .				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
No critical risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in February .				
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)				
No critical risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in February .				
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in February .				

CRITICAL PATH SCHEDULE

The PFP critical path schedule begins with debris disposition of the 234-5Z rubble piles, starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of Zones 2 and 7, with the exception of the drain line. Remote Mechanical C (RMC) process line, RMA process line demolition will begin after a second MA is completed, and concurrence granted by RL to resume higher-risk demolition activities. Working in parallel with RMA and RMC will be the completion of the basement of 234-5Z demolition and removal of HA-46. This leads to CD-4 declaration and confirmation of the completion worksheet. The CD-4 closeout completion milestone is scheduled for October 28, 2019.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	* Due Date	**Forecast Date	Status/ Comment
CAP.1	Removal of 174 gloveboxes from 234-5Z	11/30/2017	10/28/2019	The PFP project realized a loss of four weeks due to abnormally harsh winter weather in January and February. The CAP 1 project forecasted completion date has slipped to October 28, 2019.

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Nothing to report at this time.

DOE ACTIONS / DECISIONS

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

Appendix C.1

RL-0011.C1 – PFP D&D

(Removal of 174 Gloveboxes from 234-5Z)

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



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

February 2019
CHPRC-2019-02, 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

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_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2019 / 01 / 28												
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 02 / 24												
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18												
5. CONTRACT DATA																		
a. QUANTITY 1	b. NEGOTIATED COST 330,987	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 9,878	e. TARGET PRICE 340,865	f. ESTIMATED PRICE 344,857	g. CONTRACT CEILING 340,865	h. ESTIMATED CONTRACT CEILING 344,857											
6. ESTIMATED COST AT COMPLETION				7. AUTHORIZED CONTRACTOR REPRESENTATIVE														
MANAGEMENT ESTIMATE AT COMPLETION (1)		CONTRACT BUDGET BASE (2)		VARIANCE (3)		a. NAME (Last, First, Middle Initial) Underwood, Teresa												
a. BEST CASE 332,586						b. TITLE Prime Contract Compliance Manager												
b. WORST CASE 334,991						c. SIGNATURE												
c. MOST LIKELY 334,979		330,987		-3,992		d. DATE SIGNED (YYYYMMDD)												
8. PERFORMANCE DATA																		
CAPN.PBS Control Account.PARS 2 WBS (2)		CURRENT PERIOD				CUMULATIVE TO DATE				REPROGRAMMING ADJUSTMENTS			AT COMPLETION					
ITEM (1)		BUDGETED COST		ACTUAL COST WORK PERFORMED		VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED		VARIANCE		COST VARIANCE (12a) SCHEDULE VARIANCE (12b) BUDGET (13)				
		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)				BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
RL-0011 Nuclear Mat Stab & Disp PFP		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RL_0011_C1.02 Maintain Safe & Compliant PFP		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RL_0011_C1.05 Disposition PFP Facility		0	0	0	0	0	235,514	235,495	259,792	-19	-24,296	0	0	0	0	235,514	259,799	-24,284
RL_0011_C1.06 Project Management & Support		0	0	0	0	0	11,990	11,990	12,477	0	-487	0	0	0	11,990	12,477	-487	
RL_0011_C1.90 Usage Based Services Distributions -PBS RL-11		0	0	0	0	0	7,221	7,221	7,731	0	-510	0	0	0	7,221	7,731	-510	
RL_0011_C1.98 Ramp-up and transition		0	0	0	0	0	19,399	19,399	19,253	0	147	0	0	0	19,399	19,253	147	
RL_0011_C1.99 PBS RL-11 UBS, G-n-A, Direct Distrib		0	0	0	0	0	41,028	41,028	33,328	0	7,700	0	0	0	41,028	33,328	7,700	
b. COST OF MONEY		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c. GENERAL AND ADMINISTRATIVE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
d. UNDISTRIBUTED BUDGET																		
e. SUBTOTAL		0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,586	-17,434	
f. MANAGEMENT RESERVE															2,393			
g. TOTAL		0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545			
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																		
a. VARIANCE ADJUSTMENT																		
b. TOTAL CONTRACT VARIANCE															317,545	332,586	-15,041	

*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

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_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2019 / 01 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 02 / 24	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		ADJUSTMENTS			BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)					
35 - Business Services	0	0	0	0	0	60,427	60,427	52,580	0	7,847	0	0	0	60,427	52,580	7,847		
3B - PFP Closure Project	0	0	0	0	0	254,725	254,706	279,999	-19	-25,293	0	0	0	254,725	280,006	-25,281		
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
d. UNDISTRIBUTED BUDGET														0	0	0		
e. SUBTOTAL (Performance Measurement Baseline)	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,586	-17,434		
f. MANAGEMENT RESERVE														2,393				
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545				

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2019 / 01 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 02 / 24	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA															
WBS.Resp Org Group ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)											AT COMPLETION (15)	
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 MAR 2019 (4)	+2 APR 2019 (5)	+3 MAY 2019 (6)	+4 JUN 2019 (7)	+5 JUL 2019 (8)	+6 AUG 2019 (9)	FY19 END (10)	OCT 2019 (11)	NOV 2019 (12)	FY20-LC (13)	ATCOMPLETE (14)		
35 - Business Services	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
3B - PFP Closure Project	0	15441	0	0	0	0	0	0	0	0	0	0	0	0	15442
g. TOTAL DIRECT	0	15458	0	0	0	0	0	0	0	0	0	0	0	0	15459

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED

OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD			
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME MPB - RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2019/01/28			
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019/02/24			
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes		(YYYYMMDD) 2009 / 09 / 18			

Direct Projects									
5. Evaluation	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	0	0	0	0	0	0	0	0	0
Cumulative:	315,152	315,133	332,579	-19	-0.0%	-17,446	-5.5%	1.00	0.95
	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:	315,152	332,586	-17,434	-5.5%	0	2.74			

Explanation of Variance/Description of Problem:

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

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

Impact:
Impact: The RL-011.C1 project baseline completion date is November 19, 2016. The current schedule reflects a completion date of October 28, 2019.

The current RL-11 performance schedule indicates that the Plutonium Finishing Plant (PFP) project will achieve slab-on-grade by October 10, 2019. The regulators were notified in advance that the PFP Project would not meet the re-negotiated Tri-Party Agreement (TPA) milestone M-083-00A due date of September 30, 2017, for achieving slab-on-grade. In addition, the December 30, 2017, CD-4 date was not achieved. The PFP project realized a four week slip in February 2019, due to abnormally harsh winter weather. Work crews normally supporting demolition activities were reassigned to snow removal and weather mitigation activities.

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

Cost variance is not considered recoverable as there is only a small amount of scope remaining to complete the KPP.

Corrective Action:
None at this time

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

- Schedule Margin Analysis: There is no schedule margin associated with the RL-011.C1 capital asset account.
- IMS Data dictionary Changes: None in the month of February
- Forecast Schedule with No Baseline: None in the month of February
- UB Balance: None in the month of February
- Negative ACWP: Negative ACWP is related to timecard corrections for prior month mischarges.
- EAC Analysis: Best Case = \$332,586; Most Likely = \$334,979; Worst Case = \$334,991. The Best Case EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no use of management reserve. The Most Likely EAC is the EAC reported this month plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will remain at completion but all available management reserve is used (e.g., all identified risks realized). The Worst Case EAC is the ACWP plus the ETC or 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.
- Negative CV > VAC: Scope to perform size reduction efforts on the high gram glovebox removal efforts was estimated to be completed in a much shorter time frame with much fewer resources than originally planned causing the large cost variance. The EAC is reflective of the current approach to perform the remaining work scope.
- MR Transactions: None in the month of February
- Freeze Period Changes: None in the month of February
- Retroactive Changes: None in the month of February
- EVT Changes: None in the month of February

Prepared by: Eric Denton

3/13/2019

Approved by:

Date:

Appendix C.2

Capital Asset Project

RL-0011.C2 - Demolition of PFP Facilities



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

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Loadout of existing 234-5Z Facility debris was slowed in February due to abnormally harsh winter weather. Demolition crews were reassigned to snow removal and cold weather mitigation activities. This has caused a four-week slip in schedule. At this time, approximately 56 percent of the existing debris pile has been shipped to the Environmental Restoration Disposal Facility (ERDF) for disposal. Low-risk demolition is scheduled to resume in March. The higher-risk demolition, currently forecasted to begin in June 2019 is being planned, and preparations for a second Management Assessment (MA) are in progress.

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

KEY ACCOMPLISHMENTS

RL-0011_C2 Accomplishments:

- Began field mentoring activities with 10 newly hired Decontamination and Decommissioning (D&D) workers.
- Cleared debris from ion exchange exhausters that will be used during higher-risk demolition.
- Loaded eight containers for shipping to ERDF.
- Preparations for a MA are being made for the higher-risk demolition in June 2019. The subcontract proposal has been approved and the final award process will be completed in March.

MAJOR ISSUES

Issue:

The Plutonium Finishing Plant (PFP) project has realized a loss of approximately 30 D&D workers due to opportunities provided by the Labor Asset Management Program offering Nuclear Chemical Operator (NCO) positions across the Hanford site. Ten of the D&D workers transferred to Washington River Protection Solutions, LLC (WRPS) in December, 10 in January, and the last eight are scheduled to leave in March. The loss of trained and qualified workers will cause a schedule loss of 10 weeks to the PFP project.

Corrective Action:

Work with Labor Relations and Human Resources to fill needed positions.

Status:

In response to the loss of staff and possible additional attrition, PFP has hired 41 D&D workers who will complete classroom training at Volpentest HAMMER Federal Training Center in north Richland with field mentoring training activities to follow. The first group of 31 D&D workers began training on December 3, 2018, and completed field mentoring training activities January 24, 2019. The second group of 10 D&D workers began training on January 28, 2019, and will finish field mentoring training activities March 21, 2019. To prepare new hire D&D workers for safe work activities at PFP, experienced workers and managers have been dedicated to bring new staff up to speed to resume demolition and debris loadout. Furthermore, an additional eight postings are expected to occur in the future.

Issue:

The project lacks adequate Radiological Control Technicians (RCTs) to complete work package development, mock-ups, and field work activities. Efforts to employ adequate RCTs, via contract or otherwise, have been exhausted. The project has not realized planned staffing support for ongoing activities at PFP.

Corrective Action:

CHPRC has teamed with WRPS to hire and train RCTs to fulfill sitewide resource needs.

Status:

The teaming companies have performed initial screening/aptitude testing of applicants. Development of the RCT training course has been completed and the 25 chosen RCTs were given the start date of February 25, 2019. Allocation of RCT resources is subject to the availability and needs of the Company at the time of training completion, later this summer.

Issue:

Harsh weather has impacted PFP's ability to complete scheduled debris disposition activities. Additionally, in February, there were a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were directed not to report to work.

Corrective Action:

The project has set up an account to collect weather impacts and will pursue a Baseline Change Request (BCR) to address associated impacts.

Status:

Work crews normally supporting decontamination and demolition activities have been reassigned to snow removal and weather mitigation activities. Demolition activities will resume after conditions improve.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- Increased Confidence
- No Change
- Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0011/WBS-011.OA																			
Explanation of major changes to the project monthly stoplight chart: No major changes to the stoplight chart in February.																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
PFP-P2-002: Weather Impacts During 235-Z Debris Disposition	Inclement weather, including moderate winds, low or high temperatures and thunderstorms will result in in-scope unplanned work and result in schedule impacts to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 8 days			Risk Event: In February, there were a significant number of work delays, early releases, and cancellations due to adverse weather conditions on the Hanford Site and surrounding communities, where non-essential personnel were directed not to report to work <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Plan for 80% total operation efficiency.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Risk Action Assessment: Work crews normally supporting demolition and demolition support activities have been reassigned to snow removal and weather mitigation activities. Demolition activities will resume after conditions improve.	Risk recovery action(s)	FC Date	%	Plan for 80% total operation efficiency.	Ongoing	N/A									
Risk recovery action(s)	FC Date	%																	
Plan for 80% total operation efficiency.	Ongoing	N/A																	
PFP-P-014: Bump and Roll, Labor Assets Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit Employees Affecting Productivity	Plutonium Finishing Plant (PFP) Hanford Atomic Metal Trades Council (HAMTC) labor resources are unavailable or unqualified due to the bump and roll, LAMP, or other job postings, resulting in schedule impacts to the project. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 128 days			Risk Event: Thirty D&D workers have been hired by other projects on the Hanford Site and have left PFP. The process to hire and train new D&D workers has been initiated. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communication and coordination with other projects, contractors, and unions to reduce or eliminate the impact of the bump and roll process.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 1)</td> <td>1/24/19</td> <td>100%</td> </tr> <tr> <td>Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 2)</td> <td>3/21/19</td> <td>75%</td> </tr> </tbody> </table> Risk Action Assessment: The first group of 31 new D&D workers completed training/field mentoring activities January 24, 2019. The second group of 10 new D&D workers started training January 28, 2019, and will complete field mentoring activities March 21, 2019.	Risk recovery action(s)	FC Date	%	Communication and coordination with other projects, contractors, and unions to reduce or eliminate the impact of the bump and roll process.	Ongoing	N/A	Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 1)	1/24/19	100%	Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 2)	3/21/19	75%			
Risk recovery action(s)	FC Date	%																	
Communication and coordination with other projects, contractors, and unions to reduce or eliminate the impact of the bump and roll process.	Ongoing	N/A																	
Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 1)	1/24/19	100%																	
Hire and train additional D&D workers as needed to perform demolition work at PFP. (Group 2)	3/21/19	75%																	
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
No critical risks in February.																			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																			
No high risk threat value risks in February.																			
FY2019 Risk Triggers (Risk could be realized in FY2019)																			
PFP-P-004: Stop Work From Concerned Workers	Concerned workers result in a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project. Risk Handling Strategy: Accept Probability: Very Likely (>90%)			Risk Event: During resumption of PFP demolition activities, an increase in stop works could result in delays. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>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>	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																	

	Worst Case Impacts: \$0, 52 days			Mitigation Assessment: No major changes in February . Increased communication and worker involvement has been implemented to avoid confusion and concern in an effort to minimize stop works.												
PFPP-P-007: Demolition Equipment Reliability and Modification	Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment impact the demolition of PFP. Equipment modification, leasing, or replacement will be required, resulting in cost and schedule impacts. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$1 million, 48 days	● ↔		Risk Trigger: Equipment failures result in delays to fieldwork. <table border="1" style="width: 100%;"><thead><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr></thead><tbody><tr><td>Repurpose other owned equipment on-site.</td><td>Ongoing</td><td>N/A</td></tr><tr><td>Develop and maintain min/max inventory of spares.</td><td>Complete</td><td>100%</td></tr><tr><td>Perform planned preventative maintenance on equipment.</td><td>Ongoing</td><td>N/A</td></tr></tbody></table> Mitigation Assessment: No major changes in February . All mitigations have been sufficient to maintain equipment in working condition.	Mitigation action(s)	FC Date	%	Repurpose other owned equipment on-site.	Ongoing	N/A	Develop and maintain min/max inventory of spares.	Complete	100%	Perform planned preventative maintenance on equipment.	Ongoing	N/A
Mitigation action(s)	FC Date	%														
Repurpose other owned equipment on-site.	Ongoing	N/A														
Develop and maintain min/max inventory of spares.	Complete	100%														
Perform planned preventative maintenance on equipment.	Ongoing	N/A														
PFPP-P5-006: Additional Soil Removal is Required	Prior to the placement of the cover cap, the additional soil added for contamination control is required to be dispositioned, resulting in cost and schedule delays to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 54 days	● ↔		Risk Trigger: Additional soil, above planned value, is required to be removed due to contamination or regulatory concerns. <table border="1" style="width: 100%;"><thead><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr></thead><tbody><tr><td>Engage early with RL to identify a path forward associated with the additional soil.</td><td>11/9/18</td><td>100%</td></tr><tr><td>Collect and provide radiological mapping data to RL.</td><td>TBD</td><td>TBD</td></tr></tbody></table> Mitigation Assessment: No major changes in February . Continued communication with RL on required soil removal. No additional soil above planned quantity is required at this time. RL has requested radiological data to help them determine no additional soil disposition than planned is required.	Mitigation action(s)	FC Date	%	Engage early with RL to identify a path forward associated with the additional soil.	11/9/18	100%	Collect and provide radiological mapping data to RL.	TBD	TBD			
Mitigation action(s)	FC Date	%														
Engage early with RL to identify a path forward associated with the additional soil.	11/9/18	100%														
Collect and provide radiological mapping data to RL.	TBD	TBD														
Unassigned Risks (Pending ownership of identified risks/opportunities)																
No unassigned risks identified in February .																

CRITICAL PATH SCHEDULE

The PFP Critical Path schedule begins with the resumption of debris disposition of the 234-5Z rubble piles starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of Zones 2 and 7, with the exception of the drain line. Remote Mechanical C process line demolition, Remote Mechanical A process line demolition, loadout of glovebox HA-46, in parallel with completion of the basement of 234-5Z demolition will begin after a second MA, and concurrence is obtained to resume high-risk demo from RL. The 234-5Z demolition is projected to complete August 12, 2019. The 236-Z Canyon demolition will then resume with completion scheduled for October 10, 2019, meeting the requirements for the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) *Milestone M-083-00A – PFP Facility Transition and Selection Disposition Activities*. Completion of demolition is followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities completing in January 2020.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	* Due Date	**Forecast Date	Status/ Comment
RL-011.C2	Completion of Demolition of all PFP Facilities.	8/31/2018	12/30/2019	The PFP project realized a loss of four weeks due to abnormally harsh winter weather in January and February. Completion of demolition of all PFP facilities has slipped to December 30, 2019. Loadout of the existing debris remains at 56 percent of the total debris pile shipped to ERDF for disposal.

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

**Forecast date reflects CD-4 due date without DOE contingency.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

DOE ACTIONS / DECISIONS

Working with RL on CD-4 closure actions.

Appendix C.2

RL-0011.C2 - Demolition of PFP Facilities

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



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

February 2019
CHPRC-2019-02, Rev. 0
Contract DE-AC07-08RL14788
Deliverable C.3.1.3.1 - 1

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

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

FORM APPROVED

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2019 / 01 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 02 / 24	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18	

WBS.Resp Org Group	CURRENT PERIOD						CUMULATIVE TO DATE					REPROGRAMMING			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		ADJUSTMENTS			BUDGETED	ESTIMATED	VARIANCE	
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	(14)	(15)	(16)	
3B - PFP Closure Project	28,417	20,898	3,051	-7,519	17,848	83,724	65,070	113,789	-18,654	-48,719	0	0	0	104,441	152,884	-48,443	
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)	28,417	20,898	3,051	-7,519	17,848	83,724	65,070	113,789	-18,654	-48,719	0	0	0	104,441	152,884	-48,443	
f. MANAGEMENT RESERVE														13,535			
g. TOTAL	28,417	20,898	3,051	-7,519	17,848	83,724	65,070	113,789	-18,654	-48,719	0	0	0	117,977			

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE										DOLLARS IN THOUSANDS						Form Approved OMB No. 0704-0188	
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA			2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM RL_0011_C2 PFP Demolition Capital Asset Project a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009			4. REPORT PERIOD a. FROM: 2019/01/28 b. TO: 2019/02/24							
5. CONTRACT DATA			a. ORIGINAL NEGOTIATED COST 51,683	b. NEGOTIATED CONTRACT CHANGE \$0	c. CURRENT NEGOTIATED COST (A + B) \$51,683	d. ESTIMATED COST AUTH UNPRICED WORK \$0	e. CONTRACT BUDGET BASE (C + D) \$51,683	f. TOTAL ALLOCATED BUDGET \$117,977	g. DIFFERENCE (E - F) (\$66,293)								
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2019		k. CONT COMPLETION DATE 9/30/2019			l. EST COMPLETION DATE 9/30/2019							
6. PERFORMANCE DATA			BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)														
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)	UNDISTRIB BUDGET (17)	TOTAL BUDGET (18)
			+1 Mar-19 (4)	+2 Apr-19 (5)	+3 May-19 (6)	+4 Jun-19 (7)	+5 Jul-19 (8)	+6 Aug-19 (9)									
a. PM BASELINE (BEGIN OF PERIOD)	55,307	0	0	0	0	0	0	0	0	0	6,090	29,182	19,407	628	0	0	55,307
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																	
BCR-011C-18-005R2, PFP CAP 2 Project Completion															49,134	0	49,134
c. PM BASELINE (END OF PERIOD)	83,724	28,417	4,646	4,811	5,439	4,187	1,601	34	0	0	6,090	29,182	19,407	628	49,134	0	104,441
7. MANAGEMENT RESERVE																	13,535
8. TOTAL																	117,977

The ~\$49M increase in the performance baseline of the RL-0011.C2 Project was a result of the incorporation of the baseline change approved by the DOE Assistant Secretary for Environmental Management on January 11, 2019. DOE's approval of the baseline change was consistent with DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, guidance for a Performance Baseline deviation, projects that cannot meet the established cost and schedule baseline parameters, and the DOE approving authorities' determination to establish a new Performance Baseline for the RL-0011.C2 Project. This change revised the project completion date to July 2020 and the TPC to \$192M and included the addition of \$4,805.3K (burdened) of scope in FY2018 and \$44,329.1K (burdened) in FY2019 for a net increase of \$49,134.4K to the RL-0011.C2 Project. The FY2018 and FY2019 scope changes through February 2019 were incorporated by a point adjustment. No change to the Contract Budget Base was made in February. The Contract Budget Base will be adjusted in the future to incorporate the changes resulting from the DOE/CHPRC Global Settlement of Changes documented in Plateau Remediation Contract Modification 684, dated January 9, 2019, and the anticipated definitization of CHPRC's Change Proposal for the PRC extension through FY2019.

CONTRACT PERFORMANCE REPORT

FORMAT 4 - STAFFING

Dollars in: FTE

FORM APPROVED

OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2019 / 01 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 02 / 24	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA															
WBS.Resp Org Group ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 MAR 2019 (4)	+2 APR 2019 (5)	+3 MAY 2019 (6)	+4 JUN 2019 (7)	+5 JUL 2019 (8)	+6 AUG 2019 (9)	FY19 END (10)	OCT 2019 (11)	NOV 2019 (12)	FY20-LC (13)	ATCOMPLETE (14)		
3B - PFP Closure Project	128	2956	148	150	150	147	148	150	155	107	111	16	0	4237	
g. TOTAL DIRECT	128	2956	148	150	150	147	148	150	155	107	111	16	0	4237	

CLASSIFICATION (When Filled In)										
CONTRACT PERFORMANCE REPORT										
FORMAT 5 - Explanations and Problem Analysis										
FORM APPROVED									OMB No. 0704-0188	
1. CONTRACTOR		2. CONTRACT			3. PROGRAM			4. REPORT PERIOD		
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract			a. NAME RL_0011_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2019/01/28		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788			b. PHASE			b. TO (YYYYMMDD) 2019/02/24		
c. TYPE CPAF		d. SHARE RATIO			c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2009 / 09 / 18					
Direct Projects										
5. Evaluation		Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:		28,417.2	20,898.4	3,050.5	-7,518.8	-26.5%	17,847.8	85.4%	0.74	6.85
Cumulative:		83,724.0	65,070.3	113,789.4	-18,653.7	-22.3%	-48,719.1	-74.9%	0.78	0.57
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		104,441.3	152,884.0	-48,442.7	-46.4%	0	1.01			
Explanation of Variance/Description of Problem:										
Current Month:										
Schedule Variance: The current month favorable cost variance is primarily due to BCR-011C-18-005R2, which implemented a revised scope, cost and schedule baseline for the completion of the RL-0011.C2 project. The BCR set the remaining historical BCWs equal to BCWP as of June 24, 2018, consistent with DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, and DOE approving authorities' determination to establish a new Performance Baseline as documented by 18-AMRP-0062, dated February 27, 2018, Performance Baseline Deviation Notification of Plutonium Finishing Plant (PFP) Demolition Project – RL-0011.C2. The BCWS reflected in the BCR from the June 25, 2018 start date for replanning of work through February 2019 fiscal month end was incorporated into the CHPRC PMB as a point adjustment in Fiscal Month February 2019. The new BCWS as reflected in the revised PMB and corresponding BCWP earned as represented in BCR-011C-18-005R1 was implemented in February 2019. Additionally, the PFP project realized a four week slip in schedule for February 2019 due to abnormally harsh winter weather. Work crews normally supporting demolition activities were reassigned to snow removal and weather mitigation activities.										
Cost Variance: The current month favorable cost variance is due to BCR-011C-18-005R2, which implemented a revised scope, cost and schedule baseline for the completion of the RL-0011.C2 project. The BCR set the remaining historical BCWs equal to BCWP as of June 24, 2018, consistent with DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, and DOE approving authorities' determination to establish a new Performance Baseline as documented by 18-AMRP-0062, dated February 27, 2018, Performance Baseline Deviation Notification of Plutonium Finishing Plant (PFP) Demolition Project – RL-0011.C2. The BCWS reflected in the BCR from the June 25, 2018 start date for replanning of work through February 2019 fiscal month end was incorporated into the CHPRC PMB as a point adjustment in Fiscal Month February 2019. The new BCWS as reflected in the revised PMB and corresponding BCWP earned as represented in BCR-011C-18-005R1 was implemented in February 2019.										
Cumulative to Date:										
Schedule Variance: The cumulative unfavorable schedule variance is due to a loss of 20 D&D workers due to hiring by Washington River Protection Solutions, LLC (WRPS). Half of the D&D workers transferred to WRPS in December and the other half in January. In response to this loss of staff, PFP has hired an additional 31 D&D workers who began training on December 3, 2018. Classroom training at Volpentest HAMMER Federal Training Center completed January 11, 2019. Field mentoring training activities were completed January 24, 2019. To prepare new hire D&D workers for safe work activities at PFP, experienced workers and managers have been dedicated to bring new staff up to speed to resume demolition and debris lead-out. This impact resulted in 10 weeks of schedule slip. An abnormally harsh winter has been experienced in January and February. R time was granted for an average of 30 hours. When workers did report, snow removal was a focus, and further cold conditions would not allow field work. The combination of these impacts resulted in 4 weeks of schedule slip. PFP also has realized 11 stop works from June 25, 2018 to November 30, 2018, that resulted in an impact to 34 work days.										
Cost Variance: The cumulative negative cost variance is associated with MSA resources arriving to support PFP demolition that were planned as P/Q shift support. Additionally, Readiness Assessment activities lagged due to a delay in the start of 236-Z Demolition and increased requirements to show readiness resulting in increased costs due to additional time and effort required from subcontracted and direct labor resources. The apportioned project management activities (i.e. project oversight and planning) and support activities are ongoing, while a delay in the discrete field work is resulting in minimal apportioned BCWP. Demolition mobilization activities took longer than originally assumed because of recommendations made during the readiness assessment and purchasing unplanned PBS fixative to support 236-Z demolition. In addition, significant winter weather impacts (i.e., snow, wind, freezing rain, etc.) have been recognized on the Hanford Site. Site closures, freezing temperatures and significant snowfall that required clearing of the demolition zone rather than performing physical demolition on the facilities while a constant staff provides demolition support services is a contributing factor. Unplanned Management Assessment efforts for the 234-5Z and 291-Z facilities took longer than originally assumed. Impacts associated with the Stop Work that was initiated by the HAMTC union leadership on November 11, 2017 “associated with concerns over events both inside and outside of the facility.” The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As the project gets further into the demolition phase of the PRF Canyon, increased utilization of Personnel Protective Equipment to align with the original plan as well as increased material procurements to align with the scope being performed (i.e., P-100 filters, Labounty Shear, additional fixative, etc.) are also contributing to this variance. An adjustment to the General & Administrative (G&A) Rate for FY2017 resulted in a reduction to the Performance Measurement Baseline (PMB) of \$463K. Finally, impacts from a contamination event that occurred on Friday, December 15, 2017 swing shift where RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a “speck” of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis was conducted and resumption actions identified. Also, the project experienced a loss of 20 D&D workers due to hiring by Washington River Protection Solutions, LLC (WRPS). Half of the D&D workers transferred to WRPS in December and the other half in January. In response to this loss of staff, PFP has hired an additional 31 D&D workers who began training on December 3, 2018. Classroom training at Volpentest HAMMER Federal Training Center completed January 11, 2019. To prepare new hire D&D workers for safe work activities at PFP, experienced workers and managers have been dedicated to bring new staff up to speed to resume demolition and debris lead-out. PFP also has realized 11 stop works from June 25, 2018 to November 30, 2018, that resulted in an impact to 34 work days.										
This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
Impact:										
Schedule Impact: Completion of all demolition activities are forecast to occur in October 2019. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of November 30, 2017 was not met.										
Cost Impact: A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017. Partially offset by working one shift during demolition of 236-Z, 242-Z and 291-Z building and stack rather than two as planned in the PMB. Durations for the remainder of the 234-5Z and PRF demolitions activities have been adjusted to incorporate increased durations as a result of expected recovery actions from the contamination event that occurred in December.										

Corrective Action:

NOTE: All corrective actions and resumption pre-start items identified in the management assessment are have been completed, and the DOE has provided concurrence for the resumption of lower risk work. The Stop Work issued by CHPRC management on demo activities has been lifted and resumption of low risk debris disposition has been initiated.

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

The following items are addressed, as applicable:

1. Schedule Margin Analysis: BCR-011C-18-005R2 implemented a revised scope, cost and schedule baseline for the completion of the RL-0011.C2 project. The BCR included 89 days of schedule margin.
2. IMS Data dictionary Changes: BCR-011C-18-005R2 implemented a revised scope, cost and schedule baseline for the completion of the RL-0011.C2 project.
3. Forecast Schedule with No Baseline: No change in the month of February
4. UB Balance: In February, BCR-011C-18-005R2 implemented a revised scope, cost and schedule baseline for the completion of the RL-0011.C2 project. The BCR set the remaining historical BCWs equal to BCWP as of June 24, 2018, consistent with DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, and DOE approving authorities' determination to establish a new Performance Baseline as documented by 18-AMRP-0062, dated February 27, 2018, Performance Baseline Deviation Notification of Plutonium Finishing Plant (PFP) Demolition Project – RL-0011.C2. The BCWS reflected in the BCR from the June 25, 2018 start date for replanning of work through February 2019 fiscal month end was incorporated into the CHPRC PMB as a point adjustment in Fiscal Month February 2019. The point adjustment included removal of the BCWP claimed against the BCWR in the PMB from Fiscal Months July 2018 through January 2019. The new BCWS as reflected in the revised PMB and corresponding BCWP earned as represented in BCR-011C-18-005R1 was implemented in February 2019.
5. Negative ACWP: No change in the month of February
6. EAC Analysis: Best Case = \$152,884; Most Likely = \$166,419; Worst Case = \$170,788. The Best Case EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no use of management reserve. The Most Likely EAC is the EAC reported this month plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will remain at completion but all available management reserve is used (e.g., all identified risks realized). The Worst Case EAC is the ACWP plus the ETC or BCWR if greater plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will be eroded at completion and all available management reserve is used (e.g., all identified risks realized), plus the scope identified in the Trend Log that is not in the EAC. The Best/Worst and Most Likely EAC values are documented in the Format 1 Report.
7. Negative CV > VAC: No change in the month of February
8. MR Transactions: No change in the month of February
9. Freeze Period Changes: No change in the month of February
10. Retroactive Changes: No change in the month of February
11. EVT Changes: BCR-011C-18-005R2 implemented a revised scope, cost and schedule baseline for the completion of the RL-0011.C2 project.

Prepared by: Eric Denton

Date: 03/13/19

Approved by:

Date: