

Monthly Performance Report

December 2018

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

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

CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

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Date Published
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P.O. Box 1600
Richland, Washington 99352

APPROVED

By Janis D. Aardal at 2:33 pm, Jan 24, 2019

Release Approval

Date

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CH2MHILL
Plateau Remediation Company



L. Ty Blackford
President and Chief
Executive Officer

Monthly Performance Report

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

December 2018
CHPRC-2018-12, Revision 0

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EXECUTIVE SUMMARY

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

- **Waste and Fuels Management Project (W&FMP):** The project completed the technical evaluation of the design proposal to modify the Maintenance and Storage Facility (MASF) to simulate the Waste Encapsulation and Storage Facility's (WESF) G Cell, canyon, and truck port to test equipment, develop procedures, and train personnel for the transfer of capsules to dry storage. At WESF, the team completed the maintenance inspection of the 15-ton canyon crane with maintenance and engineering staff, and are currently evaluating inspection results. At T Plant, crews placed the seventh sludge transport and storage container (STSC).
- **Soil and Groundwater Remediation Project (S&GRP):** The project successfully completed cleaning the inner surfaces of four injection well feed lines to reduce resistance in the lines and increase efficiency. This was done by running devices known as "pigs" through the lines without stopping the flow of the treated groundwater. Crews completed construction of wells 199-K-236 and 199-H3-21 and initiated drilling at well 199-H3-12.
- **Plutonium Finishing Plant (PFP) Closure Project:** The PFP team finished loading demolition debris from the south side of the main processing facility and began focusing efforts on loading out debris from the north side of the facility. Forty new Decontamination and Decommissioning (D&D) workers were hired and began training.
- **K Basins Operations (KBO):** The Sludge Removal Project filled the seventh STSC and shipped it to T Plant.
- **River Risk Management Project (RRMP):** Workers installed a rail cart system to help transport large equipment to support waste removal from the 324 Building. They used the system to move the remote excavator from a contamination-controlled area into an airlock, where workers then used remote-operated cranes to move and install the excavator arm into B Cell. Radiological cleanout of a floor drain trench in the 324 Building airlock was successfully completed. At the 324 Building mock-up, workers placed a slab of grout to replicate the floor of the real facility's B Cell.
- **Central Plateau Risk Management Project (CPRM):** CPRM workers developed and deployed an innovative tool to remotely explore and collect data from potentially hazardous areas of the REDOX. The robotic device identified a safe path for entry and exit for future cleanup efforts. Workers passed the halfway point in grouting Plutonium Uranium Extraction Plant (PUREX) Tunnel 2.

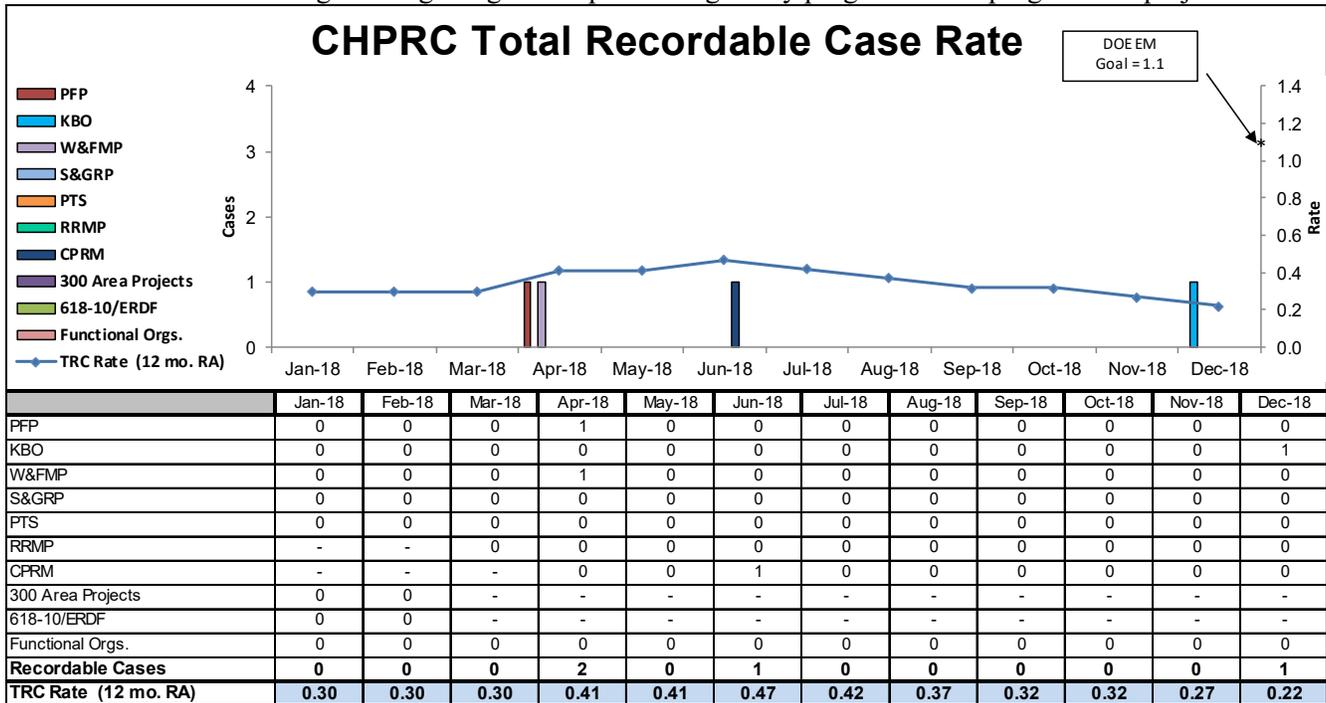


Workers from the Central Plateau Risk Management team developed and deployed an innovative tool to remotely explore and collect data from potentially hazardous areas of the Reduction Oxidation Facility (REDOX) for the first time in nearly two decades.

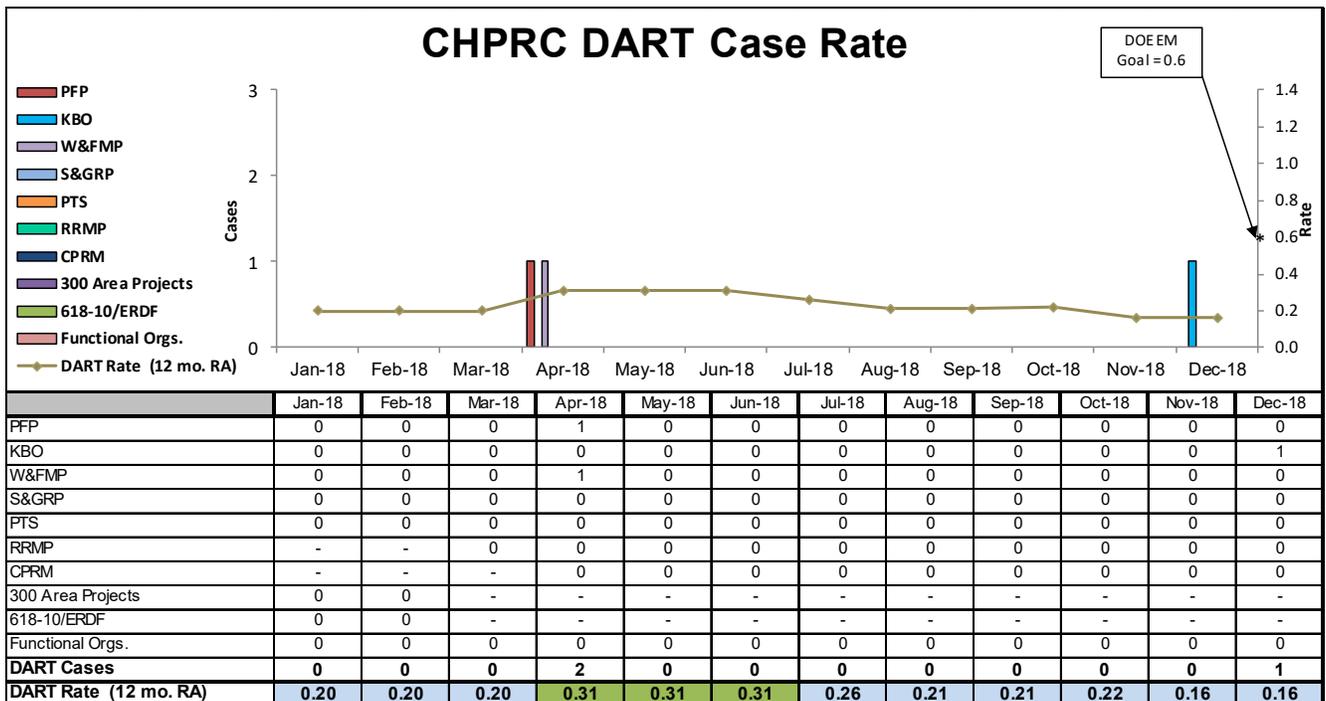
- The President's Zero Accident Council (PZAC) meeting for December was hosted by Business Services. The three main ideas were:
 - Blue Christmas.
 - Return to Sender.
 - Blue Suede SAFETY Shoes.
- Five "*Thinking Target Zero*" (TTZ) bulletins were published to convey important occupational, safety, health, and environmental messages:
 - Winter Personal Protective Equipment (PPE).
 - Fall Prevention.
 - Environmental Management System Wood Smoke.
 - Voluntary Protection Program Self-Assessment.
 - Outdoor Winter Activities.
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
 - Three Lessons Learned:
 - Project Planning, Design, Execution and Startup Lessons Learned for the Sludge Removal Project (CHPRC).
 - First Aid Injury Highlights the Importance of Hierarchy of Controls (offsite).
 - Space Heater Use Safety Updates.
 - Injuries.
 - Weekly ethics moments.
 - Vehicle events.
 - CHPRC recreation policy.
 - Special Safety Bulletin regarding the importance of performing inspections on your PPE prior to using it.
 - Radiological protection.
 - Sentinel update.
 - Security reminder.
 - Training and work delays.
 - Property management.
 - Wintering bald eagles.
 - OPEX best practice.
 - Year-end dosimeter exchange.
 - Use of Hanford dosimeters.
 - Welcome back! Safety re-focus.
 - Exertion in cold weather.
 - Security badge reminder.
 - Refresh your work habits.
 - Refresh your work space.
 - Safety Alert – offsite.

TARGET ZERO PERFORMANCE

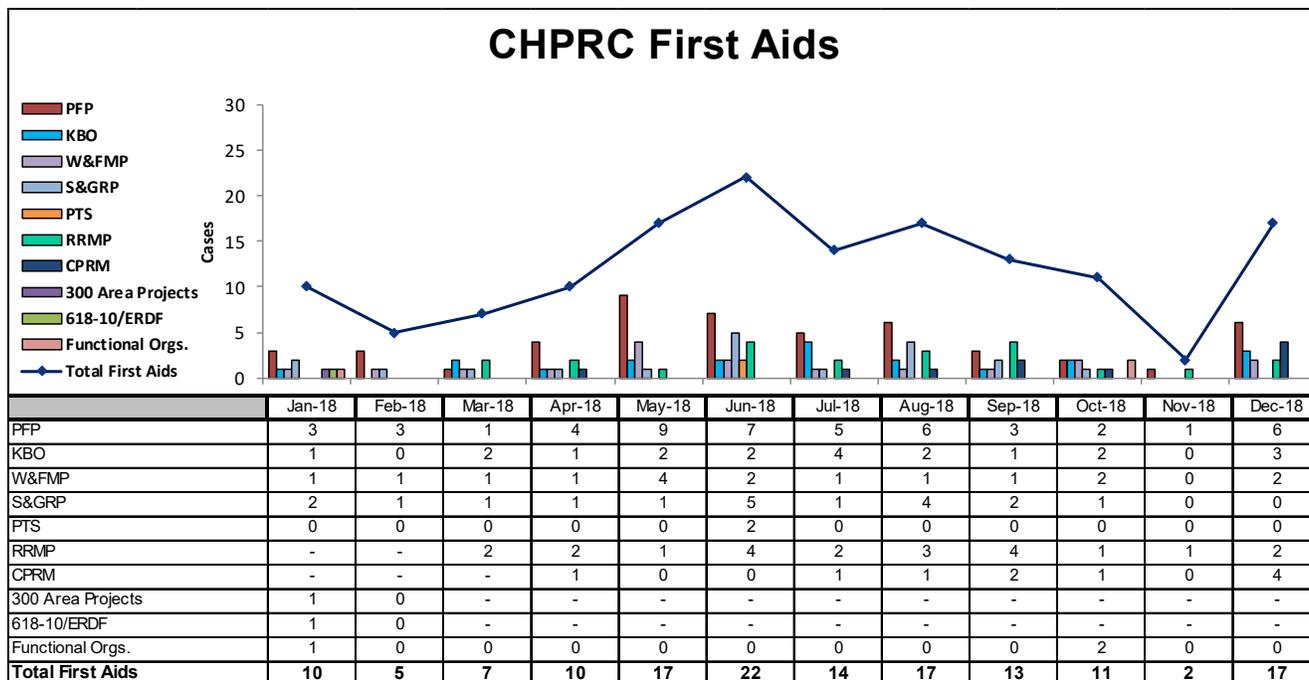
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.22 is based on a total of four Recordable injuries. December had one reported Recordable case.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.16 is based upon a total of three Days Away cases. December had one reported DART case.



First Aid Case Summary: CHPRC reported seventeen first aid cases in December. The contributors were seven sprains/strains/pains, seven miscellaneous (burns, rashes, repetitive motion, etc.) and three abrasions/bruises/contusions injuries. There were no self-treat cases reported in December.

KEY ACCOMPLISHMENTS

Projects

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

Project Services and Support

- 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.

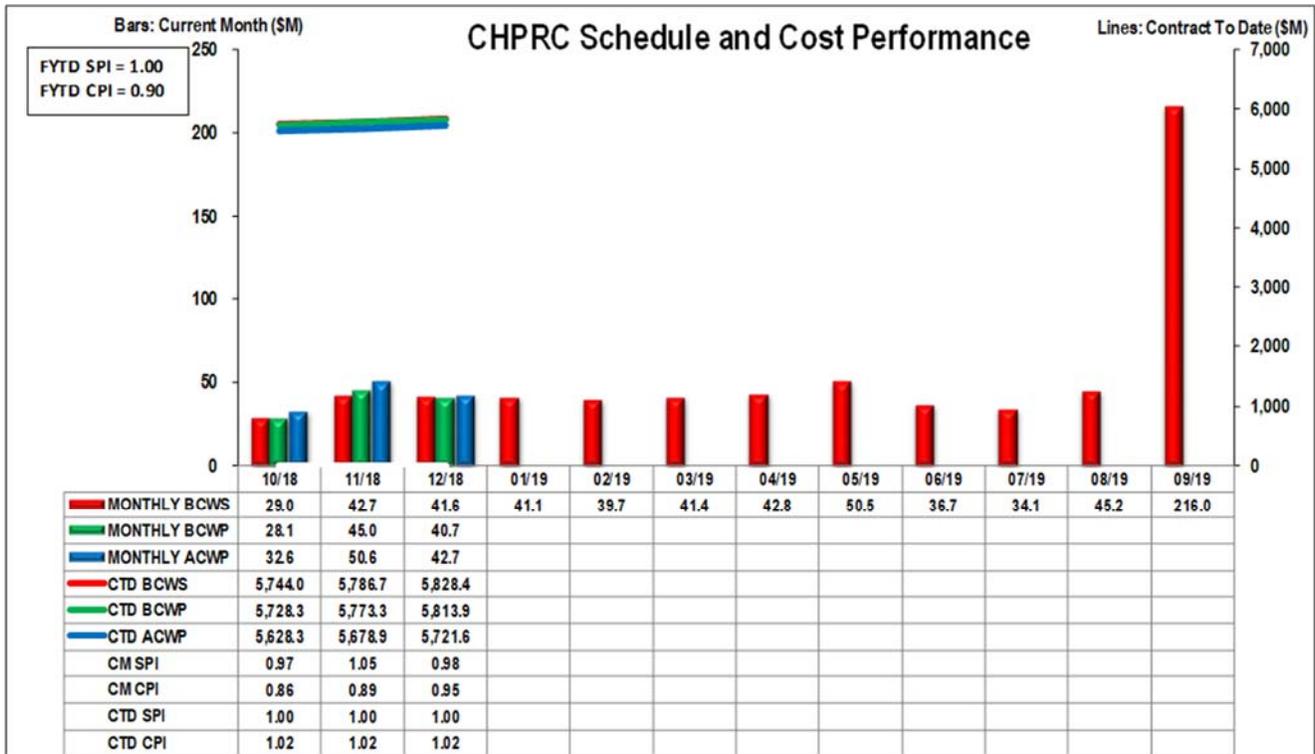
Corrective Action:

Proceed with implementation of the technical amendment to 10 CFR 851; however, compliance by the directed deadline of January 17, 2019, is unachievable.

Status:

Engineering is evaluating impacts and requisite effort to obtain compliance.

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 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 PFF	1.2	2.6	5.4	1.4	(2.9)	994.1	982.8	1156.3	(11.2)	(173.5)	1,006.0	1,216.7	(210.7)
RL-0012 - SNF Stabilization & Disposition	1.4	1.4	1.3	0.0	0.2	748.1	747.8	717.8	(0.3)	30.0	762.0	731.4	30.6
RL-0013 - Solid Waste Stab & Disposition	12.8	11.4	10.9	(1.4)	0.5	1379.1	1377.0	1280.7	(2.1)	96.3	1,562.0	1,462.9	99.1
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	9.3	9.4	8.5	0.1	0.9	1552.0	1551.9	1498.4	(0.1)	53.5	1,717.2	1,663.6	53.7
RL-0040 - Nuc Fac D&D - Remainder	6.9	7.1	6.7	0.2	0.4	506.9	512.2	487.2	5.3	25.0	576.8	554.6	22.3
RL-0041 - Nuc Fac D&D - RC Closure Project	9.9	8.7	9.8	(1.3)	(1.2)	621.2	615.3	558.7	(5.9)	56.6	723.7	667.7	55.9
RL-0042 - Nuc Fac D&D - FFTF Project	0.1	0.1	0.2	0.0	(0.0)	26.9	26.9	22.4	(0.0)	4.5	28.2	24.1	4.1
Total	41.6	40.7	42.7	(1.0)	(2.1)	5,828.4	5,813.9	5,721.6	(14.4)	92.3	6,375.9	6,321.0	55.0

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

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

Performance Summary

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$55.0 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$118.3 million. For December, the project was 2.3 percent behind schedule and 5.1 percent over planned cost. Contract to date (CTD); the project was 0.2 percent behind schedule and 1.6 percent under planned cost.

The current month (CM) schedule variance is within thresholds.

The CM negative cost variance is primarily due to project breakdown structure (PBS) RL-0011 unplanned training costs for 25 new D&D workers, repairs, and maintenance to high-risk demo equipment, and continuous planning and mockups of higher-risk work. Additionally, unplanned costs to support implementation of schedule efficiency, process improvements, and a learning curve associated with revised project requirements contributed to the cost variance.

Also contributing to the negative variance is PBS-0041 delays in 324 Building Disposition Project procurements. These delays are caused by design changes for the B Cell filter frames and the water delivery system as well as a delay in awarding the contract for the waste boxes. The negative schedule variance is also related to the delayed start in performing basin floor surveys and settled solid sampling under WBS 41.02.21.02.03, 105KW Basin Characterization due to the priority of sludge removal activities; and actual progress was understated in 041.02.34.01, 100K Remaining Waste Sites due to an error in calculation of Rules of Performance for excavation work performed on 100-K-47:1. Rules of performance weighting will be revised in January.

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	65.6	4.3
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	18.3	1.9
RL-0012	15-D-401 Sludge Retrieval Project	11.3	0.0	11.3
RL-0013	Waste and Fuels Management Project	173.5	158.1	15.4
RL-0013	Management of Cesium and Strontium Capsules	6.6	3.2	3.4
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	127.7	5.2
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	71.4	10.4
RL-0041	Nuclear Facility D&D, River Corridor	148.3	125.5	22.9
RL-0042	Fast Flux Test Facility Closure	4.3	2.3	2.0
Total Estimate at Complete		649.0	572.2	76.8
Scope Pending Change Management				
RL-0013	Waste and Fuels Management Project	0.0	0.1	(0.1)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	1.6	(1.6)
Total Incremental Work Scope		0.0	1.7	(1.7)
Total Fiscal Year Spend Forecast				
RL-0011	Nuclear Materials Stabilization and Disposition	70.0	65.6	4.3
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	18.3	1.9
RL-0012	15-D-401 Sludge Retrieval Project	11.3	0.0	11.3
RL-0013	Waste and Fuels Management Project	173.5	158.2	15.4
RL-0013	Management of Cesium and Strontium Capsules	6.6	3.2	3.4
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	127.7	5.2
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	73.0	8.8
RL-0041	Nuclear Facility D&D, River Corridor	148.3	125.5	22.9
RL-0042	Fast Flux Test Facility Closure	4.3	2.3	2.0
Total		649.0	573.8	75.1

Funds/Variance Analysis

For December, there was no change to fiscal year (FY) 2019 projected funding of \$649 million; however, \$15.6 million of funding moved from RL-0040 to RL-0041 per RL direction. The spending forecast increased \$5.9 million from last month, which includes an increase in RL-0011 for new RCTs, an increase in RL-0041 for additional 100K ancillary facilities D&D preparation and 105KE ISS design modifications and contract mobilization, with a decrease in RL-0030 for 100-HR-3 well realignments.

BASELINE CHANGE REQUESTS

In December 2018, CHPRC approved and implemented seven Baseline Change Requests (BCRs) into the PMB budget. Six of the seven BCRs impacted the PMB. Each change request is identified in the table below:

Change Request #	Title	PBS	Summary of Change
BCR-030-19-001R0	<i>Modify Approach to FY2019 Cumulative Impact Evaluation</i>	RL-0030	This BCR accelerated preparation of the Cumulative Impact Evaluation (CIE) Approach document, provides for the procurement and installation of a computing system (Tellus replacement), and initiates the CIE execution modeling activities in FY2019 into the PMB. This BCR increased the PMB value by \$3,439K.
BCR-030-19-005R0	<i>Complete 200-EA-1 RI/FS Work Plan and SAP</i>	RL-0030	This BCR incorporated RL-0030 work scope into the PMB, which was authorized by the RL Contracting Officer via letter 18-AMRP-0182 Contract No. DE-AC06-08RL14788 – Approval of Fiscal Year 2019 Post-Contract Performance Baseline and Work Authorization. This BCR increased the PMB value by \$299K.
BCR-030-19-006R0	<i>Additional FY2019 Work Authorization RL-0030</i>	RL-0030	This BCR incorporated RL-0030 work scope into the PMB, which was authorized by the RL Contracting Officer via letter 1804435A, 11804117.2, Additional FY19 Work Authorization. This BCR increased the PMB value by \$311K.
BCR-040-19-002R0	<i>Removal of 202-S Combustibles Materials</i>	RL-0040	This BCR implemented work scope associated with the discovery of combustible materials in 202-S (REDOX) Canyon. This BCR increased the PMB value by \$1,006K.
BCR-041-19-003R0	<i>Additional FY2019 100-K Work Authorization –100K Demo</i>	RL-0041	This BCR incorporated scope to perform D&D for additional 100K Ancillary Facilities, which was authorized by the RL Contracting Office by email, B.S. Valadez, RL, to L. J. Horton, CHPRC, Additional FY19 Work Authorization. This BCR increased the PMB value by \$3,115K.
BCR-041-19-004R0	<i>Additional FY2019 100-K Work Authorization – 105KE ISS</i>	RL-0041	This BCR incorporated additional authorized scope for 105KE Interim Safe Storage (ISS). The additional 100KE ISS scope was authorized by the RL Contracting Officer by email, B.S. Valadez, RL, to L.J. Horton, CHPRC, Additional FY19 Work Authorization. This BCR increased the PMB value by \$2,247K.
BCRA-PRC-19-007R0	<i>HPIC Updates December 2018</i>	000, RL-0011, RL-0013, RL-0030, RL-0040, RL-0042	This BCR incorporated December FY2019 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

The allocated (distributed) budget increased by \$10,418K.

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 December.

Management Reserve Activity

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

There was no change to MR in December.

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 December.

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

December 2018 Summary of Changes

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	Contract Period Total	Total PMB
November 2018 Estimate										
PMB	3,391,477	391,653	471,323	504,826	485,028	470,649	2,323,478	650,577	6,365,531	6,365,531
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	713,855	6,670,415	6,670,415
December 2018 Change										
PMB										
Change to PMB	0	0	0	0	0	0	0	10,418	10,418	10,418
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	10,418	10,418	10,418
December 2018 Estimate										
PMB	3,391,477	391,653	471,323	504,826	485,028	470,649	2,323,478	660,995	6,375,950	6,375,950
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	724,273	6,680,833	6,680,833

Changes to/Utilization of Management Reserve in December 2018

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	FY2019	Total
November 2018 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
December 2018 MR Changes/Utilization									
RL-0011	0	0	0	0	0	0	0	0	0
RL-0012	0	0	0	0	0	0	0	0	0
RL-0013	0	0	0	0	0	0	0	0	0
RL-0030	0	0	0	0	0	0	0	0	0
RL-0040	0	0	0	0	0	0	0	0	0
RL-0041	0	0	0	0	0	0	0	0	0
RL-0042	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
December 2018 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

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 - 12/31/2018					
Reporting Category					
	\$ Value	%	Goal %		
SB	\$1,573.3	55.71%	49.3%	PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
SDB	\$283.2	10.03%	8.2%		
SWOB	\$289.7	10.26%	7.5%	CHPRC Contract Value:	\$5,824.8
HUB	\$90.9	3.22%	2.2%	SB actual:	\$1,573.3
VOSB	\$242.8	8.60%	3.5%	SB Performed %:	27.01%
SDVO	\$153.4	5.43%	1.3%	PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed	
NAB	\$75.6	2.68%	N/A	CHPRC Contract Value:	\$5,824.8
Large	\$749.3	26.53%	N/A	CHPRC Self Performed:	\$3,231.6
UNK	\$0.9	0.03%	N/A	CHPRC Self Performed %:	55.48%
GOVT	\$5.0	0.18%	N/A		
GOVT CONT	\$483.2	17.11%	N/A		
EDUCATION	\$0.1	0.01%	N/A		
NONPROFIT_	\$4.1	0.15%	N/A		
FOREIGN	\$8.3	0.29%	N/A		
Total	\$2,824.2	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 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



K. A. Wooley
Vice President for
Plutonium Finishing Plant
Closure Project

December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Loadout of existing 234-5Z Facility debris continued throughout December. Approximately 41 percent of the existing debris pile has been shipped to the Environmental Restoration Disposal Facility (ERDF) for disposal. The higher-risk demolition scheduled to begin in May 2019 is currently being planned, and preparations for a second management assessment are in progress.

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	806 m ³	17,763 m ³

EMS Objectives and Target Status

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

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A

	Current Month	Rolling 12 Month	Comment
Total Recordable Injuries	0	1	N/A
First Aid Cases	6	50	<p>12/3/2018 - Employee was in the process of walking into Conex HFM-7 (RBA Line) and tripped over a plastic bag containing tools lying on the floor. Employee suffered a minor sprain/strain to the left knee. Employee states this incident re-aggravated a previous work-related incident/injury to the same knee. (25018)</p> <p>12/3/2018 - Employee was going up a set of stairs at the entrance of MO2184 and tripped, contacting the ground with both knees. (25017)</p> <p>12/4/2018 - The employee was sitting in an all-terrain vehicle south of 234-5Z operating the remote control for a water cannon during the loadout process. When the employee twisted, they felt a “tweak” in the back but did not think anything about it. The next morning there was discomfort in the right middle back (rib cage area). Upon arrival to work, the employee reported the event to their Field Work Supervisor (FWS). The employee was taken to HPMC. The employee returned to work with no work restrictions. (25020)</p> <p>12/4/2018 - Employee was exposed to printer toner as printers were being disposed of within an ERDF macro waste container. A printer cartridge fell out of one of the printers and broke during this process. This resulted in a dust cloud that the employee was exposed to. The employee was taken to HPMC for evaluation, where they reported a bad taste in their mouth and a dry mouth and throat. Employee was released to work by HPMC without restriction. Employee was seen again by HPMC on 12/6/2018 for a personal condition and as a follow-up to this event, and was released to work without restriction. (25019)</p> <p>12/18/2018 - Employee was involved in the radiological surveys that are required after an elevated wind event at the Plutonium Finishing Plant (PFP). While performing these surveys, it was noted that there was an air sampler that had blown over. Employee was shocked as they placed their hand on the air sampler for stabilization while leaning over to find an identification number. Shock was to the right hand only. Supervisor was immediately notified, the area was secured, and the Radiological Control Technician (RCT) exited the area. Employee was taken to HPMC for evaluation and was released to work without restriction. (25032)</p> <p>12/27/2018 - Employee had just completed tarping/untarping approximately six ERDF cans and was in the process of tarping (covering) the last can. The employee was pulling the tarp along the top of the can, when the tarp began to fall into the can. The employee caught the falling tarp and began pulling it back up and out of the can when they reported hearing a “pop” and feeling pain coming from their left hand. The employee was taken to HPMC for evaluation and released to work without restriction. (25037)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments:

- Loaded and shipped existing 234-5Z rubble debris. Approximately 41 percent of existing debris has been shipped in total. Rubble debris Zones 3, 4, 5, and 7 have been successfully dispositioned with Zone 2 scheduled to be completed in February.

MAJOR ISSUES

Issue:

During November, the PFP project realized a loss of 10 Decontamination and Decommissioning (D&D) workers due to hiring by Washington River Protection Solutions, LLC (WRPS), another Hanford contractor. Ten more D&D workers are scheduled to leave in January. It is anticipated that this loss in trained and qualified workers will cause a 10-week schedule impact to the PFP project.

Corrective Action:

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

Status:

In response to this loss of staff, PFP has hired an additional 25 D&D workers who began training on December 3, 2018. Classroom training at HAMMER is scheduled to complete January 11, 2019. These D&D workers will then move to the on-the-job portion of their training at 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-0011/WBS-011.OA																			
Explanation of major changes to the project monthly spotlight chart: No major changes to the spotlight chart in December .																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
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, 64 days	●		Risk Event: Twenty-five D&D workers have been hired to other projects on the Hanford Site and will be leaving PFP. The process to hire and train new D&D workers has been initiated. <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>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.</td> <td>1/17/19</td> <td>50%</td> </tr> </tbody> </table> Risk Action Assessment: No major changes in December . Offers were made to new D&D workers, and training began on December 3, 2018.	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.	1/17/19	50%						
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.	1/17/19	50%																	
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
No critical risks in December .																			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																			
No high risk threat value risks in December .																			
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%) Worst Case Impacts: \$0, 52 days	●		Risk Event: During resumption of PFP demolition activities, an increase in stop works could result in delays. <table border="1" style="width: 100%;"> <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 Assessment: No major changes in December . Increased communication and worker involvement has been implemented to avoid confusion and concern in an effort to minimize stop works.	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																	
PFP-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 December . 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																	
PFP-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 Trigger: Additional soil, above planned value, is required to be removed due to contamination or regulatory concerns.															

Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 54 days			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 Assessment: No major changes in December. Continued communication with RL on required soil removal. No additional soil above planned quantity is required at this time. DOE has requested radiological data to help them determine no additional soil disposition than planned is required.						
Unassigned Risks (Pending ownership of identified risks/opportunities)						
No unassigned risks identified in December.						

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled (BCWS)	Budgeted Cost of Work Performed (BCWP)	Actual Cost of Work Performed (ACWP)	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	1.2	2.6	5.4	1.4	112.3%	(2.9)	-111.5%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Variance: (+\$1.4M/+112.3%)

The CM favorable schedule variance is due to performance taken on the completion of rubble debris disposition in Zones 3, 4, 5, and 7. Efforts implementing process improvements have contributed to this month's demolition resumption and debris disposition progress.

CM Cost Variance: (-\$2.9M/-111.5%)

The current month negative cost variance is predominantly due to unplanned training costs for 25 new D&D workers, repairs and maintenance to high-risk demo equipment, and continuous planning and mockups of higher-risk work. Additionally, unplanned costs to support implementation of schedule efficiency, process improvements, and a learning curve associated with revised project requirements contributed to the cost variance.

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	994.1	982.8	1,156.3	(11.2)	-1.1%	(173.5)	-17.7%	1,006.0	1,216.7	60.4	(210.7)

Numbers are rounded to the nearest \$0.1 million

Contract-to-Date (CTD) Schedule Variance: (-\$11.2M/-1.1%)

The CTD schedule variance is within threshold.

CTD Cost Variance: (-\$173.5M/-17.7%)

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 Health Physics Technicians 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 (HDPE) 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 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 and hoses than originally planned for 242-Z entries. This is a result of fewer fieldwork team members being required to perform hands-on work in 242-Z because of the confined space and number of suits (three suits per day versus five). In addition, there were recognized efficiencies where crews were able to complete process vacuum removal in 291-Z with less effort than originally planned. Characterization results indicated lower levels of hold-up than planned, which allowed more efficient piping removal. Isolations of the 291-Z Facility 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 baseline change request (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, Plutonium Reclamation Facility contamination events, and Mission Support Alliance (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: (-\$210.7M/-20.9%)

The unfavorable Variance at Completion (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 September 2019. The EAC is reflective of resumption activities, impacts of craft personnel LAMPing to WRPS, and revised demolition approach implementation.

The VAC does not include the revised demolition approach pending the Independent Cost Estimate/External Cost Review (ICE/ECR).

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	65.6	4.3
RL-0011 - Total	70.0	65.6	4.3

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

Fiscal year (FY) 2019 expected required funding for PBS RL-0011 is \$65.6 million to allow for continuation of demolition activities to achieve slab-on-grade. Increased EAC is reflective of schedule impacts due to the activities to replenish RCT staffing support and purchases for contaminated leased equipment. 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 management assessment and concurrence is obtained to resume high-risk demo from RL. The 234-5Z demolition is projected to complete July 16, 2019. The 236-Z Canyon demolition will then resume with completion scheduled for September 16, 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 December 2019.

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		9/16/2019	There has been additional schedule loss of five days since November. This was a result of incorporation of further revisions to the revised demo approach.

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

None at this time.

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The sixth Sludge Transport & Storage Container (STSC) was shipped to T Plant on November 26, 2018. The seventh STSC was filled and shipped to T Plant on December 17, 2018.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Dart Injuries	1	1	12/3/2018: Employee was descending the stairs and stepped wrong, causing the following foot to get caught and employee to fall and sprain their ankle. (25016)
Recordable Injuries	0	0	N/A
First Aids	1	16	12/24/2018: Employee was sliding chlorine bottles and experienced neck pain. (25036)
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 sixth STSC was shipped to T Plant on November 26, 2018.
- The seventh STSC was filled and shipped to T Plant on December 17, 2018.

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 in the baseline. When EC-250 bulk sludge removal is completed following STSC 11 (mid-March), engineering will more accurately forecast the total number of STSCs required to complete the sludge removal campaign.

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 NCOs and RCTs by February 19, 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 December.																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
STP-152: Attrition, Acquisition, & Retention of Qualified Employees	Improving job markets/funding uncertainties or site wide 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 Triggers: 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: #d3d3d3;"> <th style="width: 80%;">Mitigation action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>Monitor employee job satisfaction to evaluate/maintain morale.</td> <td>Ongoing</td> <td>TBD</td> </tr> <tr> <td>Actively pursue filling open positions and train/qualify personnel.</td> <td>Ongoing</td> <td>TBD</td> </tr> <tr> <td>Establish enhanced work schedule. (KWD7442)</td> <td>02/19/19</td> <td>50</td> </tr> </tbody> </table> <p>Mitigation Assessment: Attrition of qualified personnel continued in December. 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 are aggressively backfilling open positions. Although training and qualification takes longer than desired, both organizations are expecting to have fully trained and qualified staff to support an enhanced work shift by February 19, 2019. The 16-day slip associated with establishing the enhanced work schedule is at direction of KBO vice president to align with initiation of first STSC (10) following T Plant crane outage.</p>	Mitigation action(s)	FC Date	%	Monitor employee job satisfaction to evaluate/maintain morale.	Ongoing	TBD	Actively pursue filling open positions and train/qualify personnel.	Ongoing	TBD	Establish enhanced work schedule. (KWD7442)	02/19/19	50			
Mitigation action(s)	FC Date	%																	
Monitor employee job satisfaction to evaluate/maintain morale.	Ongoing	TBD																	
Actively pursue filling open positions and train/qualify personnel.	Ongoing	TBD																	
Establish enhanced work schedule. (KWD7442)	02/19/19	50																	
STP-153: Sludge Engineered Container End Point Criteria	ECF-100KR2-12-0040 Calculation for 105-KW Substructure Demolition Rubble ERDF Compliance specifies the volume of residual sludge that is acceptable to leave in ECs following sludge removal operations. It is possible that the endpoint 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: #d3d3d3;"> <th style="width: 80%;">Mitigation action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>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>1/17/19</td> <td>95</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> </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 endpoint 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 will be submitted to RL by January 17, 2019. This submittal date slipped 17 days from November due to delays in getting internal review/approval to Data Safety Analysis (DSA)/Technical Safety Requirement (TSR) comment incorporation.</p>	Mitigation 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).	1/17/19	95	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
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Unmitigated Risk Impacts	Assessment		Comments																			
	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>Mitigation 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>2/19/19</td> <td>50</td> </tr> <tr> <td>Complete bulk sludge removal from EC-250, which will facilitate establishment of KE Basin DE sludge density. (KWD9000)</td> <td>3/15/19</td> <td>50</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. (KWD9000)</td> <td>3/29/19</td> <td>5</td> </tr> <tr> <td>Issue Final Sludge Density Evaluation, establishing total number of STSC necessary to complete sludge removal.</td> <td>3/29/19</td> <td>20</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, the project will provide an initial evaluation/recommendation to more efficiently disposition the remaining sludge. The final evaluation will occur upon completion of sludge removal from EC-250, forecast for mid-March 2019.</p>	Mitigation 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)	2/19/19	50	Complete bulk sludge removal from EC-250, which will facilitate establishment of KE Basin DE sludge density. (KWD9000)	3/15/19	50	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. (KWD9000)	3/29/19	5	Issue Final Sludge Density Evaluation, establishing total number of STSC necessary to complete sludge removal.	3/29/19	20
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Issue Final Sludge Density Evaluation, establishing total number of STSC necessary to complete sludge removal.	3/29/19	20																				
<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 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>Mitigation 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. (KWD90116)</td> <td>2/14/19</td> <td>50</td> </tr> <tr> <td>Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90121)</td> <td>2/28/19</td> <td>10</td> </tr> </tbody> </table> <p>Mitigation Assessment: During December, 100K Closure personnel continued to collect and containerize (double barrel fuel canister) high-dose material that will likely have to be placed into EC-230. Material will be placed into EC-230 and removed from the 105KW Basin via STSCs.</p>	Mitigation 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. (KWD90116)	2/14/19	50	Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90121)	2/28/19	10						
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Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90121)	2/28/19	10																				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																						
No critical risks identified in December.																						
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																						
No high threat value risks identified in December.																						
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 fiscal year (FY) 2019 during operations campaign.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish a production control center to facilitate maximum efficiency integrating SRP operations and maintenance activities.</td> <td>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. (No Activity ID)</td> <td>1/31/19</td> <td>90</td> </tr> </tbody> </table>	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. (No Activity ID)	1/31/19	90						
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Unmitigated Risk Impacts	Assessment		Comments																		
	Month	Trend																			
RL-0012/WBS-012																					
			<p>Mitigation Assessment: No major changes in December. 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 has determined that the sludge removal campaign personnel will be placed on a five day work week (minimum), effective February 19, 2019.</p>																		
<p>STP-108: STP Annex Equipment and ECRTS/Ancillary System Reliability</p>	<p>Required corrective maintenance on the STP annex and the ECRTS 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%)</p> <p>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 Maintenance and Storage Facility (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 (RAM) 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>3/25/19*</td> <td>50</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. 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> <p><i>*Date was revised due to higher priority 105KW work activities.</i></p>	Mitigation action(s)	FC Date	%	Conduct full-scale testing at the Maintenance and Storage Facility (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 (RAM) analysis.	Complete	100	Modifications to the skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90091)	3/25/19*	50
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Unassigned Risks (Pending ownership of identified threats/opportunities)																					
No unassigned risks identified in December .																					

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	1.4	1.3	0.0	3.4%	0.2	12.2%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (+\$0.0M/+3.4%)

The variance is within reporting thresholds.

CM Cost Performance (+\$0.2M/+12.2%)

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	748.1	747.8	717.8	(0.3)	-0.0%	30.0	4.0%	762.0	731.4	13.6	30.6

Numbers are rounded to the nearest \$0.1 million

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

The variance is within reporting thresholds.

CTD Cost Performance (+\$30.0M/+4.0%)

The variance is within reporting thresholds.

Variance at Completion (+\$30.6M/+4.0%)

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	18.3	1.9
Incremental Scope Pending Change Management	0.0	0.0	0.0
Expense – Subtotal	20.1	18.3	1.9
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	18.3	13.2

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

Fiscal Year (FY) 2019 funding for project breakdown structure (PBS) RL-0012 is \$31.4 million. FY2019 funding aligns with the RL Integrated Priority List (IPL). 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 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		10/08/2019	On Schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

None currently identified.

Section C

Solid Waste Stabilization and Disposition (RL-0013)

CH2MHILL
Plateau Remediation Company



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

December 2018
CHPRC-2018-12, 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 December reporting period, November 26 – December 23, 2018, Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. The River Risk Management Project operated the Environmental Restoration Disposal Facility (ERDF) and continued document preparation for the Integrated Disposal Facility (IDF) permits.

This month:

- For the Management of Cesium and Strontium Capsules (W-135) Project, the Waste Encapsulation and Storage Facility (WESF) Modifications Preliminary Design Review focus for the month is on equipment interface requirement and heating, ventilation, and air conditioning (HVAC) upgrades. Engineers completed a facility walk down to validate wall penetration locations. Final design review is expected to be performed when Cask Storage System (CSS) final design comment incorporation is mature enough to lock down interfaces to the facility. Maintenance and Storage Facility (MASF) mockup facility technical evaluations of the mockup structure design proposals have been completed and transmitted to procurement for award. The mockup facility will simulate the G Cell, canyon and truck port. The facility will be used to test equipment, develop procedures, and train personnel. CSS final design review comments have been collated by the subject matter and transmitted to. CHPRC is reviewing the Capsule Storage Area (CSA) contractor proposals for the excavation of utility test pits received on December 18, 2018.
- The sludge receipt team received the sixth and seventh shipment of sludge from the 100K West Reactor Basin at T Plant and loaded empty Sludge Transport and Storage Container (STSC) 9 for shipment to 100K.

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	40%
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	75%
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	19%

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	2	17	12/12/2018 – W&FMP employee was walking up the stairs and appeared to step wrong when they heard their right knee make a popping sound. At the time, the employee did not appear to have any negative effects. However, the pain worsened as the day went on while ascending and descending stairs. (25024) 12/18/2018 – ERDF employee sprained a finger while opening a truck door latch. The employee was examined and released to work without restriction. (25030)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- o The Part A Permit Application for the Low Level Burial Grounds (LLBG) Green Island was provided to Ecology for review on December 20, 2018.

13.02 Capsule Storage & Disposition

- o Performed decontamination of the K-3 ventilation stem registers in the canyon. This will allow ventilation flow testing in support of the W-135 project.

13.03 Canister Storage Building (CSB)

- o Completed operations HVAC programmable logic controller (PLC) component testing in the field.
- o Completed 23 Preventative Maintenance (PM) packages.

13.06 Transuranic (TRU) Repackaging

- o Completed and returned fiscal year to date (FYTD) – 65.3 cubic meters of transuranic (TRU/M) waste.

13.07 Waste Receiving and Processing (WRAP)

- o Completed scheduled operations, Radcon, safety inspections, HVAC controller cabinet maintenance, calibration of Dwyer instruments, and air compressor inspection.
- o Completed 201 surveillances and 16 PM packages.
- o Shipped one drum from WRAP to ERDF.

13.08 T Plant

- o Completed annual Treated Effluent Disposal Facility generator sampling at 225WA.
- o Completed 487 surveillances and 33 PM packages.

Sludge Receipt

- o Completed repair of Cell 15L leak detector cable and nitrogen hose.
- o Received the seventh STSC (W-420), which was weighed and placed in cell 15L for interim storage.

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

- o Completed scheduled operations and Radcon inspections, security testing, container movements from 2403WC and 2404WA to 2403WE, Sentinel briefing (new Radcon access control software), circuit verifications for 480V motor starters at mixed waste trenches (MWTs) and 286W backflow preventer PM/testing.
- o Completed installation of stack ladder.
- o Completed 278 surveillances and 16 PM packages.
- o Shipped one 1800TL and one Super 7A from CWC to Perma-Fix Northwest (PFNW) in two shipments.
- o Received 15 standard waste boxes (SWBs) from PFWN to CWC in five shipments.
- o Received seven drums and one SWB from Pacific Northwest National Laboratory (PNNL) into CWC SA-1 in one shipment.

13.15 TRU Disposition

- o Completed enhancement of acceptable knowledge of the TRU waste streams RLWAR-03.
- o Continuing enhancement work on waste stream RL325-01; work has also commenced on RLGEV-01.

13.16 Offsite Spent Nuclear Fuel Disposition

- o Maintained coordination of offsite spent nuclear fuel disposition.

13.21 Mixed Waste Disposal Trenches

- o Completed 118 surveillances.
- o Received three boxes from PFWN into MWT 31 in one shipment.

13.24 Management of Cesium and Strontium Capsules Project

- o Continued with the final WESF Modifications Design. Engineers completed a facility walk down to validate wall penetration locations.
- o The CSA contractor proposals for the excavation of utility test pits were received on December 18, 2018. Proposals are being reviewed. The test pits are required to determine the integrity and location of existing firewater pipelines.

13.25 Capsules Interim Storage Operations

- o The CSS final design comment dispositions are scheduled to be completed by the end of January.

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

- o Received 12,053 tons of waste for disposal in December.
- o Received 44,497 tons of waste for disposal FYTD.
- o Received 119 shipments (1,147 tons) of Plutonium Finishing Plant (PFP) waste and used the new enhanced radiological controls during disposal operations.

13.12 Integrated Disposal Facility (IDF)

- o Care & Custody, completed December monthly inspections, quarterly inspections, and three storm even inspections.
- o IDF Operational Readiness/Resource Conservation and Recovery Act (RCRA) Permit Modifications
 - Initiated 60 percent design for the facility modifications and site infrastructures.
 - Initiated discussions between CHPRC, RL, DOE Office of River Protection (ORP), Washington River Protection Solutions LLC (WRPS), and Ecology to collect requirements that will better define the development of the IDF Risk Budget Tool.
 - Initiated development of RCRA Permit Addenda K, Post-Closure and Addenda I, Inspection.

- Reviewed Groundwater Engineering Report to support development of the Addenda D, Groundwater Monitoring Plan.
- Continued work on Addenda A, Part A; Addenda C, Process Information; Addenda G, Training; Addenda E, Security; Addenda H, Closure Plan; and Addenda B, Waste Analysis Plan and the waste acceptance criteria to support IDF RCRA permit modifications.

Project Technical Services Support

- o Received contractor proposals for NR-1 Reactor Surface Prep. Awaiting approvals to proceed.
- o Received contractor proposals for W-135 Project Utility Line Investigation. Contract awarded to Ojeda Business Venture (OBV). Commenced pre-construction and pre-mobilization activities.

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. Specific comments on the process information permit addendum have not yet been received from Ecology. Ecology has announced that CIS process information comments are scheduled to be provided in January 2019.

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 is awaiting 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 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:

Discussions are in process with WRPS ETF personnel regarding options for acceptance of the tank liquid contents. Concurrently, an analysis is in progress to determine additional options for disposal of the TK-100 contents. Planning efforts are underway to use an ion-exchange module to reduce the Cs-137 inventory, thereby allowing shipment of the liquid to the ETF. A work package has been prepared and passed through a Hazard Review Board. Tentative date for performance of the work will be late January/early February pending favorable weather conditions.

Issue:

It was determined by dynamometer that the WESF truck port cover block measured weight is 30,900 pounds, which is 3 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 (3 percent).

Corrective Action:

Agreed with RL to perform a planned engineering lift in accordance with ASME B30.2-2016.

Status:

Path agreed upon with RL Programs and RL Safety. Part of the path includes contacting the crane vendor to discuss known issues with this model of crane and to locate any recalls, etc. Additionally, other actions have been identified that must take place prior to lifting cover block.

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. 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.

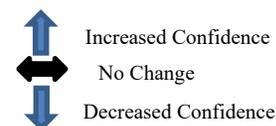
Status:

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: No major changes to the stoplight chart in the month of December.																		
Realized Risks (Risks that are currently impacting project cost/schedule)																		
WSD-CSA-007: Delays in CSS Design Impact PDSA	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. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$0K, 96 days			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. Additionally, The PDSA development cannot complete until CSS design is complete.														
				<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>2/18/19</td> <td>50</td> </tr> <tr> <td>Submit PDSA to DOE for approval.</td> <td>5/24/19</td> <td>0</td> </tr> </tbody> </table>	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.	2/18/19
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Review CSS final design and incorporate into PDSA.	2/18/19	50																
Submit PDSA to DOE for approval.	5/24/19	0																
Risk Action Assessment: No significant changes in December. The design contractor submitted the CSS final design to CHPRC for review in November. Review comments were provided to the design contractor for disposition and resolution. Final design includes revision to the Hastelloy emissivity value for strontium capsules.																		

Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)

No critical risks identified in **December**.

High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)

<p>WSD-013B: TRU Waste Volumes or Characteristics - Processing</p>	<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" data-bbox="898 380 1572 428"> <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 December. 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																				
<p>WSD-097: Major Equipment Failure – T Plant</p>	<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%) 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" data-bbox="898 842 1572 911"> <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 December. 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, is currently forecasted to start in January. 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																				
<p>WSD-136: CWC/WRAP Components Fail</p>	<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%) 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" data-bbox="898 1199 1572 1398"> <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>Obtain spare parts for the fire alarm control units (FACU) via deactivation of old FACUs.</td> <td>3/18/2019</td> <td>0</td> </tr> <tr> <td>Conduct fieldwork for 2727W deactivation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Conduct fieldwork for MO433 deactivation.</td> <td>3/18/2019</td> <td>10</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 December. 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 FACU spare parts are being obtained through the deactivation of MO433, for which the FMP is complete.</p>	Mitigation Action(s)	FC Date	%	Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A	Obtain spare parts for the fire alarm control units (FACU) via deactivation of old FACUs.	3/18/2019	0	Conduct fieldwork for 2727W deactivation.	Complete	100	Conduct fieldwork for MO433 deactivation.	3/18/2019	10	Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A
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Conduct fieldwork for MO433 deactivation.	3/18/2019	10																				
Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A																				

<p>WSD-CSA-006: Ecology Temporary Authorization contingent on 90% Design for CSA RCRA Permit Application</p>	<p>The Washington State Department of Ecology (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%) 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" data-bbox="889 289 1578 338"> <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 December. 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 Mods and CSA to RL in May to support Ecology's completeness determination. RL has transmitted this information to Ecology. Ecology is currently reviewing the design information. 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												
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None identified at this time.	N/A	N/A																				
<p>FY2019 Risk Triggers (Risk could be realized in FY2019)</p>																						
<p>WSD-125: Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues</p>	<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%) Worst Case Impacts: \$3 million, 0 day</p>			<p>Risk Trigger Metric: Degraded containers are discovered in CWC.</p> <table border="1" data-bbox="889 825 1578 1037"> <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 December. The project continued to perform container surveillances in December 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
Mitigation Action(s)	FC Date	%																				
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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																				
<p>WSD-W135-19: Unexpected Contamination is Found in the WESF Facility</p>	<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%) 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 truck port) 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" data-bbox="889 1329 1578 1440"> <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 December. 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.</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						
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																				

<p>WSD-W135-31: Canyon Crane non-functional/not Serviceable</p>	<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%) 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" data-bbox="889 268 1575 426"> <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 December. Performance of the full annual preventive maintenance package is 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
Mitigation Action(s)	FC Date	%																	
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Refurbish current crane block.	9/30/20	0																	
Procure critical spares.	9/30/21	0																	
<p>WSD-CSS-002: CSS Subcontractor Change Orders & Claims</p>	<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%) 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" data-bbox="889 737 1575 936"> <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 December. CSS final design review comment disposition and comment resolution is in progress. Fabrication of CSS equipment is not planned until FY2020 and the final design review began in November 2018.</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																	
<p>WSD-CSS-011: Greater than Expected Comments on CSS Design are Received</p>	<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%) 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" data-bbox="889 1150 1575 1262"> <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>0</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>0</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 is currently providing disposition to comments and assessing magnitude of effort for comment resolution.</p>	Mitigation Action(s)	FC Date	%	CHPRC will provide recommendations for comment resolution, minimizing the effort to respond.	4/30/19	0	CHPRC will work closely with NAC during comment resolution to ensure all comments are understood.	4/30/19	0						
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<p align="center">Unassigned Risks (Pending ownership of identified risks/opportunities)</p> <p>No unassigned risks identified in December.</p>																			

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	12.8	11.4	10.9	(1.4)	(10.6)	0.5	4.5%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$1.4M/-10.6%)

The CM negative schedule variance is primarily associated with a stop work following a contamination event at the offsite processing facility for large box shipments, delays with the WESF modification final design due to additional efforts required by the subcontractor and slow ramp-up of Test Pit planning and preparation activities due to a change in contract strategy that requires a new procurement versus a change to an existing contract. In addition, WESF preparations are behind schedule due to uncertainties on a path forward for the WESF crane due to the weight capacity issues.

CM Cost Performance (+\$0.5M/+4.5%)

The CM cost variance is within threshold.

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	1,379.1	1,377.0	1,280.7	(2.1)	-0.2%	96.3	7.0%	1,562.0	1,462.9	182.2	99.1

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$2.1M/-0.2%)

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$96.3M/+7.0%)

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 (RAM) and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of PM activities; increasing shared resources across all of SWOC; reducing dedicated resources for the Corrective Action System (CAS) and using project-wide support; optimizing maintenance scheduling and execution reducing operations 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 (+\$99.1M/+6.3%)

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	158.1	15.4
Management of Cesium and Strontium Capsules (Line Item)	6.6	3.2	3.4
Incremental Scope Pending Change Management	0.0	0.1	(0.1)
RL-0013 – Total	180.1	161.4	18.7

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 (IPL). The fiscal year spending forecast of \$161.4 million includes actions anticipated to achieve funding targets.

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-0013 Tri-Party Agreement enforceable milestones, non-enforceable target due dates, and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-53	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste	1/31/2019		1/22/2019	On schedule
C-026-07M	Submit Tritium Treatment Technology Developments to Ecology and EPA	3/31/2019			Deleted
M-026-07D	Evaluation of Tritium Treatment Technology to EPA and Ecology	3/31/2019			Moved to FY2022
M-091-03M	Submit Revision of TRUM Waste and MLLW PMP to Ecology	6/30/2019		6/30/2019	On schedule
M-091-52-T01B	Remove 10 Additional Mixed Waste Containers from Outside Storage Area A and/or B	11/30/2019		2/14/2019	On schedule

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	1/9/2019	2/7/2019
DOE Review IDF DSA	3/8/2019	7/5/2019
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)	5/10/2019	7/22//2019
DOE Final IDF DSA Review and SER Prep	9/9/2019	9/30/2019

Section D

Soil and Groundwater Remediation Project (RL-0030)

CH2MHILL
Plateau Remediation Company



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

M. A. Wright
Vice President for
Project Technical
Services

December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

PROJECT SUMMARY

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

Treatment Facility	Million Gallons Treated		Chrome (kg)		Carbon Tet (kg)		Tech-99 (pCi)		Uranium (kg)	
	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD
DX P&T	27.8	83	2.6	8.6						
HX P&T	23.4	72.4	2.6	7.2						
KR-4 P&T	11.0	32.9	0.1	0.3						
KW P&T	13.4	38.4	0.5	1.6						
KX P&T	40.6	114.9	2.3	6.6						
200 West P&T	96.3	276.3	8.1	25.7	174	518	1.9x10 ¹²	5.8x10 ¹²	5.8	15.5
Combined	212.7	617.7	16.2	50.1	174	518	1.9x10¹²	5.8x10¹²	5.8	15.5
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	2	2
100-HR-3	9	0	0
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	2
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	25%
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	NA
Total Recordable Injuries	0	0	NA
First Aid Cases	0	*19	* 1 First Aid case, PTS in support of RL-0030.
Near-Misses	0	0	NA

KEY ACCOMPLISHMENTS

Strategic Integration

- We began development of the cumulative impact evaluation (CIE) approach document after completion of four scoping workshops in 2018.
- CHPRC is coordinating with Mission Support Alliance (MSA) to purchase and install a new computing system in 2019 to support modeling activities, including the CIE. Nine of ten new servers have been received with the remaining server and balance of hardware (switches) schedule for delivery in January 2019. The new computing system will replace the aging existing (Tellus) system.

River Corridor

300-FF-5 OU

- Completed demobilization of the 300-FF-5 Stage B Sequestration Project Site on December 3, 2018.
- Initiated groundwater modeling of the Stage B Sequestration Project to demonstrate effective phosphate delivery to the treatment area.
- Initiated phosphate extraction testing of the Stage B sequestration soil samples on November 28, 2018, to establish the pre-injection phosphate concentrations in the subsurface.
- Initiated preparation of the data quality objectives (DQO) and sampling instructions for the Stage B post injection sampling and testing, and for the sample collection associated with the unplanned release of purge water that occurred during phosphate injections.

100-BC-5 OU

- Provided a presentation to DOE-HQ Legacy Management (LM) staff on December 12, 2018, that summarized the proposed remedial actions. LM staff were at Hanford to evaluate the feasibility of transitioning the Manhattan Project National Historical Park real property and mission to DOE LM.
- Conducted sessions with RL and U.S. Environmental Protection Agency (EPA) on December 18 and 19, 2018, to revise the Draft Revision 0 Proposed Plan in response to recent comments provided by EPA legal and policy organizations.
- No further comments were received from the tribes on the National Historic Preservation Act (NHPA) text contained in Draft Revision 0 Remedial Investigation/Feasibility Study (RI/FS) text contained in Chapters 3 and 9. Initiated finalization of the RI/FS on December 19, 2018, based on discussions with RL and EPA.

100-HR-3 OU

- Transmitted the Revision 1 Operations and Maintenance Plan to RL on December 5, 2018.
- Initiated drilling at well 199-H3-22 on December 4, 2018.
- Completed drilling on well 199-H3-21 on December 13, 2018, well construction and development to follow.

100-KR-4 OU

- Met with RL and EPA on December 12, 2018, and resolved comments on the 100-K draft Technical Impracticability (TI) Waiver. The revised document is on schedule to be submitted to RL and EPA by mid-January.
- Prior to completion of well 199-K-235, it was discovered that the well screen had separated about 2.5 inches at approximately 100 feet below ground surface. With concurrence from RL, successfully installed a 5-inch diameter well liner inside the originally designed 6-inch well on December 19, 2019.

100-NR-2 OU

- Initiated final surface contouring and revegetation for the former groundwater P&T site.

200-UP-1 OU

- Initiated resolution of RL comments on the Decisional Draft Performance Monitoring Plan, which were received on December 18, 2018.
- Initiated resolution of the two EPA comments on the Draft A 200-UP-1 SE Chromium Plume Remedial Design Investigation Report on December 11, 2018. A meeting with EPA to resolve the comments is scheduled for January 15, 2019.

200-BP-5/200-PO-1 OUs

- Submitted the Draft A Interim Record of Decision (IROD) FS to RL on December 4, 2018, for transmittal onto the regulators for review and comment.
- Transmitted the Decisional Draft IROD proposed plan to RL for review on December 18, 2018.
- Issued the Revision 0 200-BP-5 Drilling Sampling Analysis Plan (SAP) for Planned Fiscal Year (FY) 2019 Removal Action Wells.

200-ZP-1 OU

- Held a workshop with RL on December 12, 2018, to define a path forward for the Explanation of Significant Difference and the Record of Decision (ESD/ROD) amendment for 200-ZP-1 OU and to define the supplemental groundwater modeling scenarios needed.

- Briefed EPA on December 17, 2018, on the initial scoping for the development of the 200-ZP-1 Ringold A DQO/SAP. EPA concurred with the scope and objectives outlined in the first four steps of the DQO process.
- Submitted the revised Feed Stream Acceptance Criteria for the 200 West P&T and Optimization Pilot Test Results Report of Treating modular storage unit (MSU) water to EPA on December 20, 2018, for concurrence and approval to issue these documents.

200-DV-1 OU

- Briefed RL on December 13, 2018, on the revised Draft A Deep Vadose Zone Treatability Testing Evaluation Report based on Ecology's verbal comments.

Central Plateau Closure Plans

- Completed preparation of the 216-A-37-1 Crib Closure Plan and initiated certification process.

Project Technical Services Accomplishments

- Training and Procedures teamed with electrical safety and facility operations subject matter experts to identify changes and update 23 procedures to reflect new electrical safety hazard evaluation requirements.
- Operations Program supported the Soil and Groundwater Remediation Project management team in determining the appropriate application of lockout/tagout for interlocked pumps at the 200 West P&T.
- Project Delivery supported the following:
 - o 200-BP-5 YE32 well connection.
 - Completed pre tie-in installation of fiber optic.
 - Completed installation of conduit, wire pulling at tank pad, pre tie-in work.
 - Completed installation of conduit, wire pulling at well pad rack, pre tie-in work.
 - o Commenced polyvinyl chloride pipe fabrication of KW soil flushing infiltration gallery (shop work).
 - o Commenced field mobilization and material deliveries for YE33 well connection.

Modular Storage Units

- Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) change notice approved on December 17, 2018, by RL and EPA to extend the MSU Optimization Pilot Test Plan to the end of May 2019.
- Prepared Tri-Party Agreement change notices to the 200 West Operations and Maintenance Plan, investigation derived waste (IDW) Purge Water Management Action Memorandum, and IDW Purge water Management Work Plan to allow long-term permanent approval of treatment of MSU water at the 200 West P&T.

200 West P&T

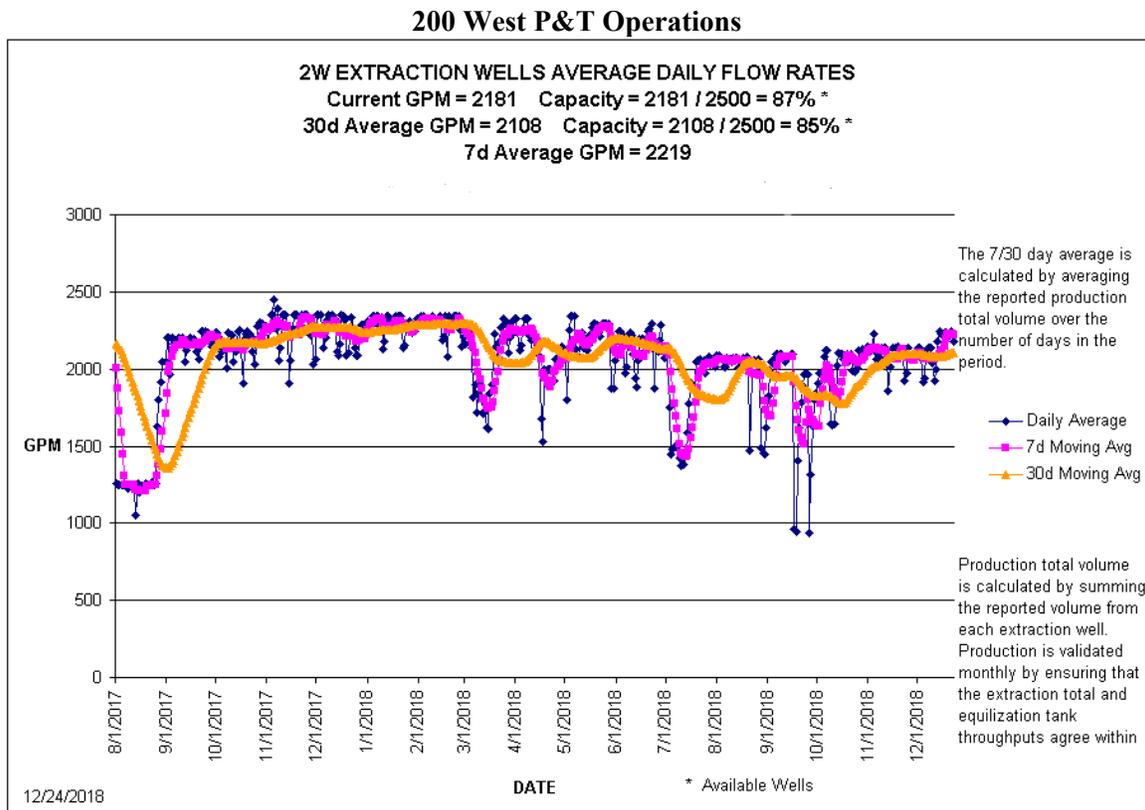
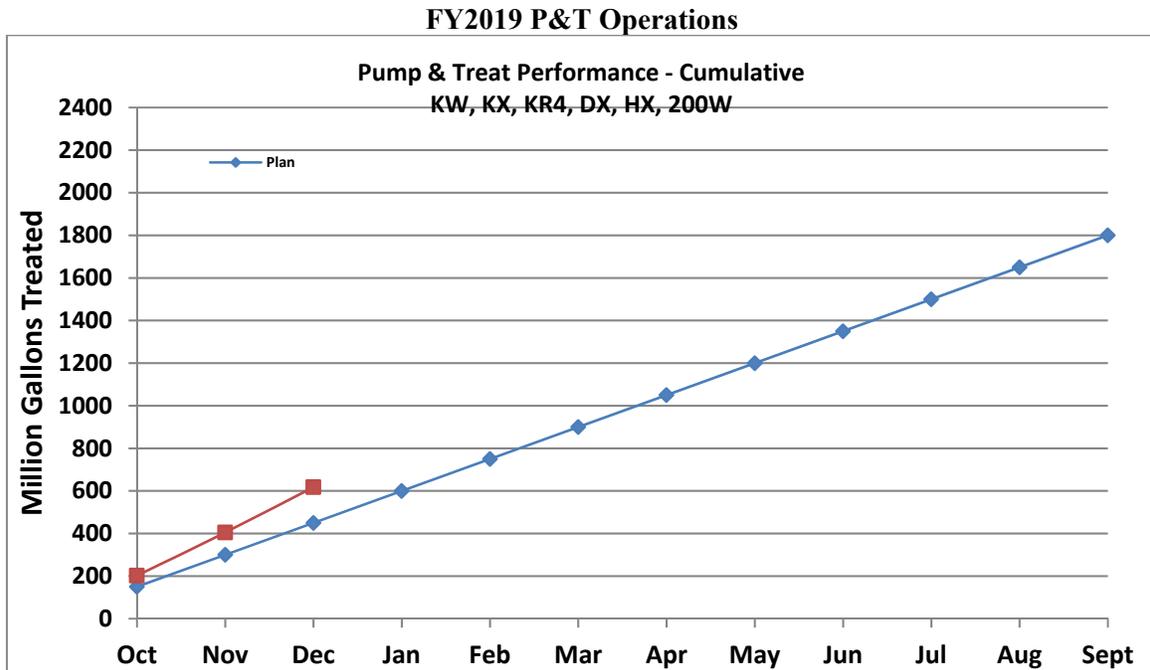
- Operated the 200 West P&T at an average of 2,157 gallons per minute (gpm) in December.

100 Area P&Ts

- Operated the DX P&T at 623 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 248 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 300 gpm, below the facility capacity of 330 gpm.
- Operated the KX P&T at 909 gpm, above the facility capacity of 900 gpm.
- Operated the HX P&T at 526 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.



MAJOR ISSUES

Issue:

If a government furlough takes place, documents requiring regulator review may be at risk.

Corrective Action:

CHPRC will continue to prepare and submit documents with the knowledge that due dates may not be able to be met if a furlough takes place.

Status:

Ongoing.

Issue:

Experiencing delays from the Yakama Nation (YN) in the approval of the 100-BC-5 RI/FS. The following chapters were provided to the YN:

- Ecological Risk Assessment (Chapter 7) provided in April 2018.
- Revised cultural resources information (Chapters 3 and 9) provided on October 17, 2018.

YN has requested more time to provide comments on these chapters.

Corrective Action:

Establish a deadline for receipt of YN comments. Establish a policy on how to address the YN comments on this and future decision documents.

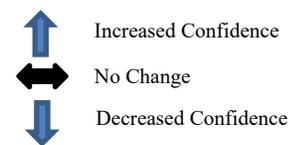
Status:

The issue of not receiving Tribal Nations comments on the revised cultural resources information in the 100-BC RI/FS has been closed. The Tribal Nations did not provide further comments on these sections and after repeated attempts to receive these comments, RL and EPA agreed to proceed with finalizing the RI/FS without Tribal Nation input.

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-0030/WBS-030				
Explanation of major changes to the project monthly stoplight chart:				
No major changes in December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
No realized risks identified in December.				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
No critical risks identified in December.				
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)				

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
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"> <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> 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 FY19 risk triggers identified in December .										
Unassigned Risks (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in December .										

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	9.3	9.4	8.5	0.0	0.6%	0.9	9.5%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (+\$0.0M/+0.6%)

The current period positive schedule variance is within reporting threshold.

CM Cost Performance (+\$0.9M/+9.5%)

The current period cost variance is primarily attributed to the December implementation of three baseline change requests (BCRs), which allowed performance to be measured against scope that was authorized and initiated in prior periods. A missing chemical accrual also contributed to the positive cost variance.

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	1,552.0	1,551.9	1,498.4	(0.1)	-0.0%	53.5	3.4%	1,717.2	1,663.6	165.2	53.7

Numbers are rounded to the nearest \$0.1 million.

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

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

CTD Cost Performance (+\$53.5M/+3.4%)

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

Variance at Completion (+\$53.7M/+3.1%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0030 Soil and Groundwater Remediation	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	132.9	127.7	5.2
RL-0030 –Total	132.9	127.7	5.2

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 fiscal year spending forecast of \$127.7 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		3/8/2019	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.
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 200-UP-1 RD/RAWP Decisional Draft Rev 1	10/1/2018 (A)	12/31/2018
RL Issue Comments on the 200-UP-1 Performance Monitoring Plan	10/1/2018 (A)	12/31/2018
RL Review 100-NR-2 RI/FS Decisional Draft B	11/05/2018 (A)	1/25/2019
RL/EPA Confirm Changes to the 100-K TI Evaluation Doc	12/11/2018 (A)	12/26/2018
RL Provide Concurrence of DV-1 Decision Draft Treatability Test Evaluation Report (TTER) Comments	12/13/2018 (A)	12/26/2018
RL Review of 200-BP-5 Draft IROD-PP	12/20/2018 (A)	1/10/2019
RL Transmit Draft IDF Engineering Evaluation Report to Ecology for review	12/28/2018	12/28/2018
RL Transmit Draft IDF Engineering Evaluation Report to Ecology for Review	12/31/2018	12/31/2018
RL Review ECF for calendar year 2018 Groundwater Performance Monitoring	1/02/2019	1/14/2019
RL Review 100-KR-4 RD/RAWP Revision	1/03/2019	2/01/2019
RL Certify New Information and Submit to Ecology 200 East Closure Plan	1/04/2019	1/06/2019
RL Transmit Draft A 100-HR-3 RD/RAWP to Regulators for review	1/10/2019	1/24/2019
RL Approve the 200-EA-1 RI/FS work plan Rev 0	1/10/2019	2/10/2019
RL Submit SST WMA A-AX Engineering Evaluation Report to Ecology for review	1/15/2019	1/15/2019
RL Transmit Draft A TTER to Regulators for review	1/15/2019	1/19 /2019
RL Submit SST WMA-C Engineering Evaluation Report to Ecology for review	1/21/2019	1/21/2019
RL Validate Draft B of the 100-KR-4 RI/FS	1/28/2019	2/11/19
RL Review of 100- KR-4 Revised Primary Drilling SAP	2/1/2019	3/2/2019
RL Review of 100- HR-3 Revised Primary Drilling SAP Draft Rev 1	2/1/2019	3/2/2019
RL Submit Revision 0 100-BC-5 Proposed Plan to Regulators	2/5/2019	2/19/2019
RL Review of 100-KR-4 Explanation of Significant Difference (ESD)	2/5/2019	3/06/2019
RL Submit 216-B-3 Pond Engineering Evaluation Report to Ecology	2/13/2019	2/13/2019

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

December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

M. A. Wright
Vice President for
Project Technical
Services

PROJECT SUMMARY

Grout placement continued in Tunnel 2 at the Plutonium Uranium Extraction Plant (PUREX) in December on a five day, 10-hour work schedule to mitigate potential winter weather-related impacts. Approximately 64 percent of the tunnel has been filled. Steam line crossover removals continued in the 200 West Area. The project team completed characterization and initiated bio-vector cleanup in 242-B/BL. Reduction and Oxidation Plant (REDOX) entries continued to remove combustible materials from the canyon.

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	0%

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	4	11	12/14/2018 – During radiological clearance surveys inside a small trailer at REDOX, an Industrial Hygienist technician (IH) monitored air in the trailer for carbon monoxide (CO). The IH technician’s handheld instrument alarmed for CO levels. The Radiological Control Technicians (RCT) exited the trailer and surveys were performed at another location the rest of the day. None of the employees in the trailer reported any symptoms. After some discussion with one of the RCTs, an employee noted they were in the same type of trailer at 242-B/BL the previous day and experienced a headache at the end of the day. Upon hearing this, it was decided to take them to HPMC for evaluation related to what may have been a carbon monoxide issue on 12/13/2018, since there was no IH monitoring done on that day. (25028)

			<p>12/14/2018 - There was a heightened awareness about the REDOX trailer 12/14/2018 event. Personnel reported issues the next work day (Monday). This was an afterthought because the symptoms were general, (i.e. headache). Personnel who were in the trailer were sent to First Aid for evaluation. (25031, 25033)</p> <p>12/26/2018 – An RCT was exiting the tent with tech smears and an instrument (Ledlum 2360) in their right hand and was walking toward the survey cave. Rubber matting was in place on the ground as a walking surface. Towels had been placed on the matting to help with the wet walkway. The RCT walked on the path covered in towels. As soon as they stepped off the towel path and stepped on the rubber matting surface, they slipped and fell on their left hip/left side, dropping the instrument. (25035)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0040 Accomplishments

Central Plateau Risk Management Project (CPRM) Surveillance and Maintenance (S&M)

- Supported Department of Ecology visit at PUREX.
- Carpenters repaired holes in doors at 242-B/BL.
- Fire maintenance completed 252AB 12M device test and inspections.
- Completed quarterly CX-70/71/72 temporary storage and disposal (TSD) inspections.
- Completed annual chemical inventory.
- Completed down posting of radiological buffer area (RBA)/contamination area (CA) at door 1 of B Plant.

PUREX Tunnel 2 Stabilization Project

Project Technical Services (PTS) Support

- Continued grout placement at PUREX Tunnel 2. Approximately 25,601 cubic yards of grout has been placed.
- Completed fabrication of the 10 new insertion devices required for the topping-off plan.

REDOX Canyon Risk Mitigation

- Updated as low as reasonably achievable management worksheet and radiological work permit for repetitive use work to be performed in high contamination areas (HCA) based on data obtained by a robot.
- Completed all REDOX silo tank interrogations.
- Approved silo HCA/high radiological area sixth- and seventh-floor entry work package.
- Continued removal of waste items from the sample gallery, pipe gallery, and operating gallery.
- Re-entered the canyon crane maintenance and crane way platforms; performed sampling of unknown liquids and powders.
- Completed beryllium verification sampling in the south operating gallery.
- Commenced procedure revisions/creations in preparation for fissile material handling within REDOX.

- Completed work package revision and sample plan to allow waste removal and unknown waste sampling during the next canyon entry into the crane way and crane maintenance.
- Installed confinement tent, reactivated northwest egress door into North Sample Gallery (NSG) and took radiological samples of stairwell leading into gallery.
- Deployed robot into west end of NSG to verify radiological conditions.
- Finalized electrical lock out strategy to enable personnel access to west end of the NSG due to water intrusion.
- Approved work package for set up, training, and tear down of equipment for new decontamination & decommissioning (D&D) hires at Maintenance and Storage Facility (MASF). Assembled training equipment for delivery to the MASF.
- Commenced field walk downs for mechanical cold and dark isolations.
- Completed walk downs of new trailer and installation locations for automated personnel contamination monitoring egress from REDOX.

Steam Line Removal

- Completed crossover removals in one location within the 200 West Area. Eleven (out of twelve) crossovers have been removed from the 200 West area.

242-B&BL Demo

- Completed initial mobilization and set up for entry into 242-B/BL.
- Commenced bio vector/bio-cleanup throughout all of 242-B/BL.
- Completed characterization for beryllium, radiological, asbestos, and lead.

MAJOR ISSUES

Issue

During the past 12 months, the rate of radiological and foreign material buildup on both pre and primary filter media at B Plant has exceeded historical trends. In the past year, the ventilation pre-filters have been replaced three times, as opposed to previous years with replacements every 18 to 24 months. Additionally, debris collected on filter media indicate corrosion upstream of the filters.

Corrective Action

Perform B Plant canyon entries to investigate elevated radiological dose rates.

Status

Completed replacement of the B Plant pre-filters in November 2018. Buildup on pre-filters following adjustments indicate improved performance, and this issue is now considered resolved.

Issue

On January 11, 2018, Department of 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 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 2 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.

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) throughout the canyon was discovered.

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 is being prepared for submittal in January. Material loadout continues and liquid sampling on crane maintenance platform is complete. Additionally, 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 D&D workers due to hiring by Washington River Protection Solutions (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 are being hired and began training on December 3, 2018.

Status

Received notification of up to 25 additional NCO positions to be opened by WRPS in the second quarter of FY2019. In response, additional hires are underway at CHPRC.

RISK MANAGEMENT STATUS

<p>Unassigned Risk</p> <p>Risk Passed</p> <p>New Risk</p> <p>Change</p>	<p> Opportunity realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.</p> <p> 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.</p> <p> Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.</p>	<p> Increased Confidence</p> <p> No Change</p> <p> Decreased Confidence</p>
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0040/WBS-040													
Explanation of major changes to the project monthly stoplight chart: Risks REDOX-11, <i>Unexpected Discovery – Hazmat</i> , and REDOX-16, <i>Facility Integrity</i> , were added as realized risks in December.													
Realized Risks (Risks that are currently impacting project cost/schedule)													
PRXT-S2-001: Unexpected Contamination Event	During installation of grouting infrastructure, execution of characterization, monitoring, and grouting activities, loss of contamination control will result in in-scope unplanned work, causing cost and schedule impacts to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$5,708K, 64 day			<p>Risk Event: 1) During the end of shift draining of the booms as a part of the freeze protection, the pump backstroked prior to closure of the valve on the PUREX Tunnel 2 conveyance system. 2) Release of water vapors from PUREX Tunnel 2 at the water door structure was reported, and a take cover was called on October 25, 2018.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Investigative efforts into risers will be conducted to collect preliminary radiological and IH data which will be used in future planning efforts.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Increased air sampling was conducted for five days after the incident.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Action Assessment: 1) A stand down was placed immediately after the incident. A management critique of the process was conducted on October 24, 2018. Grout placement activities resumed on October 25, 2018. 2) IH and rad sampling was conducted, and the cause of the steam was determined to be water vapors as a result of the grout curing process. No contamination was released. The opening above the water door was patched over the weekend (three days). Total schedule impact was three days. No further mitigation actions were required.</p>	Risk Recovery action(s)	FC Date	%	Investigative efforts into risers will be conducted to collect preliminary radiological and IH data which will be used in future planning efforts.	Complete	100	Increased air sampling was conducted for five days after the incident.	Complete	100
Risk Recovery action(s)	FC Date	%											
Investigative efforts into risers will be conducted to collect preliminary radiological and IH data which will be used in future planning efforts.	Complete	100											
Increased air sampling was conducted for five days after the incident.	Complete	100											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0040/WBS-040																
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"> <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>1/17/19</td> <td>50</td> </tr> </tbody> </table> <p>Risk Action Assessment: The “topping off plan” has required 10 new injection points, which require the contractor to fabricate and install for the last phase of grout placement. Additionally, two PTZ70 (cameras) were purchased.</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.	1/17/19	50
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.	1/17/19	50														
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.</p> <table border="1"> <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> </tbody> </table> <p>Risk Action Assessment: 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.</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
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														
REDOX-11: Unexpected Discovery - Hazmat	Unexpected or late discovery of hazardous material is discovered during deactivation and decommissioning of 202-S REDOX. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$11K, 48 day	●	↓	<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: 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
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														
REDOX-16: Facility Integrity	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. Risk Handling Strategy: Transfer Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 0 day	●	↓	<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>Sept 2019</td> <td>35</td> </tr> <tr> <td>Repair minor roof defects.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: 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.	Sept 2019	35	Repair minor roof defects.	Ongoing	N/A			
Risk Recovery action(s)	FC Date	%														
Perform cold and dark activities to shut off building power.	Sept 2019	35														
Repair minor roof defects.	Ongoing	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0040/WBS-040																						
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																						
REDOX-05: Collapse of Sand Filter	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. Risk Handling Strategy: Control Probability: Very Low (<10%) Worst Case Impacts: \$260K, 48 day	●	↔	<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>12/2018</td> <td>50%</td> </tr> <tr> <td>Use bracing when digging.</td> <td>Not digging yet</td> <td>0%</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 December. 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-of distances. Additionally, discussions for the initial planning of the critical lift process has started.</p>	Mitigation action(s)	FC Date	%	Establish project boundary.	12/2018	50%	Use bracing when digging.	Not digging yet	0%	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.	12/2018	50%																				
Use bracing when digging.	Not digging yet	0%																				
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 December.																						
FY2019 Risk Triggers (Risk could be realized in FY2019)																						
PRXT-S2-009: Resources Unavailable	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. Risk Handling Strategy: Accept Probability: Low (10% to 25%) Worst Case Impacts: \$102K, 64 day	●	↔	<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 is hiring 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																				
Unassigned Risks (Pending ownership of identified risks/opportunities)																						
No unassigned risks identified in December.																						

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	6.9	7.1	6.7	0.2	2.6%	0.4	5.3%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance: (+\$0.2M/+2.6%)

The current month schedule variance is within reporting thresholds.

CM Cost Performance: (+\$0.4M/+5.3%)

The current month cost variance is within reporting thresholds.

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	506.9	512.2	487.2	5.3	1.0%	25.0	4.9%	576.8	554.6	67.4	22.3

Numbers are rounded to the nearest \$0.1 million

Cost to Date (CTD) Schedule Performance: (+\$5.3M/+1.0%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$25.0M/+4.9%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$22.3M/+3.9%)

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	71.4	10.4
Incremental Scope Pending Change Management	0.0	1.6	(1.6)
RL-0040 – Total	81.8	73.0	8.8

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, a reduction of \$15.6 million from last month per RL direction. 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 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		3/31/2019	On schedule.
M-016-256	Complete Removal of All Waste Sites for FY2019 as Updated/Modified in M-16-17-01.	9/30/2019		9/30/2019	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) to RL for Review	8/16/2017 (A)	5/30/2019
202-A (PUREX) Draft B Engineering Evaluation/Cost Analysis (EE/CA) Ecology Review	12/11/2017 (A)	3/28/2019
REDOX RAWP (2017-06) Draft A Environmental Protection Agency (EPA) Review	3/15/2018 (A)	2/15/2019
REDOX SAP (2017-05) Draft C EPA Review	4/11/2018 (A)	2/15/2019
Tier 2 Misc. (B Plant North) Sampling Analysis Plan (SAP) (2017-47) EPA Review	4/17/2018 (A)	2/28/2019
Tier 2 Misc. Fac. (B Plant North) RAWP (2016-50) Ecology Review	5/2/2018 (A)	2/28/2019

Section F

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

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

M. A. Wright
Vice President for
Project Technical Services

PROJECT SUMMARY

The 100K Closure Project continued remediation of Waste Site 100-K-47:1; continued preparations to return to excavate Waste Site 116-KE-2 radioactive waste crib after successful completion of the Hazard Review Board (HRB); and continued characterization activities in K West Basin. Workers at the 324 Building moved the remote excavator from a contamination-controlled area into an airlock, where workers then used remote-operated cranes to move the excavator arm into B Cell and install it. Workers also completed radiological cleanout of a floor drain trench in the 324 Building airlock. At the 324 Building mockup, workers placed grout to replicate the floor of the 324 facility's B Cell.

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	40%
19-EMS-KBOPR-OBJ1-P1	Improve compliance/pollution and spill prevention	Monitor and evaluate universal waste (UW) and recycling accumulation areas for compliance with CHPRC procedures. Survey spill prevention measures.	9/30/2019	24%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	4	27	12/6/2018 – Employee was using a tool to turn over soil and struck a rock that flew up and hit the employee in the jaw. Employee was taken to HPMC and released back to work without restrictions. (25021) 12/13/2018 – Two employees experienced a potential electric shock while drilling. Employees were examined and released to work with no restrictions. (25025, 25026) 12/20/2018 – Employee was planting vegetation when cotter pin broke and auger bit struck employee in the shin. (25034)
Near Misses	0	2	

KEY ACCOMPLISHMENTS

K Basin Operations

- 100K Closure Project:
 - o 100K Soil Remediation:
 - The HRB released the work package for Waste Site 116-KE-2 radioactive crib removal.
 - Continuing excavation and loadout of Waste Site 100-K-47:1. Reached the top of culvert on the southern end of the east segment and relocated to the northern end to continue overburden removal.
 - Received RL and Environmental Protection Agency (EPA) backfill concurrence documentation and completed backfill of Waste Site 100-K-13.
 - Provided Waste Site 100-K-94 Waste Site Reclassification Form to RL for review and approval.
 - o K West Basin Deactivation:
 - Garnet Filter Media Removal System (GFMRs):
 - Issued the revision of Facility Modification Package (FMP) ECR-16-000999, *Installation of the Garnet Filter Media Retrieval System in KW Basin*.
 - Provided the 100K Documented Safety Analysis (DSA) annual update incorporating GFMRs installation activities to RL. Approval is expected by the end of January 2019.
 - Sand Filter Media Removal System (SFMRs):
 - Approved and issued PRC-KC-00009, *Sand Filter Media Retrieval System Design Requirements*. Started design development.
 - Prepared the Plant Forces Work Review (PFWR) for SFMRs equipment installation and submitted to the RL Labor Standards Board for review.
 - The Design Change Notice and FMP for SFMRs equipment fabrication and installation continue and are approximately 40 percent complete.
 - MASF received and tested the new SFMRs sparge head.
 - K East Reactor Interim Safe Storage (ISS)
 - The CHPRC Change Control Board approved Baseline Change Request (BCR) BCR-041-19-004R0, *Additional FY19 100-K Work Authorization – 105KE ISS*. This BCR incorporates additional scope in support of 105KE reactor ISS.
 - K West Basin Below-Water Debris Characterization:
 - Cleared blockage in the debris sorting table discharge pipe and resumed collection of high-dose material (HDM). Re-started sparging, clamshell collection, and loading HDM through a screen into an empty fuel canister..
 - Completed draft statement of work (SOW) for fabrication of the vertical pipe casings, which will be used to segregate debris in the K West Basin prior to demolition.
 - The labor standards board dispositioned the PFWR for K West Basin deactivation as plant forces work.
 - Developed white paper defining completion criteria for Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-016-178, *Initiate Deactivation* and incorporated RL comments into the document.
 - Received notice that safeguards has determined K West Basin fuel specimens will be assigned attractiveness level E, accelerating formal termination of safeguards for material in the basin.
 - o Ancillary Facility Deactivation and Demolition (D&D):
 - 166KE Fuel Storage Basin/130-KE-2 Waste Site D&D/soil remediation planning continued. Placed the Expression of Interest (EOI) on CHPRC procurement websites to obtain a vendor to pump out and disposition the oily water from 166KE.
 - Received EPA/Department of Health (DOH) comments on drafts of DOE/RL-2005-26, *RAWP for 100K Reactor and Ancillary Facilities* and the supporting Air Monitoring Plan

- (AMP). Comments were forwarded to the CHPRC Air subject matter expert (SME) for evaluation.
- Resolved CHPRC technical reviewer comments to draft Revision 2 for DOE/RL-2010-52 *Remedial Design and Remedial Action Work Plan for the K Basins Interim Remedial Action: 105-K West Basin Deactivation*. CHPRC will start the internal review in January.
 - The CHPRC Change Control Board approved BCR-041-19-003R0, *Additional FY19 100-K Work Authorization – 100K Demo*. The BCR incorporates additional scope, schedule, and budget into the performance measurement baseline (PMB) to perform D&D of additional 100K ancillary facilities.
 - o Remaining Closure Operations - 618-10 complex revegetation:
 - Completed light decompaction of surface soils.
 - Started mechanically planting grass, shrub, and legume seeds; mulching and crimping straw to the soil; and contouring roads and soil berms to match surrounding terrain.

River Risk Management Project, 324 Building Disposition Project

- Equipment Procurement and Fabrication
 - Continued the design and fabrication of the following systems: shielded probe collimator, rad assay, waste box shielding, floor saw, filter frames, heating ventilation and air conditioning (HVAC) snorkels, cell dams, and water delivery.
 - Completed the factory acceptance test (FAT) for the 324 Building floor saw.
 - Issued the request for proposal for Phase II of the cell dams.
- Cell Cleanout
 - Completed function testing of the remote excavator arm (REA) in B Cell.
 - Initiated debris size reduction in B Cell with REA.
 - Installed B Cell crane camera and the roughing filter.
 - Installed South West REA through support assembly.
 - Initiated A Cell crane door repair.
- Facility Preparations
 - Applied fixative to the floor of the cask handling area to support airlock entries.
 - Installed a new camera and lighting system in A Cell to increase visibility in support of cell cleanout and equipment installation.
 - Replaced a non-operating master slave manipulator in 324 Airlock.
 - Completed core drilling in C Cell and installed C Cell lights.
 - Removed germanium detector from C Cell and installed a shield plate.
 - Completed core drilling of D Cell for grout delivery.
- Structural Modifications
 - Continued horizontal drilling, excavations, and chemical grout testing at Pit 6 soil stabilization demonstration and verification site.
 - Subcontractor crews demonstrated donning/doffing practices in support of the Room 18 up-post to an airborne radiation area.
 - Completed removal of Room 18 debris.
 - Received 90 percent structural design and initiated design review.
 - Completed installation of bulkhead and pass-through to support routing services into Room 18 for pilot hole installation.
 - Completed Room 18 ventilation flow test to support pilot hole testing in support of the 324 Building structural modifications.
- Mockup/Readiness
 - Issued the readiness plan of action (POA), which defines the readiness review scope to authorize B Cell floor and soil removal.
 - Completed removal of mockup manipulator and transferred it to the 324 Building.
 - Completed modifications required to accommodate mockup testing of the rad assay system.

- Continued remote equipment operator qualification and proficiency training.
- Tours
 - New Plutonium Finishing Plant (PFP) D&D workers toured the mockup as part of a Hanford Site familiarization tour.

Project Technical Support

- Training and Procedures supported facility operations through examination of three laborers and three heavy equipment operations needed to support waste operations in the 324 facility.
- Readiness and Preparedness provided 324 Team 1-Team 2 Operations drill support improving the overall posture for the 324 team to respond to events and emergency conditions.

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

No change in December.

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 December.																
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" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: left;">Recovery Action(s)</th> <th style="text-align: left;">FC Date</th> <th style="text-align: left;">%</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 Cell Crane Door Repairs</td> <td>12/5/2018</td> <td>100</td> </tr> <tr> <td>A Cell crane door malfunction recovery</td> <td>1/19/2019</td> <td>Ongoing</td> </tr> </tbody> </table> Recovery Assessment: No major changes in December . A Cell crane door became restricted from closing, prohibiting airlock entry. No personnel were affected. Airlock operations were delayed for three weeks while technical response teams deliberated planning actions, and evaluations were performed in advance of successfully closing the A Cell crane door. A Cell debris cleanout operations will be impacted while the crane door is repaired. Recovery continues to progress, as the A Cell crane door inspection and surveys, along with cleaning of the airlock trench were performed to support preparations for repairs.	Recovery Action(s)	FC Date	%	Airlock entry recovery from A Cell crane door malfunction	7/10/2018	100	Clean Airlock Trench for A Cell Crane Door Repairs	12/5/2018	100	A Cell crane door malfunction recovery	1/19/2019	Ongoing
Recovery Action(s)	FC Date	%														
Airlock entry recovery from A Cell crane door malfunction	7/10/2018	100														
Clean Airlock Trench for A Cell Crane Door Repairs	12/5/2018	100														
A Cell crane door malfunction recovery	1/19/2019	Ongoing														
RCC-300-296-30: 300-296 Design Changes Result in Increased Subcontractor Change Order(s) / Claims	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. Risk Handling Strategy: Control Probability: Very Likely (>90%) Worst Case Impacts: \$3,318K, 136 days	●		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. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: left;">Recovery Action(s)</th> <th style="text-align: left;">FC Date</th> <th style="text-align: left;">%</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>Contractor prepare and submit structure modification design (VN1220)</td> <td>1/16/2019</td> <td>75</td> </tr> </tbody> </table> Recovery Assessment: No major changes in December . However, 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. The engineering team anticipated that they could complete review of the 1,500 plus page document in 10 working days and combine SME and CHPRC comments into one document. 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. Additional efforts through progressing on the final design activities have been incorporated into the field execution schedule (FES), along with the estimate to complete to reflect impacts of risk being realized.	Recovery Action(s)	FC Date	%	Contractor prepare and submit structure modification design - 30%-60% (VE2810)	8/15/2018	100	Contractor prepare and submit structure modification design (VN1220)	1/16/2019	75			
Recovery Action(s)	FC Date	%														
Contractor prepare and submit structure modification design - 30%-60% (VE2810)	8/15/2018	100														
Contractor prepare and submit structure modification design (VN1220)	1/16/2019	75														
RCC-300-296-03: Mockup Testing and Qualification of Remote Equipment/ Process Identifies Major Modification Requirements.	Issues such as equipment interferences, differing as-found conditions than planned, equipment reliability, etc., arise prior to/during mockup testing, leading to re-design of equipment and resulting in cost and schedule delays. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$773K, 80 Days	●		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).												

				<table border="1"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform Construction Acceptance Test for mockup equipment install - cameras and lighting; REA system with HPUs; transfer mechanism (VE0640)</td> <td>8/23/2018</td> <td>100</td> </tr> <tr> <td>Install floor saw & support system (VN1020)</td> <td>2/20/2019</td> <td>-</td> </tr> </tbody> </table> <p>Recovery Assessment: No major changes in December. Construction Acceptance Testing (CAT) for remotely operated mockup equipment procurements was completed in August. Integrated testing of remotely operated equipment at the mockup was completed in September. However, interferences with nearby equipment/tools was discovered, leading to modifications. The remainder of miscellaneous supporting equipment is scheduled to arrive at the mockup over the upcoming periods. 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	%	Perform Construction Acceptance Test for mockup equipment install - cameras and lighting; REA system with HPUs; transfer mechanism (VE0640)	8/23/2018	100	Install floor saw & support system (VN1020)	2/20/2019	-
Recovery action(s)	FC Date	%											
Perform Construction Acceptance Test for mockup equipment install - cameras and lighting; REA system with HPUs; transfer mechanism (VE0640)	8/23/2018	100											
Install floor saw & support system (VN1020)	2/20/2019	-											
100K-KWB-102: KW Basin – Resources Unavailable	Other higher CHPRC priority work results in reallocation of key resources (Rad Planners, RCTs, IH, and NCOs), which results in cost and schedule delays as projects compete for key CHRPC resources. Risk Handling Strategy: Accept Probability: Low (10% to 25%) Worst Case Impacts: \$15K, 16 Days			<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"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>No major change in December.</td> <td>3/15/2019</td> <td>25</td> </tr> </tbody> </table> <p>Recovery Assessment: Recent RCT movement to other companies is challenging the staffing effort; however, Radcon is moving quickly to replace lost personnel. A shortage of key resources, affecting 100K work scope is still improving.</p>	Recovery action(s)	FC Date	%	No major change in December.	3/15/2019	25			
Recovery action(s)	FC Date	%											
No major change in December.	3/15/2019	25											
100K-KWB-092: KW Basin - Fuel or Residual Material Discovered	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. Risk Handling Strategy: Accept Probability: Low (10% to 25%) Worst Case Impacts: \$2,000K, 96 Days			<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 CSB.</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 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: Safeguards determined that the specimen material is no longer attractive. As such, there is high confidence that safeguards will be terminated.</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 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 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 December .													
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 & Airlock, or CHA cranes)	Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$1,561K, 208 days			<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>Order and Procure Spare Parts – REC Cranes</td> <td>1/14/2019</td> <td>Ongoing</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. The project experienced loss of the CHA crane in November 2017. Final repairs and load testing for the 30-ton CHA crane were completed and the crane was returned to service in January 2018. 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. Due to limited vendor (SME) availability over the later portion of the fiscal period (holidays), the final determination and procurement of spare parts was delayed. Project management will be briefed on vendor-assessed data to determine procurements of identified crane parts. These efforts are expected to reduce the potential for impacts.</p>	Mitigation action(s)	FC Date	%	Order and Procure Spare Parts – REC Cranes	1/14/2019	Ongoing			
Mitigation action(s)	FC Date	%											
Order and Procure Spare Parts – REC Cranes	1/14/2019	Ongoing											

<p>RCC-300-296-15: 300-296 Cell sealing, interference removal and/or core drilling takes longer than planned</p>	<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" data-bbox="862 306 1563 363"> <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>4/3/2019</td> <td>Ongoing</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. 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 periods. 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)	4/3/2019	Ongoing
Mitigation action(s)	FC Date	%								
Perform Core Drilling and Shield Plug Installation (VN1200)	4/3/2019	Ongoing								
<p>FY2019 Risk Triggers (Risk could be realized in FY2019)</p>										
<p>RCC-300-296-01: Latent Conditions Impact Facility Modification</p>	<p>Latent conditions, poor visibility in REC cells, or drawing omissions, inconsistencies, or errors impact facility modifications (e.g. mechanical, electrical 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" data-bbox="862 737 1563 793"> <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 December. 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 recent 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								
<p>Unassigned Risks (Pending ownership of identified risks/opportunities)</p>										
<p>RCC-300-296-04DOE: 300-296 Seismic Event (Force Majeure)</p>	<p>A “Force Majeure” incident, such as a seismic event, results in the loss of structural integrity; causing cost and schedule impacts to the project delivery. 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.</p>									
<p>RCC-300-296-23DOE: 300-296 Large Brush Fire (Force Majeure)</p>	<p>A brush fire ignited on the Hanford Site near the proximity of the 300-296 Waste Site, resulting in cost and schedule delays. 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.</p>									
<p>RCC-300-296-27: 300-296 Requirement Changes Result in Additional Work/Entry Prerequisite Training</p>	<p>Due to complex-wide or facility specific changes in requirements outside of CHPRC’s ability to manage (e.g. technical documents, procedures, training), project delivery will be impacted in terms of cost and schedule. 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.</p>									

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	9.9	8.7	9.8	(1.3)	-12.6%	(1.2)	-13.4%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$1.3M/-12.6%)

The current month unfavorable schedule variance is primarily due to delays in 324 Building Disposition Project procurements. These delays are caused by design changes for the B Cell filter frames and the water delivery system as well as a delay in awarding the contract for the waste boxes. The negative schedule variance is also related to the delayed start in performing basin floor surveys and settled solid sampling under WBS 41.02.21.02.03, 105KW Basin Characterization due to the priority of sludge removal activities; and actual progress was understated in 041.02.34.01, 100K Remaining Waste Sites due to an error in calculation of Rules of Performance for excavation work performed on 100-K-47:1. Rules of performance weighting will be revised in January.

CM Cost Performance (-\$1.2M/-13.4%)

The current month unfavorable cost variance is primarily due to additional subcontractor costs at the 324 Building Disposition Project in support of work scope that has pushed into FY2019 from FY2018, such as the 324 Building design for structural modifications. Because this scope is not in the FY2019 baseline, performance could not be taken in the current period, while actual costs were realized.

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	621.2	615.3	558.7	(5.9)	-1.0%	56.6	9.2%	723.7	667.7	109.0	55.9

Numbers are rounded to the nearest \$0.1 million

Contract-to-Date (CTD) Schedule Performance (-\$5.9M/-1.0%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance (+\$56.6M/+9.2%)

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 (+\$55.9M/+7.7%)

The 100K Closure positive variance at completion (VAC) is primarily due to labor; fewer resources have been 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 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	
Spending Forecast	148.3	125.5	22.9
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0041 - Total	148.3	125.5	22.9

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis:

The FY2019 projected funding for project breakdown 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 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	8/17/2020	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
Class 1 Prime Modification RL Certification send Class 1 Prime to Ecology for Action to close 1301-N and 1325-N	12/4/2018 (A)	12/5/2018 (A)
Review DSA/TSR Revision	12/4/2018 (A)	1/21/2019
Ecology Receive the Certified CHPRC and RL Information (1301, 1325)	12/10/2018 (A)	12/10/2018 (A)
RL Certify Information – RL Manager Letter to Ecology (1301, 1325)	12/10/2018 (A)	12/10/2018 (A)
Deliver Attachment(s) and Certification(s) to RL (1301, 1325)	12/12/2018 (A)	12/12/2018 (A)
DOE Authorize SPA SEC for Soils – 300-296	12/24/2018	2/21/2019
DOE Authorize SPA SEC for Hot Cell Disposal	1/1/2019	3/1/2019
DOE Independent Structural Modification Review	1/10/2019	2/8/2019
RL Provide Comments on DSA/TSR in RCR	1/22/2019	1/31/2019
RL Review EPHA Draft	2/1/2019	2/15/2019
RL Concur on DSA/TSR Revision Comment Resolution	2/7/2019	2/20/2019
RL Prepare DSA/TSR Revision SER	2/21/2019	2/23/2019
RL Approval EPHA Final	3/6/2019	3/20/2019
SRB Review SER for DSA/TSR Revision	3/13/2019	3/19/2019
RL Issue SER for 324 DSA/TSR	3/20/2019	3/26/2019
DOE Review WCH-539, Treatment Plan for Macro Encapsulation - 324	3/31/2019	4/29/2019

Section G

Fast Flux Test Facility Closure (RL-0042)

CH2MHILL
Plateau Remediation Company



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

December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

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

KEY ACCOMPLISHMENTS

RL-0042 Accomplishments

- Continued preparing an Engineering Change Request (ECR) that will be used to support final installation of the variable frequency drive and associated hardware for the P-16 pump.
- Continued gathering information on the hundreds of electrical components in the FFTF buildings that require preventative maintenance per National Fire Protection Association (NFPA) 70E.
- Received labor board determination on Plant Forces Work Review (PFWR) for installation of the replacement C670 fire pump control panel; work will be performed by plant forces.
- Started review of lockout/tagout process and cause of unexpected power discovery during an eight-point Safe to Work Check on water tank heaters.
- Incorporated reviewer comments into the Acceptance Test Plan for installation of the replacement C670 fire control panel.
- Continued preparation of an ECR for replacement of Building 481 power panel B37 and panel board LP-1L.

MAJOR ISSUES

None currently identified.

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	0.2	0.0	0.0%	(0.0)	-9.1%

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/-9.1%)

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	26.9	26.9	22.4	(0.0)	-0.0%	4.5	16.6%	28.2	24.1	1.7	4.1

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 (+\$4.5M/+16.6%)

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

Variance at Completion (+\$4.1M/+14.6%)

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	2.3	2.0

Numbers are rounded to the nearest \$0.1 million

Funds Analysis

Fiscal year (FY) 2019 funding for project breakdown structure (PBS) RL-0042 is \$4.3 million. The spending forecast is \$2.3 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



December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

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) 2018 / 11 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 12 / 23	
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 843,229	d. TARGET PROFIT/FEE 241,605	e. TARGET PRICE 5,830,563	f. ESTIMATED PRICE 6,625,833	g. CONTRACT CEILING 5,830,563	h. ESTIMATED CONTRACT CEILING 6,625,833	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 6,320,950						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)	
b. WORST CASE 6,531,353									
c. MOST LIKELY 6,384,228		6,432,186		47,958					

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	1,205	2,557	5,409	1,353	-2,852	994,081	982,835	1,156,334	-11,246	-173,499	0	0	0	1,001,762	1,212,494	-210,732		
RL-0012 SNF Stabilization & Disp	1,389	1,436	1,261	47	175	748,150	747,811	717,848	-339	29,963	0	0	0	761,876	731,241	30,635		
RL-0013 Solid Waste Stab & Disp	12,751	11,397	10,879	-1,355	518	1,379,071	1,376,975	1,280,701	-2,096	96,274	0	0	0	1,498,650	1,399,547	99,103		
RL-0030 Soil & Water Rem-Grndwtr/Vadose	9,307	9,359	8,472	52	887	1,551,996	1,551,871	1,498,418	-125	53,453	0	0	0	1,649,060	1,595,406	53,654		
RL-0040 Nuc Fac D&D - Remainder Hanfrd	6,912	7,092	6,713	180	378	506,943	512,224	487,197	5,281	25,027	0	0	0	556,272	533,993	22,279		
RL-0041 Nuc Fac D&D - RC Closure Proj	9,933	8,681	9,844	-1,252	-1,163	621,232	615,326	558,726	-5,906	56,600	0	0	0	704,775	648,838	55,937		
RL-0042 Nuc Fac D&D - FTF Proj	139	139	151	0	-13	26,885	26,874	22,406	-11	4,468	0	0	0	28,197	24,073	4,124		
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	41,635	40,661	42,730	-975	-2,070	5,828,359	5,813,916	5,721,630	-14,442	92,287	0	0	0	6,375,950	6,320,950	54,999		
f. MANAGEMENT RESERVE														63,278				
g. TOTAL	41,635	40,661	42,730	-975	-2,070	5,828,359	5,813,916	5,721,630	-14,442	92,287	0	0	0	6,439,227	6,320,950	118,277		
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																		
a. VARIANCE ADJUSTMENT																		
b. TOTAL CONTRACT VARIANCE																		
										-14,442		92,287		6,439,227		6,320,950		118,277

* Per email direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, baseline change requests (BCRs) will be processed to align the PMB with the settlement values.

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

CLASSIFICATION (When Filled In)

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

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

FORM APPROVED

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) 2018 / 11 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 12 / 23	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group	CURRENT PERIOD						CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)							
34 - Env Program & Strategic Plng	1,447	1,384	917	-63	467	87,903	87,965	80,708	62	7,257	0	0	0	98,807	91,678	7,129	
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	131	131	72	0	59	8,073	8,073	4,936	0	3,136	0	0	0	9,314	6,139	3,175	
3B - PFP Closure Project	1,205	2,557	5,409	1,353	-2,852	905,299	894,053	1,075,269	-11,246	-181,216	0	0	0	912,980	1,131,429	-218,449	
3C - Waste & Fuels Management Project	10,024	8,689	8,551	-1,335	138	1,225,913	1,223,950	1,137,453	-1,963	86,497	0	0	0	1,319,969	1,230,180	89,789	
3D - Soil & Groundwater Remediation	7,828	7,943	7,543	115	400	1,362,414	1,362,227	1,310,170	-187	52,058	0	0	0	1,448,264	1,395,887	52,377	
3G - K Basin Oper & Plateau Remediation Project	6,206	5,733	5,418	-473	315	1,054,881	1,053,270	994,399	-1,610	58,871	0	0	0	1,112,279	1,051,748	60,532	
3H - River Risk Management Project	7,778	7,026	7,977	-752	-950	260,163	255,396	234,458	-4,767	20,938	0	0	0	324,935	306,131	18,803	
3K - Central Plateau Risk Reduction	7,017	7,197	6,844	180	353	445,307	450,576	430,149	5,269	20,427	0	0	0	495,637	478,312	17,325	
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)	41,635	40,661	42,730	-975	-2,070	5,828,359	5,813,916	5,721,630	-14,442	92,287	0	0	0	6,375,950	6,320,950	54,999	
f. MANAGEMENT RESERVE														63,278			
g. TOTAL	41,635	40,661	42,730	-975	-2,070	5,828,359	5,813,916	5,721,630	-14,442	92,287	0	0	0	6,439,227			

* Per email direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, baseline change requests (BCRs) will be processed to align the PMB with the settlement values.

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE											DOLLARS IN THOUSANDS					Form Approved OMB No. 0704-0188		
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA			2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2018/11/26 b. TO: 2018/12/23							
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 \$843,229		e. CONTRACT BUDGET BASE (C + D) \$6,432,186		f. TOTAL ALLOCATED BUDGET \$6,439,228		g. DIFFERENCE (E - F) (\$7,041)			
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2018		k. CONT COMPLETION DATE 9/30/2018				l. EST COMPLETION DATE 9/30/2018							
6. PERFORMANCE DATA																		
BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)																		
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 Jan-19 (4)	+2 Feb-19 (5)	+3 Mar-19 (6)	+4 Apr-19 (7)	+5 May-19 (8)	+6 Jun-19 (9)									
a. PM BASELINE (BEGIN OF PERIOD)		5,786,723	41,003	40,574	38,671	40,520	41,314	48,786	35,211	3,391,477	391,653	471,323	504,826	485,027	470,649	475,219	175,358	6,365,531
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																		
BCR-030-19-005R0 - Complete 200-EA-1 RI/FS Work Plan																299	299	
BCR-030-19-005R0 - Complete 200-EA-1 RI/FS Work Plan																3,439	3,439	
BCR-030-19-006R0 - Additional FY2019 Work Authorization RL-0030																311	311	
BCR-040-19-002R0 - Removal of 202-S Combustible Materials																1,006	1,006	
BCR-041-19-003R0 - Additional FY2019 100-K Work Authorization - 100K Demo																3,115	3,115	
BCR-041-19-004R0 - Additional FY2019 100-K Work Authorization -105KE ISS																2,247	2,247	
BCRA-PRC-19-005R0, HPIC Updates December 2018																0	0	
c. PM BASELINE (END OF PERIOD)		5,828,359	41,635	41,108	39,740	41,378	42,827	50,547	36,682	3,391,477	391,653	471,323	504,826	485,027	470,649	485,637	175,358	6,375,950
7. MANAGEMENT RESERVE																		
																		63,278
8. TOTAL																		
																		6,439,228

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) 2018 / 11 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 12 / 23	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA		FORECAST (Non-Cumulative)														AT COMPLETION
WBS.Resp Org Group	ACTUAL CURRENT PERIOD	ACTUAL END OF CURRENT PERIOD (Cumulative)	SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						AT COMPLETION (15)	
			+1 JAN 2019 (4)	+2 FEB 2019 (5)	+3 MAR 2019 (6)	+4 APR 2019 (7)	+5 MAY 2019 (8)	+6 JUN 2019 (9)	JUL 2019 (10)	AUG 2019 (11)	FY19 END (12)	FY20-LC (13)	ATCOMPLETE (14)			
ORGANIZATIONAL CATEGORY (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		
300 - Office of the President	6	826	7	7	7	7	7	7	7	7	7	7	7	7	888	
303 - Internal Audit	6	546	6	6	6	6	6	6	6	6	6	6	6	6	599	
304 - General Counsel	4	506	4	4	4	4	4	4	4	4	4	4	4	4	545	
31 - Communications	8	1141	8	8	8	8	8	8	8	8	8	8	8	8	1216	
32 - Safety Health Security & Quality	61	7951	63	65	63	64	64	64	64	64	64	64	64	64	8532	
34 - Env Program & Strategic Plng	46	5427	47	47	47	47	47	47	47	47	46	47	47	47	5849	
35 - Business Services	55	7578	58	58	58	58	58	58	58	58	58	58	58	58	8100	
36 - Prime Contract & Proj Integr	42	4049	40	39	39	39	39	39	40	40	40	40	40	40	4407	
37 - Resource Mgmt & Strategic Intg	33	2974	34	39	45	44	44	44	44	44	44	44	44	44	3356	
38 - Project Technical Services	36	6103	36	36	37	37	37	37	37	37	37	37	37	37	6436	
3B - PFP Closure Project	198	51903	216	213	205	205	205	205	205	198	201	236	0	53989		
3C - Waste & Fuels Management Project	363	54929	366	380	372	377	381	374	368	374	367	21	0	58309		
3D - Soil & Groundwater Remediation	266	40381	266	281	293	306	296	288	276	261	234	32	0	42913		
3G - K Basin Oper & Plateau Remediation Project	221	34796	222	222	235	251	234	258	257	245	240	0	0	36959		
3H - River Risk Management Project	229	6905	220	222	225	225	224	224	223	223	221	91	0	9004		
3K - Central Plateau Risk Reduction	197	18049	220	225	221	218	193	185	176	173	172	10	0	19842		
g. TOTAL DIRECT	1769	244065	1815	1853	1866	1896	1848	1852	1821	1789	1751	390	0	260945		

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) 2018/11/26			
b. LOCATION (Address and ZIP Code) Richland, WA 99354		b. NUMBER DE-AC06-08RL14788		b. PHASE Base		b. TO (YYYY/MM/DD) 2018/12/23			
		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:	41,635	40,661	42,730	(975)	-2.3%	(2,070)	-5.1%	0.98	0.95
Cumulative:	5,828,359	5,813,916	5,721,630	(14,442)	-0.2%	92,287	1.6%	1.00	1.02
	BAC	EAC	VAC in \$	VAC in %	TCPI				
At Complete:	6,375,950	6,320,950	54,999	0.9%	0.94				
Explanation of Variance/Description of Problem:									
<p>Current Period Schedule Variance: The current month (CM) schedule variance is within thresholds.</p> <p>Current Period Cost Variance: The CM negative cost variance is primarily due to project breakdown structure (PBS) RL-0011 unplanned training costs for 25 new D&D workers, repairs, and maintenance to high-risk demo equipment, and continuous planning and mockups of higher-risk work. Additionally, unplanned costs to support implementation of schedule efficiency, process improvements, and a learning curve associated with revised project requirements contributed to the cost variance.</p> <p>Also contributing to the negative variance is PBS-0041 delays in 324 Building Disposition Project procurements. These delays are caused by design changes for the B Cell filter frames and the water delivery system as well as a delay in awarding the contract for the waste boxes. The negative schedule variance is also related to the delayed start in performing basin floor surveys and settled solid sampling under WBS 41.02.21.02.03, 105KW Basin Characterization due to the priority of sludge removal activities; and actual progress was understated in 041.02.34.01, 100K Remaining Waste Sites due to an error in calculation of Rules of Performance for excavation work performed on 100-K-47:1. Rules of performance weighting will be revised in January.</p> <p>Cumulative Schedule Variance: The variance is within reporting thresholds.</p> <p>Cumulative Cost Variance: The variance is within reporting thresholds.</p>									
Impact:									
<p>Current Period Schedule: The current month schedule variance is not expected to impact the overall contract schedule.</p> <p>Current Period Cost: Cost impacts are being estimated and will be incorporated in the project estimate to complete (ETC).</p> <p>Cumulative Schedule: N/A</p> <p>Cumulative Cost: N/A</p>									
Corrective Action:									
<p>Current Period Schedule: No corrective actions have been identified.</p> <p>Current Period Cost: A baseline change request (BCR) implementing a revised PFP Cap 2 Project baseline is anticipated following receipt of the results of an ICE/EIR performed by DOE-HQ.</p> <p>Cumulative Schedule: N/A</p> <p>Cumulative Cost: N/A</p>									
Monthly Summary (to include technical causes of VARs, Impacts, and Corrective Action(s):									
<p>CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$55.0 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$118.3 million. For December, the project was 2.3 percent behind schedule and 5.1 percent over planned cost. Contract to date (CTD); the project was 0.2 percent behind schedule and 1.6 percent under planned cost.</p> <p>There was no increase in the difference between the Contract Budget Base and the Total Allocated Budget on Format 3 since last month.</p> <p>Six of the seven BCRs implemented in the period impacted the PMB:</p> <ul style="list-style-type: none"> • BCR-030-19-001R0, Modify Approach to FY2019 Cumulative Impact Evaluation • BCR-030-19-005R0, Complete 200-EA-1 RI/FS Work Plan and SAP 									

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

- BCR-030-19-006R0, Additional FY2019 Work Authorization RL-0030
- BCR-040-19-002R0, Removal of 202-S Combustibles Materials
- BCR-041-19-003R0, Additional FY2019 100-K Work Authorization –100K Demo
- BCR-041-19-004R0, Additional FY2019 100-K Work Authorization –105KE ISS

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 +\$55.0 million, +0.9% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

CPS - In Process		
	Total Authorized Unpriced Work	\$843,229
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	Grand Total Adjustments	\$843,229

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 December.

Management Reserve Activity

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

There was no change in MR during December.

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 December.

Best/Worst/Most Likely Estimate: The Best EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no use of management reserve. The most likely EAC is the EAC reported this month plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will remain at completion but all available management reserve is used (e.g., all identified risks realized). The worst EAC is the ACWP plus the 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: 01/22/2019	Approved by:	Date:
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** Per email direction received December 6, 2017, from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, BCRs will be processed to align the PMB with the settlement values.*

Appendix B

Project Services and Support (WBS 000)

CH2MHILL
Plateau Remediation Company



T. L. Vaughn
Vice President for
Safety, Health, Security
and Quality

M. A. Wright
Vice President for
Project Technical
Services

December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

D. J. Henderson
Director of
Communications

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

T. A. Heidelberg
Vice President for
Business Services
Chief Financial Officer

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

PROGRAM SUMMARY

Project Services and Support functional activities continue to provide support and technical services to all CHPRC projects, as well as central management of cross-cutting services. This section is reported on a quarterly basis.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-ADMIN-OBJ1-P1	Reduce energy intensity.	Increase facility occupancy rates to greater than 85 percent by compressing occupancy and vacating underutilized facilities. Occupancy compression to be maintained through disposition of buildings or square footage reduction.	9/30/2019	0%
19-EMS-PTS-OBJ1-P1	Spill prevention/waste minimization/pollution prevention.	Reduce and/or eliminate spills to the environment by surveillances and on-going training. Monitor and evaluate spill prevention program and existing techniques. Also, survey universal waste and recycling areas.	9/30/2019	24%
19-EMS-PTS-OBJ2-P1	Monthly chemical management inspection/pollution and spill prevention.	Ensure chemical products are accurately tracked, maintained, and excessed/disposed. Perform quarterly assessment on chemical inventory locations.	9/30/2019	28%

TARGET ZERO PERFORMANCE

	Current Quarter	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	2	5	10/18/2018 – Employee lifted a box, twisted, and then experienced pain in the right side. Employee was taken to HPMC and released with no restrictions. (24999) 10/30/2018 – Employee tripped on a raised floor mat at a mask fit station. (25004)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

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

- There were two injuries reported during this quarter in the functional groups.
 - o Occupational Safety and Industrial Hygiene (OS&IH) accomplishments:
 - Performed Senior Supervisory Watch at the Plutonium Finishing Plant Closure Project (PFP).
 - Supported the third Office of Inspector General (OIG) Audit of Safety Equipment Maintenance site visit.
 - Submitted correspondence CHPRC-1603202 R9, *Quarterly Report of Highly Radioactive Beryllium Samples Processed Third Quarter CY 2018*.
 - Submitted correspondence CHPRC-1603202 R9, *Quarterly Report of Highly Radioactive Beryllium Samples Processed Third Quarter CY 2018*. Submitted correspondence - CHPRC-1804301A R1, *Contract Number DE-AC06-08RL14788 –10 CFR 851 Worker Safety and Health Program Description, PRC-MP-SH-32219, Revision 3, Change 2 for Approval and the Hazard Abatement Plan for Information*.
 - Submitted correspondence - CHPRC-1804994A (DOE-RL 19-ESQ-0015) - *Contract Number DE-AC06-08RL14788 - 10 CFR 851 Worker Safety and Health Program (WSHP) Description, PRC-MP-SH-32219, Revision 3, Change 2 and Hazard Abatement Plan Review*.
 - Developed and issued a Special Safety Bulletin regarding the use of the 3M™ Versaflo™ Powered Air-Purifying Respirator.
 - Provided personnel resources to support CHPRC Voluntary Protection Program (VPP) Self-Assessment.
 - Supported multiple projects in the development of the roll-on/roll-off container buffer zone definition to ensure consistent hazard controls are implemented at all container transfer areas.
 - Discussed safety and health roles and responsibilities for managers at the CHPRC New Manager Orientation.
 - Continued support of the Conduct of Work initiative.
 - Met with RL and other site contractors to discuss potential improvements to hearing conservation (e.g., audiograms, presbycusis adjustment, threshold shifts) and the Site Occupational Medical Contractor contract.
 - Supported completion of *CH2M HILL Plateau Remediation Company (CHPRC) Beryllium Program Surveillance, S-18-ESQ-CHPRC-006*.
 - Developed and issued a Special Safety Bulletin regarding the importance of performing pre-use inspections of personal protective equipment.
 - Interfaced with the Hanford Emergency Operations Center to identify CHPRC Industrial Hygiene single points of contacts to provide support during a declared emergency.
 - Supported projects to help resolve respiratory protection equipment issues.
 - Participated in Multi-Contractor Workers' Compensation Process Improvement Kaizen.
 - Performed and documented Work Site Assessment (WSA) for the Confined Space Hazard Identification form Revision 4 Extent of Condition Review.
 - Initiated bi-weekly OS&IH meetings with RL OS&IH staff members.
 - o Radiological Control accomplishments:
 - Completed review and approval of PFP Workplace Air Monitoring Technical Basis Document.
 - Coordinated with EP to identify actions the program office can take to help improve the drill program.
 - Continued mid-point effectiveness review of the completed corrective actions.
 - Met with SKC, Ltd. regarding lapel samplers to identify solutions for failure issues with the units,; met with Mission Support Alliance (MSA) Radiological Site Services to resolve issues with maintenance and evaluated units for low temperature environments.

- Supported Central Radiological Counting Facility to resolve Gamma Spec instrument issues.
- Finalized preparations for implementing new access control system-reporting tools used by Radiological Protection.
- Conducted Quarterly Radcon Leadership meeting.
- Conducted meetings with other Hanford contractors to develop Site Material Tracking process.
- Initiated the Radiological Control First Line Manager forum.
- Attended meeting with Brent Blunt (EM-1 consultant) regarding PFP data to support open-air demolition activities within the DOE complex.
- Reviewed/interpreted data for Gamma/alpha spectroscopy samples of Solid Waste Operations Complex Waste Caisson work.
- Reviewed/interpreted Sr-90 and gamma specification data for Reduction and Oxidation Plant (REDOX) work.
- Completed Contamination Survey Technical Position paper and forwarded to RL for review.
- Completed software Quality Assurance (QA) documentation for Survey Simple and APEX Alpha/Beta software (Tennelec software).
- Worked with projects to help resolve ongoing lapel issues.
 - Investigated methods to maintain sampler temperatures during cold weather.
 - Functional testing of new lapel samplers (Radeco and F&J models).
- Supported EP in improving their program by identifying OFI for EP training and drill scenario review.
- Field surveys performed with the portable hand held Bladewerx Alpha Survey Meter for radon discrimination in the presence of Plutonium/Americium.
- Supported radiological work planning at the Central Plateau Risk Management Project (CPRM) project.
- Provided “Effective ALARA Programs” training to project and program radiological protection personnel.
- Provided support for Sentinel (new radiological access control software) implementation.
- Developed new qualification card for Health Physicists/Radcon Engineers.
- Initiated Conduct of Work Initiative within the Radiological Control organization.
- Developed new scope of work for Radiological Site Services (RSS) instrument work and included a new acceptance criteria for 43-93 probes using 1/8-inch distance to source.
- Completed software QA documentation for MicroShield Version 11 and Survey Simple release that fixes record issues.
- Conducted Radiological Oversight and Assistance quarterly meeting.
- Initiated requisition to hire radiation control technicians (RCTs) trainees to participant in RCT training courses.
- Scheduled follow up assessments in response to RL 10 CFR 835 gap assessment review.
- Initiated weekly update communication distributed within the Radiological Control organization.
- Prepared course material for monthly Radiological Control leadership seminars.
- Participated in Hanford Site Forum to review and revise the company’s authorized limits.
- o Nuclear Operations Support & Compliance accomplishments:
 - Correspondence transmitted to Department of Energy Richland Operations Office (RL):
 - Letter, CHPRC-1804218, dated October 8, 2018, *Request for RL Approval to Continue Using RADIDOSE Version 3.0 Software.*
 - Letter, CHPRC-1803941, dated October 10, 2018, *Transmittal of the 2018 Annual Update to the Solid Waste Operations Complex Master Documented Safety Analysis,*

HNF-14741, Revision 13; the Technical Safety Requirements for the Solid Waste Operations Complex, HNF-15280, Revision 13; the Application of Zero Damage Ratio to Special Containers at the Solid Waste Operations Complex, CHPRC-03666, Revision 0; the Unreviewed Safety Question Determinations Summary; the Solid Waste Operations Complex Fire Hazards Analysis, HNF-21239, Revision 9; and the T Plant Fire Hazards Analysis, HNF-59192, Revision 3.

- Letter, CHPRC-1803139A R2, dated October 11, 2018, *CHPRC Response to Perform Actions to meet NQA-1 Requirements for RADCALC 4.1 Safety Software.*
- Letter, CHPRC-1804404, dated October 18, 2018, *Transmittal of the 2018 Annual Update of the 200 Area Interim Storage Area Safety Basis and the Unreviewed Safety Question Determinations Summary for the 200 Area Interim Storage Area.*
- Letter, CHPRC-1804279, dated October 31, 2018, *Transmittal of the Hazard Categorization for Trench 94 in Burial Ground 218-E-12B and Staging Area CBI in Burial Ground 218-W-3AE, CHPRC-02902, Revision 0.*
- Letter, CHPRC-1804625, dated November 1, 2018, *Transmittal of the Contaminated Equipment Special Packaging Authorization, HNF-62738, Revision 0.*
- Letter, CHPRC-1804908, dated November 20, 2018, *Request for Approval of Currently Authorized Special Packaging Authorizations – Safety Evaluation Checklists.*
- Letter, CHPRC-1804512, dated December 4, 2018, *Transmittal of the Fiscal Year 2019 Annual Update to the 324 Building Basis for Interim Operation, CHPRC-02979, Revision 4; the 324 Building Technical Safety Requirements, CHPRC-02980, Revision 3; the Addendum to the 324 Building Basis for Interim Operation for Stabilization, CHPRC-02983, Revision 3; the Remote Soil Excavation Addendum to the 324 Building Basis for Interim Operation, CHPRC-03197, Revision 1; the 324 Building Unreviewed Safety Question Determinations Summary; and the Fire Hazards Analysis for 324 Building, CHPRC-02984, Revision 3.*
- Letter, CHPRC-1805112, dated December 11, 2018, *Transmittal of the Hanford Sitewide Transportation Safety Document, DOE/RL-2001-36, Revision 3.*
- Correspondence received from RL:
 - Letter, 18-NSD-0033_RL, dated October 23, 2018, *Approval of HNF-20503, Revision 3, Tank 241-Z-361 Documented Safety Analysis (DSA), and HNF-20504, Revision 5, Technical Safety Requirements (TSRs) for the Tank 241-Z-361 Facility.*
 - Letter, 19-NSD-0003_RL, dated November 26, 2018, *Approval of the Plutonium-Uranium Extraction (PUREX) Facility Documented Safety Analysis (DSA) And Technical Safety Requirements (TSRs).*
 - Letter, 19-NSD-0006_RL, dated December 10, 2018, *Approval of the Contaminated Equipment Special Packaging Authorization, HNF-62738, Revision 0.*
 - Letter, 19-NSD-0004_RL, dated December 17, 2018, *Approval of HNF-58818, Revision 2, Documented Safety Analysis (DSA) for the 216-Z-9 Waste Storage Crib Facility, and HNF-59125, Revision 2, 216-Z-9 Waste Storage Crib Facility Technical Safety Requirements.*
 - Letter, 19-NSD-0011_RL, dated December 17, 2018, *Approval to Continue Using RADIDOSE Version 3.0 Software.*
- o Contractor Assurance Regulatory Reporting (CARR) accomplishments:
 - 574 Condition Reports (CRs) were screened:
 - One significant issue identified.
 - Seven adverse issues identified.
 - 234 Track Until Fixed issues identified.
 - 154 Trend Only items identified.
 - 161 OFI items identified.

- 17 Screened Out.
- 742 CRs administratively closed.
- 1,318 CRs actions administratively closed.
- Provided Course Number 600082, *CHPRC Responsible Manager Training - Issues Management*, to CHPRC employees.
- Provided full time support to PFP Issues Management and Occurrence Reporting activities.
- Provided Occurrence Reporting support to the River Risk Management Project.
- Submitted final Occurrence Reporting & Processing System (ORPS) report for EM-RL--CPRC-324FAC-2018-0004, *Energized Conductor Discovered While Performing Work in Electrical Panel*; and EM-RL--CPRC-324FAC-2018-0005, *Personnel Clothing Contamination*.
- Submitted ORPS notification reports for: EM-RL--CPRC-GENLAREAS-2018-0003, *Discovery of Exposed Hazardous Energy (Cut Heat Trace)*; EM-RL--CPRC-324FAC-2018-0005, *Personnel Clothing Contamination*; EM-RL--CPRC-PFP-2018-0007, *Near Miss – Hose Whipped while being Blown Out Striking Worker’s Hand*.
- Submitted Price-Anderson Amendments Act (PAAA) Noncompliance Tracking System (NTS) REPORT NTS-EM-RL—CPRC-SNF-2018-0008667, *Near Miss Events – Rocks Strike Vehicles*.
- Provided support for the Defense Nuclear Facilities Safety Board (DNFSB) On-Site review of Engineered Container Retrieval and Transfer System operational activities, including shipment of Sludge Transport and Storage Container Cask 5 from 105KW to T Plant.
- Provided support for the bi-monthly DNFSB Resident Inspector Meeting.
- Fifty-four documents were provided in response to DNFSB requests for information.
- Provided support and coordination to the DNFSB Hanford Site Resident Inspectors requests.
- Three external Lessons Learned were submitted in OPEXShare: 2018-PFP-0004 *Poor Communication Leads to a Contaminated Item Taken Off Site*; PRC-STP-01110 *Project Planning, Design, Execution and Startup Lessons Learned for the Sludge Removal Project*; and 2018-WFMP-0005 *Communication Issues Following Personnel Contamination at an Offsite Work Location*.
- Two internal Lessons Learned were submitted in OPEXShare: 2018-SGRP-0004 *Procurement Procedures Ensure Proper Quality Level at Project Inception* and 2018-SGRP-0005 *Lack of Communication during Work Scope Turnover Leads to Failure to Follow the Prescribed Hazardous Energy Control Process*. One external Just-In-Time was submitted in OPEXShare: 2018-RL-HNF-0010 *Failures of Lapel Samplers from SKC Model XR5000*.
- o Performance Oversight, Assessment, and Quality Assurance accomplishments:
 - Completed in-field activities and issued final report for the 10 CFR 835 Subpart G, *Posting and Labeling*, assessment that was conducted September through October.
 - Completed in-field activities and issued final report for the 10 CFR 835 Subpart K, *Design and Control*, assessment that was conducted October through December. The assessment resulted in one Noteworthy Practice.
 - Initiated planning for 10 CFR 835 Subparts I & N, *Reports to Individuals and Emergency Exposure Situations*, assessment that will be conducted January through February 2019.
 - Completed and issued SHS&Q-2019-SURV-22809, December 26, 2018, CHPRC Evaluated Supplier List (ESL), *Annual Evaluation of Mission Support Alliance (MSA) – Fiscal Year (FY)19, for continuation on the ESL*.
 - Provided specific mentoring and feedback to assessors and responsible managers that conducted management assessments to K Basin Operations (KBO), CPRM, Soil and Groundwater Remediation Project (S&GRP), River Risk Management Project (RRMP), Waste and Fuels Management Project (W&FMP), Business Services, and SHS&Q organizations.

- Completed and issued SHS&Q-2018-MA-21321, *Vehicle Mishap at CWC – Effectiveness of Issue Resolution*.
- Generated draft Lines of Inquiry to support Conduct of Work Core Concept development activities.
- Completed and issued SHS&Q-2019-SURV-21085, *Verify M&TE from MASF/437 in transition to K Basin is in compliance*.
- Attended/Participated in the “Effective ALARA Programs” workshop.
- Developed/issued assessment plan and conducted in-field activities for the 10 CFR 835 Subpart K “Design and Control” surveillance scheduled for November and December.
- One individual completed Lead Assessor certification process.
- Provided coaching and mentoring for multi-project Post-Job Review WSA teams.
- Conducted Project Assessment Coordinator meeting focusing on improving the Management Observation Program process.
- o Fire Protection (FP) accomplishments:
 - Completed factual accuracy review of EA-31 draft report. Comments were provided to EA-31 team by requested due date.
 - FP staff continue to perform numerous work package reviews and issue Hanford Fire Marshal permits in support of planned activities.
 - REDOX fire hazard analysis (FHA) is being prepared for transmittal to RL. All comments from the Hanford Fire Marshal’s Office have been satisfactorily resolved. Completed Quarterly Combustible Surveillances of Central Waste Complex (CWC), Waste Receiving and Processing (WRAP), Low Level Burial Grounds (LLBG), and 324 Facility.
 - Performed Waste Encapsulation and Storage Facility (WESF) monthly walkdown.
 - Completed Canister Storage Building (CSB) and T Plant complex Facility Fire Protection Assessments.
 - Provided support for PFP resumption actions, including working with facility and Mission Support Alliance, LLC, (MSA) staff to update the PFP FHA in order to document the Fire Water Loop “compensatory measure for temporary condition”.
 - Supported evaluation of options for Interim Safe Storage of K East and K West reactors.
- o Conduct of Work Mentor activities:
 - Presentation of Culture talk to SHS&Q Directors.
 - Review and analysis of specific RadCon-related CRs.
 - Review of CHPRC procedures concerning Conduct of Operations, Human Performance Improvement and Safety Culture.

Environmental Program and Strategic Planning (EP&SP)

• Environmental Protection

- o Provided direction and support to the implementation of the Tracking Inspection Actions for Regulatory Agencies (TIARA) software application. EP Inspection Coordinators have begun using the application manage inspection records.
- o Completed automation of the annual criteria and toxic air pollutant (C&T) calculation workflow. This allows an Environmental Compliance Officer to easily perform the annual query and calculation of C&T emissions for their project air emission units. Revision of the C&T environmental calculation completes a multi-year effort to simplify and provide configuration control for this annual calculation.
- o Supported CHPRC and RL efforts to obtain Ecology approval to remove Dangerous Waste Management Units 1301-N and 1325-N from the Site Wide Dangerous Waste Permit.
- o Provided Inspection Coordinator support to several regulatory agency inspections, including:
 - B Plant and WESF Stack Inspections (Health)
 - Closure of Dangerous Waste Management Units at T Plant and Central Waste Complex (Ecology)

- Inactive air emission units at Integrated Disposal Facility (IDF), WRAP, LLBG, Transuranic (TRU) Retrieval, and 400 Area (Health)
- **Environmental Compliance and Quality Assurance**
 - o Assessment Status
 - Completed Surveillance, Compliance of 300-FF-5 Operable Unit with Waste Management Plan, on October 31, 2018, and it resulted in no findings and six OFI.
 - Completed Independent Assessment, RCRA Groundwater Monitoring Program Interim and Final Status Requirements Compliance, on November 5, 2018, and resulted in three findings and six OFI.
 - Completed Surveillance, Implementation of High Performance Sustainable Building Requirements, on December 11, 2018, and resulted in one finding and no OFI.
 - Completed Surveillance, Clean Sweep Corrective Action Effectiveness Review, on December 21, 2018, and resulted in no findings or OFI.
- **Demonstrate active leadership and progress toward obtaining new Resource Conservation and Recovery Act (RCRA) Permit for the Hanford Site**
 - o Facilitated and participated in the following meetings:
 - Weekly permit Project Management Team meetings.
 - Weekly permit meeting for Hanford contractors.
 - Weekly schedule strategy discussions with Ecology.
 - Biweekly schedule status meetings with RL, DOE Office of River Protection (ORP), Ecology, and contractors.
 - Monthly Tier 2 Meeting with RL, ORP, and Ecology senior management.
 - o Maintained the permit schedule.
 - o Provided a detailed monthly schedule report and analysis for progress on the permit to Ecology, RL, ORP, and the contractors.
 - o Provided tracking and status of open issues that are preventing progression of the permit.
 - o Provided fulltime regulatory expertise and project management support.
- **Quality and timeliness of key documents submitted**
 - o From October through December 2018, 49 environmental documents supporting various CHPRC projects were completed through EP&SP Publication Services. Publication Services was established to provide a systematic process for performing technical editing and formatting of environmental documents.
 - o As part of continuous improvement, a lead author training is scheduled in January 2019 for representatives from various CHPRC projects and functions. The course will focus on the topics of document planning, writing, and finalization along with resources and tools that are available to support authors.

Business Services

- **Supply Chain/Acquisitions:**
 - o Conducted the third Buyer's Technical Representative Forum. Items covered in the meeting included managing significant modifications, subcontractor oversight planning, labor categories on time and material contracts, and proper technical evaluations and forms.
 - o Developing an Apprentice Utilization Notice in conjunction with Project Technical Services' desire to encourage the use and development of apprentices on CHPRC construction projects.
 - o Developing a more streamlined basic services contracting approach, replacing a four-part contract that is designed for larger construction type contracts.
 - o Established a Basic Ordering Agreement acquisition strategy for on-going project control and engineering resource needs at 100K. Request for Proposal will be released in January 2019.
 - o Participated in MSA-led Kaizen sessions for P-Card portion of Business Management Systems Upgrade project.

- o Coordinated a briefing of the Roof Asset Management Program (RAMP) that is used to manage facility roofing maintenance throughout the National Nuclear Security Administration (NNSA) complex. Environmental Management has shown interest in participating in the program.
- o Collaborated with EP&SP to plan the upcoming competition for environmental modeling and risk assessment work. The Request for Proposal will be released in January 2019.
- o Worked with the CHPRC small business protégé firm to identify and address personnel training gaps. CHPRC is sponsoring training for the protégé firm in areas that may result in business opportunities at Hanford and other DOE sites.
- o Assisted Project Technical Services in addressing changes to the Hanford Site Electrical Safety Program with CHPRC construction subcontractors.
- o Coordinated a discussion with the Supply Chain Management Center on a complex-wide convenience copier arrangement.
- o Assisted in the development of a requirements document to perform radiological control program assessments.
- o Secured solar-powered light plants for use at the Federal Building to increase visibility during the dawn and dusk time periods.
- o Developed an acquisition strategy for the procurement of cell dams at the 324 Building. A fixed priced contract will be pursued on the open market.
- o Assisted the Waste and Fuels Management organization with potential crane service providers. There is a need to evaluate vintage cranes in existing facilities where a current manufacturer is no longer in existence.
- **Procurement:**
 - o In the first quarter fiscal year (FY) 2019, awarded/amended 421 contracts with a total value of \$36.6 million. Additionally, awarded 726 new material purchase orders (PO) valued at \$2.4 million to support ongoing project objectives.
 - o At the end of 123 months of the CHPRC project, procurement volume has been significant: \$2.82 billion in contract activity has been recorded with approximately 55.7 percent, or \$1.57 billion, in awards to small businesses. These awards include 8,408 contract releases, 27,461 POs, and 315,016 PCard transactions.
 - o Major contract awards:

Contract/Release	Award Date	Awarded To	Title	Contract Type	Value (\$M)
67321	10/1/2018	VNS Federal Services, LLC	IDF Facility Infrastructure Detailed Design	T&M	\$ 0.87
67658	10/11/2018	Ojeda	618-10 Complex Revegetation	FFU	\$ 0.49
48767-7	10/22/2018	Cascade Drilling LP	Installation of Nine Wells Plus One Opt. Well, in the 100-HR-3 OU	FFU	\$ 0.88
67187-0	11/8/2018	Perma-Fix Northwest Richland	TRU/TRUM Size Reduction and Repackaging Services	FFU	\$ 18.0
64033-2	11/28/18	Yellow Jacket Drilling Services LLC	Installation of Three Monitoring Wells in the 200-ZP-1 FY19	FFU	\$ 1.4
67558-1	11/28/18	Bay West LLC	Geophysical Logging Services	T&M	\$ 1.1

Contract/ Release	Award Date	Awarded To	Title	Contract Type	Value (\$M)
64033-3	12/20/18	Yellow Jacket Drilling Services LLC	One Injection Well and One Extraction Well 200- ZP-1 FY19	FFU	\$ 1.1
36883-90	12/20/18	OJEDA	Construction Activities in the ZP-1 OU	T&M	\$ 0.4

- **Facilities & Property Management (F&PM):**
 - o Completed setup and occupancy of MO6114 in the 200E unsecured corridor.
 - o Ninety-five percent complete on duct smoke detector isolation in 2740W. Planned completion scheduled for January 2019.
 - o Procurement and setup of six-wide and two-wide mobile offices (MO) for Central Plateau Risk Management is 40 percent complete.
 - o Relocation and setup of three MOs from Research Technology Laboratory (RTL) Project (Pacific Northwest National Laboratory (PNNL) Richland) to B Plant is 30 percent complete.
 - o FY2019 Fixed Property Inventory commenced December 2018 and is 50 percent complete.
- **Finance:**
 - o Continuing with the series of RL finance/contracting officer meetings to discuss and align topics identified in the CHPRC Incurred Cost Audit Corrective Action Plan for FY2009-2015.
 - o October-December month end completed with no cost suspensions.
 - o Submitted FY2019 provisional rates.
 - o Submitted FY2018 fourth quarter reconciliation of RL's Accounts Payable Accrued Liabilities account (number 2110).
 - o Provided support for the FY2016 Incurred Cost Report Audit.
 - o Provided support for FY2017 Invoice Assessment.
 - o Provided support for the CR1407 Cost Monitoring Assessment.
 - o Responded to the FY2019 labor rates data call.
- **Information Management:**
 - o Processed 133,183 electronic records in the first quarter of FY2019 into the Integrated Document Management System (IDMS).
 - o Continued work with MSA to disposition upgrade issues with desktop equipment in support of site Windows 10 upgrade project. To date, 635 workstations have been replaced or returned.

Prime Contract and Project Integration (PC&PI)

- **Project Management/Compliance Assessments**
 - o The Change Control Board (CCB) Coordinator facilitated the preparation and the disposition of 11 baseline change requests (BCRs) by the CCB in October, five BCRs in November, and seven BCRs in December.
 - o Worked with RL and the PFP Closure Project to prepare for the implementation of the proposed revised RL-0011.C2 PFP Demolition Capital Asset Project Performance Measurement Baseline (PMB) resulting from the DOE approval of the revised Critical Decision (CD) 2/3, *Approve Performance Baseline/Start of Execution*.
 - o Worked with Risk Management to complete and submit to RL the FY2019 Annual Performance Measurement Baseline Risk Analysis Report in support of the FY2019 Post Contract Baseline (PCB) deliverable submitted in September 2018.
 - o Represented the Prime Contract and Project Integration organization by providing a briefing on the requirements and administration of the Plateau Remediation Contract during the December CHPRC New Employee Orientation meeting.

- o Initiated work to draft CHPRC responses to five of the historical OIG audits identified in OIG Special Report, DOE-OIG-10-04, *Compilation of Challengers and Previously Reported Key Findings at the Hanford Site for Fiscal Years 2012-2018*, issued November 2, 2018.
- **Prime Contract Compliance (PCC):**
 - o During October through December, PCC received and processed 8 contract modifications (679 and 686) from RL.
 - o The Correspondence Review Team received and determined the distribution and assignment for 102 incoming letters/documents. PCC reviewed 134 outgoing correspondence packages.
 - o Submitted CHPRC-1804554 - Contract Number DE-AC06-08RL14788 – Notification of Differing Site Condition – Plutonium Extraction Plant Deep Bed Filter Condensate Tank Rate of Rise.
 - o Submitted CHPRC-1804787 - Contract Number DE-AC06-08RL14788 – Notification of Differing Site Conditions – Reduction-Oxidation Combustible and Hazardous Materials.
 - o Submitted CHPRC-180569 - Contract Number DE-AC06-08RL14788 – Notification of Differing Site Condition – Waste Encapsulation.
 - o Submitted CHPRC-1804169 – Contract Number DE-AC06-08RL14788 – Performance Measure Completion Request for Contracting Officer Acceptance per PRC Clause B.8(C) –RL-040, Fiscal Year 2018, PM-40-1-18.
 - o Submitted CHPRC-1804148 - Contract Number DE-AC06-08RL14788 – Performance Measure Completion Request for Contracting Officer Acceptance per PRC Clause B.8(C) – RL-030, Fiscal Year 2018, PM-30-3d-17/18.
 - o Submitted CHPRC-1804185 - Contract Number DE-AC06-08RL14788 – Performance Measure Completion Request for Contracting Officer Acceptance per PRC Clause B.8(C) – RL-030, Fiscal Year 2018, PM-30-4d-17/18.
 - o Submitted CHPRC-1804052 – Contract Number DE-AC06-08RL14788 – Progress Towards Completion of Performance Measure PM-13-3a-18, Submit to RL for the Final Design Report for Capsule Storage System for Management of Cesium and Strontium Capsules Project W-135, and PM 13-3b-18, Submit to RL the Final Design Report for the Capsule Storage Area for Project W-135 and Request for Consideration.
 - o Submitted CHPRC-1804168 – Contract Number DE-AC06-08RL14788 – Performance Measure Completion Request for Contracting Officer Acceptance per PRC Clause B.8(C) – RL-030, Fiscal Year 2018, PM-30-1-18.
- **Project Integration**
 - o Project Support, Systems Integration & Schedule Integration
 - Participated in the Structured Improvement Activity for the Business Management System (BMS) upgrade for Project Controls and Reporting. This Kaizen was focused on solidifying requirements for the BMS upgrade project to help produce integrated future state business processes and requirements.
 - Implemented BCRs to incorporate authorized PCB planning into the PMB, and additionally implemented the Base Year Shift and FY2019 rates into Cobra.
 - Finalized FY2019 annual PMB Review Comment Record (RCR) disposition comments and submitted to RL.
 - Developed and submitted the FY2019 Spend Plan to RL for HQ approval to support funding allotments and monthly reporting of variances to the plan.
 - Provided CHPRC FY2019 planned subcontracting information to CHPRC Procurement to support the Small Business Plan update and annual submittal to RL.
 - Participated in Hanford Life Cycle Cleanup Baseline (HLCCB) project integrated project team kickoff. The Integrated Project Team (IPT) members will work together effectively to define, design, implement, and operate an integrated HLCCB that will serve the needs of the Site organizations for planning and analysis. The scope of this effort is limited to the development phase, scheduled through September 2019.

- o 000 Project EVM Support & Reporting:
 - Issued three months of CHPRC Monthly Performance Reports to RL.
 - Submitted the September, October, and November Gold Metrics to RL.
 - Submitted fourth quarter Facility Information Management System (FIMS) Quarterly Maintenance Report.
 - Submitted FIMS FY2018 Operating Cost to Mission Support Contractor.
 - Completed Safety Hour reporting each month.
 - Compiled IPT and Monthly Project Review packages for September, October, and November.
- **Project Support Services**
 - o Risk Management:
 - Submitted annual Risk Analysis Report to RL on November 1, 2018.
 - Participated in Kaizen on October 25, 2018, and follow-up activities to support BMS upgrade project championed by MSA.
 - Conducted monthly assessments of the status of key project risks and risk impacts associated with BCRs.
 - o Estimating & Program Support
 - Began development of Addendum 001 for CP ALL PRC 1710 - Plateau Remediation Contract Extension, Period October 1, 2018, Through September 30, 2019. The addendum includes scope from RL-0030, RL-0040, and RL-0041.
 - Provided responses to 18 requests for information (RFI) from RL:
 - Two RFIs with 11 questions on CP 040 PRC 1688 - PUREX Tunnel 2 Stabilization.
 - 16 RFIs with 22 questions on CP ALL PRC 1710 - Plateau Remediation Contract Extension, Period October 1, 2018, Through September 30, 2019.
 - Miscellaneous estimating support:
 - Provided actual cost, broken out by contract line item number (CLIN), general and administrative (G&A), and resources to support CHPRC Contracts global settlement negotiations.
 - Completed an assessment of the supporting documents submitted in CP ALL PRC 1710 - Plateau Remediation Contract Extension, Period October 1, 2018, through September 30, 2019. The assessment identified 90 estimating adjustments for a cost impact of \$2.6 million, 0.48 percent of the submitted value of \$538.1 million.
 - Completed five Inter-Entity Work Orders (IEWOs) to support other contractors:
 - o IEWO 217828 proposal for extension (October 1, 2018, through September 30, 2019), Environmental Database Technical Support and Maintenance.
 - o Pacific Northwest National Laboratory (PNNL) RTL complex, IEWO 383121 (IWO-5) modification for the remainder of FY2019.
 - o PNNL NNSA/NA-243 Nuclear Compliance Verification Program.
 - o Subcontracting support to Oakridge for RL.
 - o Review of West Valley proposals.
 - Prepared a Rough Order of Magnitude (ROM) for 10 CFR 851.
 - Initiated preparation of a ROM for Ecology access to IDMS.

Resource Management and Strategic Integration

- **Human Resources (HR):**
 - o Transferred scope to the Finance Department
 - The administration of attendance codes related to bereavement and jury duty.
 - The Personal Time Bank (PTB) cash out process.
 - o Implemented Bargaining Unit general increases.

- **Staffing and Development:**
 - o Implemented Succession Planning/Employee Development plan for CHPRC leadership and critical positions.
 - o Supported PFP with interviewing approximately 100 candidates to replace Decontamination and Decommissioning (D&D) workers transferring to Nuclear Chemical Operator (NCO) positions at Washington River Protection Solutions LLC (WRPS). Onboarded more than 40 new D&D workers in December 2018 with an additional 12 targeted to start on January 28, 2019.
- **Labor Relations (LR):**
 - o Continued to support projects to address staffing needs/challenges in a number of key resource categories.
 - o Following is a list of grievances in the arbitration process and their status:
 - Resolved during reporting period:
 - PRC-017-045 – Building trades performing work ruled non-Davis-Bacon. Status: Union withdrew grievance.
 - Scheduled:
 - PRC-017-010 – union claiming employee should have been paid between times when ready to return to work and when started with MSA. Status: Arbitration scheduled March 21, 2019.
 - PRC-017-040 – union claiming exempt performed excessing of material. Status: Arbitration scheduled February 21, 2019.
 - PRC-017-042 – union grieving company’s closure of the Plastic Shop at PFP. Status: Arbitration scheduled January 22, 2019.
 - PRC-017-052 – union claiming termination not just. Status: Arbitration scheduled for May 8 and 9, 2019.
 - PRC-018-001 – union claiming jurisdiction of demobilization activities on Davis-Bacon work site. Status: Arbitration scheduled June 6, 2019; company has requested that union put similar grievances (PRC-018-024 & PRC-018-039) in abeyance pending outcome of this arbitration.
 - PRC-018-010 – Discipline – Status: Arbitration scheduled for September 25, 2019.
 - PRC-018-013 – Discipline – Status: Arbitration scheduled for August 14, 2019.
 - PRC-018-021 – Applying fixative – Status: Arbitration scheduled for July 24, 2019.
 - PRC-018-037 – Company establishing supervisor work groups without following seniority – Status: Arbitration scheduled for October 24, 2019.
 - PRC-018-044 – Job abandonment – Status: Arbitration scheduled for April 10, 2019.
 - o The following grievances have been requested by Hanford Atomic Metal Trades Council (HAMTC) to move to arbitration but pending arbitration dates:
 - PRC-018-010, PRC-018-013 (Discipline).
 - PRC-018-011 & PRC-018-026 (Tumbleweed Removal).
 - PRC-018-041 (Fixative Application).
 - PRC-018-025 (Tunnel Surveillance).
 - PRC-018-043 (No call, no show termination).
- **Interface Management:**
 - o Organized and participated in the final review meeting for MSC-RD-FP-7899 *Fire Protection System Testing/Inspection/Maintenance/Deficiencies*. Included process to involve other Hanford contractors in MSA’s evolution of the “Get to Green” Fire Protection Program Corrective Action Plan requirements.
 - o Issued Hanford Environmental Data Integration (HEDI) AIA, HNF-48562, Revision 1.
 - o Completed joint effort with MSA and WRPS to address recent RL/ORP concerns related to Biological Control vector management. Recovery actions including lessons learned at the 12B

burial ground site and additional reporting/analysis commitments were presented to RL/ORP as highlights of continued biological vector control improvements.

- **Strategic Management:**
 - o Finalized FY2019 DOE-CHPRC Integrated Priority List (IPL) including additional scope requested by RL.
 - o Published FY2019 Operational Execution IPL for use by the projects in determining resource priorities.
 - o Conducted strategic planning workshop in November 2018. Information collected will form the basis for a 10-year strategic plan in support of RL's goals and objectives. Continued development of schedule and cost data for deliverable scheduled to complete by the end of January 2019.
 - o Developed and implemented a tool to support forecasting FTE changes in projects during FY2019 and FY2020.

Project Technical Services (PTS)

- **Training and Procedures**
 - o A multi-facility team developed and implemented the new company-level Field Work Supervisor Core qualification card.
 - o Scheduled new electrical safety courses required by a technical amendment to 10 CFR 851 being flowed down through site procedure DOE-0359.
 - o Coordinated block training for Plutonium Uranium Extraction Plant (PUREX) teamsters (with very short notice) to preserve resource continuity while keeping them gainfully employed while awaiting authorization to commence the project.
 - o Prepared and issued new Qualification Card Number 600380, *Electrical Risk Assessor & Energized Electrical Work Permit Preparer*, and new qualification verification checklists Number 60038A/B (Electrician) and Number 60039A/B (Instrument Specialist). These new qualification instruments are necessary to ensure compliance with National Fire Protection Association (NFPA) 70E (2018) requirements.
 - o Teamed with Engineering staff to develop a path forward on implementation of the new NFPA 70E (2018) training requirements. This strategy is vital to ensure company compliance with the new requirements by the January 14, 2019, due date.
 - o Supported emergent training needs by scheduling and holding three instructor-led class sessions of *Do Work Safely*. One class was held for PFP's 45 new D&D workers and two classes for other new hire field workers.
- **Operations Program (ConOps/Work Control/Conduct of Work)**
 - o Participated in the Work Management Energy Facility Contractors Group focusing on improvement metrics for work control processes.
 - o Supported review of work impacts teamed with the Electrical Authority Having Jurisdiction to identify work activities impacted by the revision of DOE-0359, *Hanford Site Electrical Safety Program*
 - o Worked with the Project to provide a planners workshop on changes to the Job Hazard Analysis process.
 - o Supported the Training Organization in the development and issuance of the Field Work Supervisor Core Qualification card.
 - o Supported development and submittal of DOE-0336, Hanford Site lockout/tagout Procedure (Revision 3).
 - o Developed implementation strategy and began gap training at all projects on the changes to DOE-0336 Revision 3.
 - o Supported the CHPRC Hazardous Energy Control Technical Review Board meeting. This meeting is conducted to share information, lessons learned, and issues from across CHPRC projects and the other site contractors.

- o Met with MSA on MSC-RD-FP-7899 to discuss implementation impact to CHPRC projects.
- o Provided initial sessions of DOE-0336 gap training. Gap training activities were halted due to pending RL changes/comments.
- o Provided support for the System Isolation Fundamentals class. This training is being provided to support Controlling Organization Administrators, Field Work Supervisors from S&GRP, CPRM, and W&FMP.
- o Completed the midpoint effectiveness review of Hazardous Energy Control Corrective Action Plan.
- o Supported the Hazardous Energy Control Technical Review Board monthly meeting.
- o Updated and submitted the Quarterly Start-up Notification Report to RL.
- **Readiness and Preparedness**
 - o Completed the following assessments for FY2018: Continuity of Operations (COOP), 4th Quarter Emergency Preparedness, and the Incident Command Post Document and Equipment Assessment.
 - o Conducted multiple programmatic workshops for EP staff. The goal of these workshops is to ensure a base level of knowledge among entire staff, which allows for better cross-project support.
 - o Transitioned new management for the EP and Readiness programs.
 - o Supported project drill implementation to improve Facility Emergency Response Organization personnel training, qualification, and proficiency.

Communications:

- Communications supported RL in proactive and reactive media stories:
 - o Tri-City Herald (October 9, 2018) Hanford's radioactive capsule deadline for dry storage is set.
 - o EM Newsletter (November 13, 2018) Community Leaders Tour 324 Building mock-up at Hanford.
- Communications supported RL in the development of social media posts featuring:
 - o 618-10 Burial Ground.
 - o 324 Building Progress.
 - o Lighting installation at the Waste Encapsulation and Storage Facility.
 - o Entering the Reduction Oxidation Facility's canyon for the first time in 21 years.
 - o PUREX Tunnel 2 grouting.
 - o Lower-risk demolition work at PFP.

MAJOR ISSUES

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

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

PROJECT BASELINE PERFORMANCE
Current Month
(\$M)

WBS 000 Project Services and Support	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Office of the President	0.2	0.2	0.1	0.0	0.0%	0.0	9.5%
Engineering	0.2	0.2	0.3	0.0	0.0%	(0.1)	-81.2%
Internal Audit	0.1	0.1	0.1	0.0	0.0%	0.0	33.1%
General Counsel	0.1	0.1	0.1	0.0	0.0%	0.1	38.9%
Communications & Outreach	0.1	0.1	0.1	0.0	0.0%	(0.0)	-9.8%
Safety, Health, Security, and Quality	1.3	1.3	1.3	0.0	0.0%	0.0	1.2%
Environmental Program and Strategic Planning	0.4	0.4	0.4	0.0	0.0%	(0.0)	-4.6%
Business Services	2.7	2.7	2.8	0.0	0.0%	(0.1)	-2.1%
Prime Contract and Project Integration	0.6	0.6	0.6	0.0	0.0%	(0.0)	-0.7%
Resource Management and Strategic Integration	0.6	0.6	0.5	0.0	0.0%	0.1	14.8%
Project Technical Services	0.5	0.5	0.4	0.0	0.0%	0.2	34.1%
Indirect WBS 000 Total	6.8	6.8	6.6	0.0	0.0%	0.2	2.6%

Numbers are rounded to the nearest \$0.1 million.

Indirect WBS 000

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

The variance is within reporting thresholds.

CM Cost Performance: (+\$0.2M/+2.6%)

The variance is within reporting thresholds.

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

WBS 000 Project Services and Support	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)
Office of the President	0.5	0.5	0.4	0.0	0.0%	0.0	6.4%	2.0
Engineering	0.4	0.4	0.4	0.0	0.0%	0.0	4.0%	1.9
Internal Audit	0.4	0.4	0.3	0.0	0.0%	0.1	20.1%	1.6
General Counsel	0.4	0.4	0.2	0.0	0.0%	0.2	41.6%	1.6
Communications & Outreach	0.3	0.3	0.3	0.0	0.0%	(0.0)	-1.8%	1.2
Safety, Health, Security and Quality	3.7	3.7	3.4	0.0	0.0%	0.3	8.7%	16.1
Environmental Program and Strategic Planning	1.1	1.1	1.1	0.0	0.0%	(0.0)	-1.0%	4.8
Business Services	8.0	8.0	7.7	0.0	0.0%	0.3	3.6%	33.7
Prime Contract and Project Integration	1.8	1.8	1.8	0.0	0.0%	(0.0)	-0.8%	7.7
Resource Management and Strategic Integration	1.6	1.6	1.3	0.0	0.0%	0.3	20.7%	7.0
Project Technical Services	1.5	1.5	1.6	0.0	0.0%	(0.0)	-2.6%	6.6
Indirect WBS 000 Total	19.7	19.7	18.6	0.0	0.0%	1.2	5.9%	84.2

Numbers are rounded to the nearest \$0.1 million.

Indirect WBS 000

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

The variance is within reporting thresholds.

FYTD Cost Performance: (+\$1.2M/+5.9%)

The positive cost variance is attributable to less labor cost than budgeted due to open vacancies, project needs, as well as unplanned absences at a rate higher than expected. Additionally, information services cost has been lower than projected.

FY2019 G&A Analysis (\$M)

WBS 000 Project Services and Support	FY 2019					
	FYTD BCWS	FYTD Actual	FYTD Variance (O)/U	FY 2019 BCWS	FY 2019 Forecast	FY 2019 Variance (O)/U
General & Administrative (G&A)	19.7	18.6	1.2	84.2	84.9	(0.8)
Office of the President	0.5	0.4	0.0	2.0	2.4	(0.4)
Engineering	0.4	0.4	0.0	1.9	1.6	0.2
Internal Audit	0.4	0.3	0.1	1.6	1.3	0.4
General Counsel	0.4	0.2	0.2	1.6	1.6	0.0
Communications	0.3	0.3	(0.0)	1.2	1.2	0.0
Safety, Health, Security and Quality	3.7	3.4	0.3	16.1	16.3	(0.2)
Env. Program & Strategic Planning	1.1	1.1	(0.0)	4.8	5.0	(0.2)
Business Services	8.0	7.7	0.3	33.7	33.7	(0.0)
Prime Contract and Project Integration	1.8	1.8	(0.0)	7.7	7.9	(0.2)
Resource Mgmt & Strategic Intg	1.6	1.3	0.3	7.0	7.0	(0.0)
Project Technical Services	1.5	1.6	(0.0)	6.6	7.0	(0.4)

FY 2019		
G&A Distribution	(20.9)	(88.0)
G&A Liquidation (Over)/Under	(2.3)	(3.1)

Liquidation Analysis

For December, application of the G&A rate over-liquidated total to date G&A costs by \$2.3 million. The FY2019 yearend projected over-liquidation of \$3.1 million reflected in the fiscal year spend forecast reflects a projected decrease in G&A costs as well as an increase to the G&A base.

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

Appendix C

Capital Asset Projects

CH2MHILL
Plateau Remediation Company



December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

CH2MHILL
Plateau Remediation Company



K. A Wooley
Vice President for
Plutonium Finishing Plant
Closure Project

December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Progress has been temporarily put on hold on work associated with critical decision (CD)-4 closure to remove the final glovebox from the 234-5Z Facility during demolition. 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 demolition on 234-5Z 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 May 2019, is currently being planned and preparations for a second management assessment (MA) are being made.

MAJOR ISSUES

Issue:

During November, the Plutonium Finishing Plant (PFP) project realized a loss of ten Decontamination & Decommissioning (D&D) workers due to hiring by Washington River Protection Solutions, LLC, another Hanford contractor. Ten more D&D workers are scheduled to leave in January. It is anticipated that this loss in trained and qualified workers will cause a ten-week schedule impact to the PFP project.

Corrective Action:

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

Status:

In response to this loss of staff, PFP has hired an additional 25 D&D workers who began training on December 3, 2018. Classroom training at HAMMER is scheduled to complete January 11, 2019. These D&D workers will then start the on-the-job portion of their training at 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 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 December .				
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 December .				
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 December .				
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 December .				
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in December .				

CRITICAL PATH SCHEDULE

The Plutonium Finishing Plant (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 and 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 1, 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	10/01/2019	The finish date for the CAP 1 project has been pushed out 15 days to October 1, 2019, due to the incorporation of further revisions to the revised demo approach. The total gloveboxes removed to date remains at 99 percent complete. Completion of CD-4 closure by November 30, 2017, was not achieved.

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

**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



December 2018
CHPRC-2018-12, 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) 2018 / 11 / 26										
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 12 / 23										
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (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	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 332,586						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)								
b. WORST CASE 334,992																
c. MOST LIKELY 334,979		330,987		-3,992												
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 (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	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	235,514	235,495	259,792	-19	-24,297	0	0	0	235,514	259,799	-24,285
RL_0011_C1.05 Disposition PFP Facility	0	0	0	0	0	11,990	11,990	12,477	0	-487	0	0	0	11,990	12,477	-487
RL_0011_C1.06 Project Management & Support	0	0	0	0	0	7,221	7,221	7,731	0	-510	0	0	0	7,221	7,731	-510
RL_0011_C1.90 Usage Based Services Distributions -PBS RL-11	0	0	0	0	0	19,399	19,399	19,253	0	147	0	0	0	19,399	19,253	147
RL_0011_C1.98 Ramp-up and transition	0	0	0	0	0	41,028	41,028	33,328	0	7,700	0	0	0	41,028	33,328	7,700
RL_0011_C1.99 PBS RL-11 UBS, G-n-A, Direct Distrib	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	-17,447	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	-17,447	0	0	0	317,545		
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																
a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE																
										-19	-17,447			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) 2018 / 11 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 12 / 23	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING			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	-17,447	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	-17,447	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) 2018 / 11 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 12 / 23	
		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 JAN 2019 (4)	+2 FEB 2019 (5)	+3 MAR 2019 (6)	+4 APR 2019 (7)	+5 MAY 2019 (8)	+6 JUN 2019 (9)	JUL 2019 (10)	AUG 2019 (11)	FY19 END (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	1	0	0	0	15442
g. TOTAL DIRECT	0	15458	0	0	0	0	0	0	0	0	1	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) 2018/11/26			
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018/12/23			
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	0.00
Cumulative:	315,152	315,133	332,579	-19	-0.0%	-17,447	-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 now reflects a schedule loss with a new completion date of October 01, 2019. The schedule loss was due to the incorporation of further revisions to the revised demo approach.

The current RL-11 performance schedule indicates that the PFP project will achieve slab-on-grade by September 16, 2019. On Friday, December 15, 2017 swing shift RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management Stop Work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis has been conducted and recovery actions and expected completion dates have been identified. The regulators were notified in advance that the PFP Project would not meet the re-negotiated TPA milestone M-083-00A due date of 9/30/17 for achieving slab-on-grade. In addition, the December 30, 2017 CD-4 date was not achieved.

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

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

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 December.
- Forecast Schedule with No Baseline: None in the month of December.
- UB Balance: None in the month of December.
- Negative ACWP: None in the month of December.
- EAC Analysis: Best Case = \$332,586; Most Likely = \$334,979; Worst Case = \$334,992. 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.
- Negative CV > VAC: Scope to perform size reduction efforts on the high gram glovebox removal efforts was estimated to be completed in a much shorter time frame with much fewer resources than originally planned causing the large Cost Variance. The EAC is reflective of the current approach to perform the remaining work scope.
- MR Transactions: None in the month of December.
- Freeze Period Changes: None in the month of December.
- Retroactive Changes: None in the month of December.
- EVT Changes: None in the month of December.

Prepared by: Eric Denton

1/14/2019

Approved by:

Date:

Appendix C.2

Capital Asset Project

RL-0011.C2 - Demolition of PFP Facilities



K. A. Wooley
Vice President for
Plutonium Finishing Plant
Closure Project

December 2018
CHPRC-2018-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Loadout of existing 234-5Z Facility debris has continued throughout the month. Approximately 41 percent of the existing debris pile has been shipped to the Environmental Restoration Disposal Facility (ERDF) for disposal. The higher-risk demolition, currently forecast to begin in May 2019, is being planned and preparations for a second Management Assessment (MA) are being made.

<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 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:

- Loaded and shipped existing 234-5Z rubble debris. Approximately 41 percent of existing debris has been shipped.

MAJOR ISSUES

Issue:

During November, the PFP project realized a loss of 10 Decontamination & Decommissioning (D&D) workers due to hiring by Washington River Protection Solutions, LLC, another Hanford contractor. Ten more D&D workers are scheduled to leave in January. It is anticipated that this loss of trained and qualified workers will cause a ten week schedule impact to the PFP project.

Corrective Action:

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

Status:

In response to this loss of staff, PFP has hired an additional 25 D&D workers who began training on December 3, 2018. Classroom training at HAMMER is scheduled to complete January 11, 2019. These D&D workers will then move to the on-the-job portion of their training at 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-0011/WBS-011.OA																			
Explanation of major changes to the project monthly spotlight chart: No major changes to the spotlight chart in December .																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
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, 64 days	●	↓	<p>Risk Event: Twenty-five D&D workers have been hired to other projects on the Hanford Site and will be leaving PFP. The process to hire and train new D&D workers has been initiated.</p> <table border="1"> <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.</td> <td>1/17/19</td> <td>50%</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in December. Offers were made to new D&D workers and training began on December 3, 2018.</p>	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.	1/17/19	50%						
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.	1/17/19	50%																	
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
No critical risks in December .																			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																			
No high risk threat value risks in December .																			
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%) Worst Case Impacts: \$0, 52 days	●	↔	<p>Risk Event: During resumption of PFP demolition activities, an increase in stop works could result in delays.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps, with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. Increased communication and worker involvement has been implemented to avoid confusion and concern in an effort to minimize stop works.</p>	Mitigation action(s)	FC Date	%	Update communications as positions change.	Ongoing	N/A	Provide new maps, with entry/exit instructions when boundaries are revised.	Ongoing	N/A	Encourage additional worker involvement.	Ongoing	N/A	Increase frequency of post-job reviews.	Ongoing	N/A
Mitigation action(s)	FC Date	%																	
Update communications as positions change.	Ongoing	N/A																	
Provide new maps, with entry/exit instructions when boundaries are revised.	Ongoing	N/A																	
Encourage additional worker involvement.	Ongoing	N/A																	
Increase frequency of post-job reviews.	Ongoing	N/A																	
PFP-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	●	↔	<p>Risk Trigger: Equipment failures result in delays to fieldwork.</p> <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> <p>Mitigation Assessment: No major changes in December. All mitigations have been sufficient to maintain equipment in working condition.</p>	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																	

<p>PPF-P5-006: Additional Soil Removal is Required</p>	<p>Prior to the placement of the cover cap, the additional soil added for contamination control is required to be dispositioned, resulting in cost and schedule delays to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$0, 54 days</p>			<p>Risk Trigger: Additional soil, above planned value, is required to be removed due to contamination or regulatory concerns.</p> <table border="1" data-bbox="862 268 1555 359"> <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>75%</td> </tr> <tr> <td>Collect and provide radiological mapping data to RL.</td> <td>TBD</td> <td>TBD</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. Continued communication with RL on required soil removal. No additional soil above planned quantity is required at this time. DOE has requested radiological data to help them determine that no additional soil disposition other than what is planned is required.</p>	Mitigation action(s)	FC Date	%	Engage early with RL to identify a path forward associated with the additional soil.	11/9/18	75%	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	75%											
Collect and provide radiological mapping data to RL.	TBD	TBD											
<p>Unassigned Risks (Pending ownership of identified risks/opportunities)</p>													
<p>No unassigned risks identified in December.</p>													

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, 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 July 16, 2019. The 236-Z canyon demolition will then resume with completion scheduled for September 16, 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 December 2019.

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	11/26/19	There has been a schedule loss of 5 days since November. This was a result of the incorporation of further revisions to the revised demo approach. Loadout of the existing debris continued in December with approximately 41 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



December 2018
CHPRC-2018-12, 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_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2018 / 11 / 26													
b. LOCATION (Address and ZIP Code) Richland, WA		d. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 12 / 23													
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18													
5. CONTRACT DATA																			
a. QUANTITY 1	b. NEGOTIATED COST 51,683	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 5,000	e. TARGET PRICE 56,683	f. ESTIMATED PRICE 160,375	g. CONTRACT CEILING 56,683	h. ESTIMATED CONTRACT CEILING 160,375												
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		151,940			c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)												
b. WORST CASE		155,375																	
c. MOST LIKELY		155,375	51,683	-103,692															
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		BUDGETED COST		ACTUAL		COST VARIANCE		SCHEDULE VARIANCE		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)		
RL-0011 Nuclear Mat Stab & Disp PFP																			
RL_0011_C2.05 Disposition PFP Facility		0	1,367	4,429	1,367	-3,062	55,307	44,146	107,418	-11,161	-63,273	0	0	0	55,307	151,940	-96,634		
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		0	1,367	4,429	1,367	-3,062	55,307	44,146	107,418	-11,161	-63,273	0	0	0	55,307	151,940	-96,634		
f. MANAGEMENT RESERVE															3,434				
g. TOTAL		0	1,367	4,429	1,367	-3,062	55,307	44,146	107,418	-11,161	-63,273	0	0	0	58,741				
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																			
a. VARIANCE ADJUSTMENT																			
b. TOTAL CONTRACT VARIANCE										-11,161		-63,273		58,741		151,940		-93,199	

**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) 2018 / 11 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 12 / 23	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group	CURRENT PERIOD						CUMULATIVE TO DATE					REPROGRAMMING			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		ADJUSTMENTS			BUDGETED	ESTIMATED	VARIANCE	
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	(14)	(15)	(16)	
3B - PFP Closure Project	0	1,367	4,429	1,367	-3,062	55,307	44,146	107,418	-11,161	-63,273	0	0	0	55,307	151,940	-96,634	
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	1,367	4,429	1,367	-3,062	55,307	44,146	107,418	-11,161	-63,273	0	0	0	55,307	151,940	-96,634	
f. MANAGEMENT RESERVE														3,434			
g. TOTAL	0	1,367	4,429	1,367	-3,062	55,307	44,146	107,418	-11,161	-63,273	0	0	0	58,741			

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_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2018 / 11 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 12 / 23	
		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 JAN 2019 (4)	+2 FEB 2019 (5)	+3 MAR 2019 (6)	+4 APR 2019 (7)	+5 MAY 2019 (8)	+6 JUN 2019 (9)	JUL 2019 (10)	AUG 2019 (11)	FY19 END (12)	FY20-LC (13)	ATCOMPLETE (14)			
3B - PFP Closure Project	153	2657	171	164	156	156	156	156	156	156	156	154	153	175	0	4254
g. TOTAL DIRECT	153	2657	171	164	156	156	156	156	156	156	156	154	153	175	0	4254

CLASSIFICATION (When Filled In)										
CONTRACT PERFORMANCE REPORT										
FORMAT 5 - Explanations and Problem Analysis										
FORM APPROVED										
OMB No. 0704-0188										
4. REPORT PERIOD										
a. FROM (YYYYMMDD)										
2018/11/26										
b. TO (YYYYMMDD)										
2018/12/23										
1. CONTRACTOR		2. CONTRACT		3. PROGRAM			4. REPORT PERIOD			
a. NAME		a. NAME		a. NAME			a. FROM (YYYYMMDD)			
CH2M HILL Plateau Remediation Company		Plateau Remediation Contract		RL_0011_C2 PFP Demolition Capital Asset Project			2018/11/26			
b. LOCATION (Address and ZIP Code)		b. NUMBER		b. PHASE			b. TO (YYYYMMDD)			
Richland, WA		RL14788					2018/12/23			
c. TYPE		d. SHARE RATIO		c. EVMS ACCEPTANCE						
CPAF				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	1,366.9	4,428.7	1,366.9	0	-3,061.8	-224.0%	0	0.31
Cumulative:		55,306.9	44,145.8	107,418.4	-11,161.1	-20.2%	-63,272.6	-143.3%	0.80	0.41
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		55,306.9	151,940.5	-96,633.6	-174.7%	0	0.25			
Explanation of Variance/Description of Problem:										
Current Month:										
Schedule Variance: The schedule variance for the current month is within threshold.										
Cost Variance: The current month negative cost variance is due to the resumption actions and implementation of the new demolition requirements associated with a December 2017 contamination event. This includes fixative applications, performance of radiological surveys, revising radiological postings, infrastructure modifications, and stabilization activities to support resumption of PFP demolition. This also includes additional material and equipment purchases to support the revised demolition approach. As resumption corrective actions and mockups are performed, costs for labor, subcontracts, and material purchases add to the current month variance. Additionally, work to size reduce and loadout debris associated with demolition has been slower than planned due to the realized risk of Bump and Roll, LAMP, or Other Contractor Hiring of Bargaining Unit employees, continued process improvements being implemented, and a learning curve associated with revised requirements.										
Cumulative to Date:										
Schedule Variance: The cumulative unfavorable schedule variance is due to delay of demolition of ancillary buildings and 236-Z caused by resources being redirected to support higher priority critical path work associated with decommissioning of 234-5Z, 242-Z, and 236-Z, as well as ready for demo activities associated with impacts from 236-Z Canyon Crane failure, contamination impacts from an unplanned criticality alarm failure, contamination recovery in the duct level of 234-5Z (two week delay in July 2016), increased characterization efforts, weather delays (snow and wind), recovery from demolition contamination events, and greater efforts to complete 242-Z demolition than originally planned. In addition, the PUREX Tunnel collapse caused a four day delay due to closure of the Hanford site restricting access to PFP and a contamination event associated with removal of PRF gallery gloveboxes causing a 20 day delay of demolition activities on the 236-Z facility. Further, impacts associated with the Stop Work that was initiated by the Hanford Atomic Metals Trade Council (HAMTC) union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As a result of delays in the ready for demolition activities, completion of the C2 CD-4 has been delayed. TPA milestone M-083-00A due September 30, 2017, was not met. A BCR was processed in the month of September to draw down on DOE contingency to recover the direct cost impacts to the RL-0011 C.2 Project associated with realization of the DOE-RL risks. Areas that were impacted were associated with Weather Delays, Stop Works, PRF Contamination Events, and MSA Resources retained to prevent Bump and Roll impacts. A contamination event occurred on Friday, December 15, 2017, swing shift when 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 has been conducted and recovery actions and expected completion dates are identified. This is partially offset 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.										
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 with a baseline start date of February 2016. 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 Hanford Atomic Metals Trade Council (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 G&A Rate for FY2017 resulted in a reduction to the PMB of \$463K. Finally, impacts from a contamination event that occurred on Friday, December 15, 2017 swing shift 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 has been conducted and resumption actions and expected completion dates are identified. This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
Impact:										
Schedule Impact: Progress continued to work toward CD-4 closure as teams continued to ready the PFP facilities for demolition. The PRF facility initiated demolition on November 8, 2016. Demolition on the 291-Z facility commenced on June 30, 2017, and the 291-Z stack was demolished on July 15, 2017. The 234-5ZA facility was demolished in the month of August 2017 with loadout of waste completed in the month of September. Demolition of 234-5Z was initiated on September 13, 2017. Completion of all demolition activities are forecast to occur in September 2019. The September date is reflective of the known actions and resumption efforts associated with a contamination event that occurred in December, 2017. The baseline completion date is not considered recoverable. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of November 30, 2017 was not met.										
Cost Impact: Stop Works, Safety Pauses, weather impacts (i.e., unusual winter, heat, wind, etc.) multiple contamination events, the PRF Crane failure, and associated recovery actions have negatively impacted demolition of the PFP facilities. In addition, readiness activities took longer than originally assumed as a result of increased requirements required by the Readiness Assessment team to demonstrate readiness for demolition of the PRF facility and efforts to mobilize took longer than originally assumed as a result of implemented recommendations from the readiness assessment team. An unplanned Management Assessment for the 234-5Z and 291-Z facilities to incorporate lessons learned from the demolition of the 236-Z and 242-Z facilities are also contributing to the cost impacts. Finally, in the early stages of this project subcontracted MSA resources specializing in facility demolition charged the project until the ready for demo status was achieved. Unexpected contamination events that occurred during demolition of the PRF facility in January, June, and December, 2017, and delays with the 242-Z demolition has contributed to the cost impacts on this project. A Baseline Change Request (BCR) was processed in the month of September to draw down on DOE contingency to recover the direct cost impacts to the RL-0011 C.2 Project associated with realization of the DOE-RL risks. Areas that were impacted were associated with Weather Delays, Stop Works, PRF Contamination Events, and MSA Resources retained to prevent Bump and Roll impacts. This is partially offset by recognized efficiencies during the 291-Z demolition and 291-Z stack implosion as well as the 234-5ZA, 252-Z1, 2503-Z, and 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017. Partially offset by working one shift during demolition of 236-Z, 242-Z and 291-Z building and stack rather than two as planned in the PMB. Durations for the remainder of the 234-5Z and PRF demolitions activities have been adjusted to incorporate increased durations as a result of expected recovery actions from the contamination event that occurred in December.										

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: In the EAC there is currently no remaining schedule margin in this capital asset account. Schedule margin was lost in February 2016 as a result of impacts from stop works associated with PremAire breathing air issues related to size reduction of the HA-9A glovebox and impacts from a safety pause associated with a PremAire Breathing Air radiological event resulting in increased survey requirements for PPE and a requirement for removing additional asbestos in the 234-5Z facility prior to demolition activities commencing.
2. IMS Data dictionary Changes: No change in the month of December.
3. Forecast Schedule with No Baseline: No change in the month of December.
4. UB Balance: No change in the month of December.
5. Negative ACWP: No change in the month of December.
6. EAC Analysis: Best Case = \$151,940; Most Likely = \$155,375; Worst Case = \$155,375. 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.
7. Negative CV > VAC: No change in the month of December.
8. MR Transactions: No change in the month of December.
9. Freeze Period Changes: No change in the month of December.
10. Retroactive Changes: No change in the month of December.
11. EVT Changes: No change in the month of December.

Prepared by: Eric Denton

Date: 01/14/19

Approved by:

Date: