

Monthly Performance Report

January 2019

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

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

CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

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APPROVED
By Janis D. Aardal at 3:58 pm, Feb 21, 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

January 2019
CHPRC-2019-01, Revision 0

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EXECUTIVE SUMMARY

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

- Waste and Fuels Management Project (W&FMP):** T Plant crane maintenance is on schedule. The team received Sludge Transport & Storage Container (STSC) 8 and is currently evaluating options to advance the schedule to enable earlier receipt of STSC 9. Crews at the Central Waste Complex achieved the Department of Energy's Hanford Federal Facility Agreement and Consent Order Milestone M-091-52-T01B to remove ten additional mixed waste containers from Outside Storage Area A and/or Outside Storage Area B one year ahead of schedule. The team awarded the Waste Encapsulation and Storage Facility (WESF) cesium/strontium (Cs/Sr) dry storage project mock-up design to a local small business. The Canister Storage Building completed conversion of the 2902HV82 Water Pump House and 2902HV80 Water Tank from a fire water system to a service water system, which enables a significant reduction of operations and maintenance costs.
- Soil and Groundwater Remediation Project (S&GRP):** The team expanded the groundwater extraction system that connects a third extraction well to a cross-site transfer line and pumping station in the B Complex Area in the central part of the Hanford Site. The connection to a third well completes the extraction system for the expansion project initiated in 2017. It is the first groundwater Pump and Treat (P&T) remedy implemented in the aquifer for this area. Nearby monitoring wells will help track the performance of the remediation effort. S&GRP continued chlorination of injection lines at the 200 West P&T, and pigging of injection well lines continues with six injection well lines already done.
- Plutonium Finishing Plant (PFP) Closure Project:** The PFP team focused on removing demolition debris from the north side of the main processing building. PFP also completed hands-on training with 31 new demolition workers brought onto the project.
- K Basins Operations (KBO):** With combined efforts from KBO, Project Technical Services (PTS) and the River Risk Management Project (RRMP), workers completed the revegetation of the 618-10 complex. 100 K Area waste site remediation crews completed the removal of the wooden crib and contaminated soil at waste site 116-KE-2. The basin operations team completed sparging the high-dose material (HDM) in K West Basin Center Bay, and using the material hopper and screen assembly, loaded the HDM into fuel canisters. In efforts to deactivate the K West Basin, workers successfully used a gamma camera to begin surveying 25 waste bins. Engineers at the Maintenance and Storage Facility (MASF) modified the prototype processing unit for found fuel specimens to include a submersible motor and gear system. Employees performed geophysical and topographical surveys around the 105 K East building to collect data for analysis to support reducing the site soil classification and International Building Code seismic classification from D to C in support of interim entombment of the 105 KE Building. Sludge retrieval continued with filling STSC 9.
- River Risk Management Project (RRMP):** At the 324 Building, the RRMP team completed the repair and successful testing of the A Cell crane door hoist. Installed the final camera control station in the Cask Handling Area, as well as, completed installation and construction acceptance testing of C Cell cameras and lights, D Cell light and the B Cell north camera. The third of four remote excavator arm (REA) through



S&GRP recently completed expansion of the groundwater remediation system allowing for more efficient and cost-effective removal of contaminants across the Site.

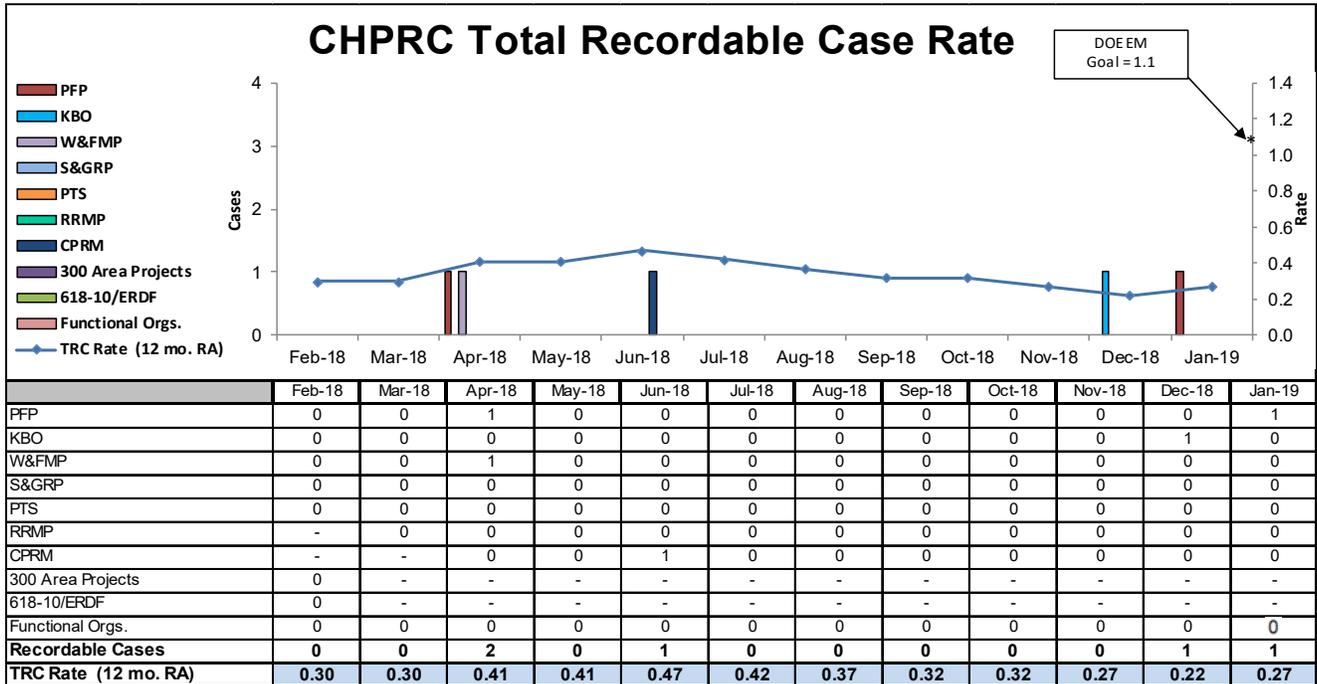
supports was installed in B Cell. To support the structural modifications, crews completed the soil stabilization of 72 stages of the vertical grout block test and drilling the 20 vertical soil stabilization injection test sites at Pit 6. Crews also initiated pre-mobilization efforts for the pilot holes (future micropile) locations by floor scanning Room 18 and continued mock up training and work package development. At the 324 mock-up, continued training on the REA, supported REA through support assembly installation and initiated the A Cell snorkel installation training.

- Central Plateau Risk Management Project (CPRM): CPRM workers conducted annual surveillance at the Fast Flux Test Facility and advanced the work package development for 242-B/BL demolition preparations and Reduction Oxidation Facility waste load out. The team also began mobilization for 242-B/BL asbestos and hazardous material removal, and prepared to return the Research Technology Laboratory demolition site to Pacific Northwest National Laboratory. CPRM also completed the last 200 West steamline crossover removal planned for the fiscal year (FY). Members of PTS completed regular maintenance and reconfigured grout placement devices as crews prepare to finish filling Plutonium Uranium Extraction Plant (PUREX) Tunnel 2. The tunnel is more than 71 percent filled.

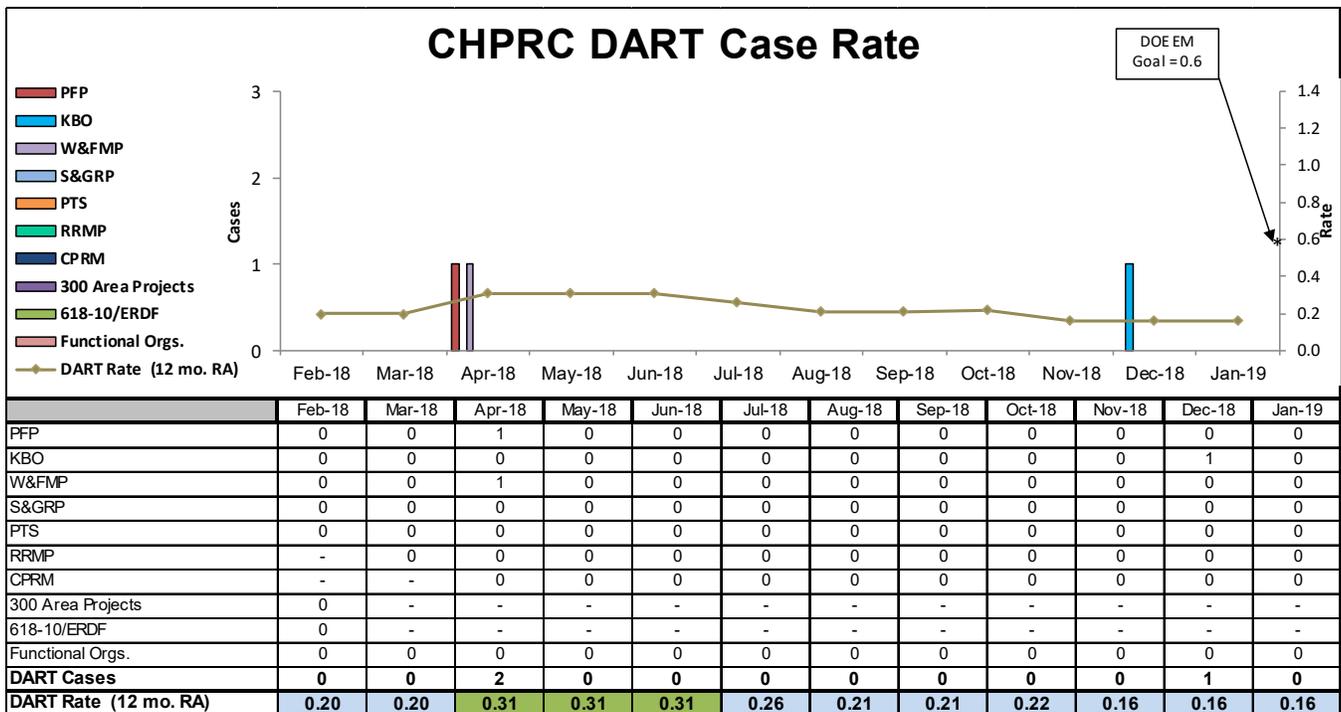
- The President's Zero Accident Council (PZAC) meeting for January was hosted by RRMP. The three main ideas were:
 - o Healthy Living.
 - o Radiological Controls.
 - o Vehicle Safety.
- Four "Thinking Target Zero" (TTZ) bulletins were published to convey important occupational, safety, health, and environmental messages:
 - o Safe New Year.
 - o Backing Safely.
 - o VPP SII Process.
 - o Curb Complacency.
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
 - o Four Lessons Learned:
 - Lack of Communication during Work Scope Turnover Leads to Failure to Follow the Prescribed Hazardous Energy Control Process (CHPRC).
 - Overhead Object Falls from Bridge Crane Striking Worker below (offsite).
 - Employee Injured While Operating a Handheld Drill (offsite).
 - Assumptions Regarding Gross Weight of a Man-lift Leads to Trailer Damage (CHPRC).
 - o Injuries.
 - o Weekly Ethics Moments.
 - o Vehicle events.
 - o Welcome Back! Safety Re-focus 2019.
 - o Electrical Safety Procedure.
 - o DOE-0336 procedure revision.
 - o HPMC medical appointments.
 - o Looking out for each other.

TARGET ZERO PERFORMANCE

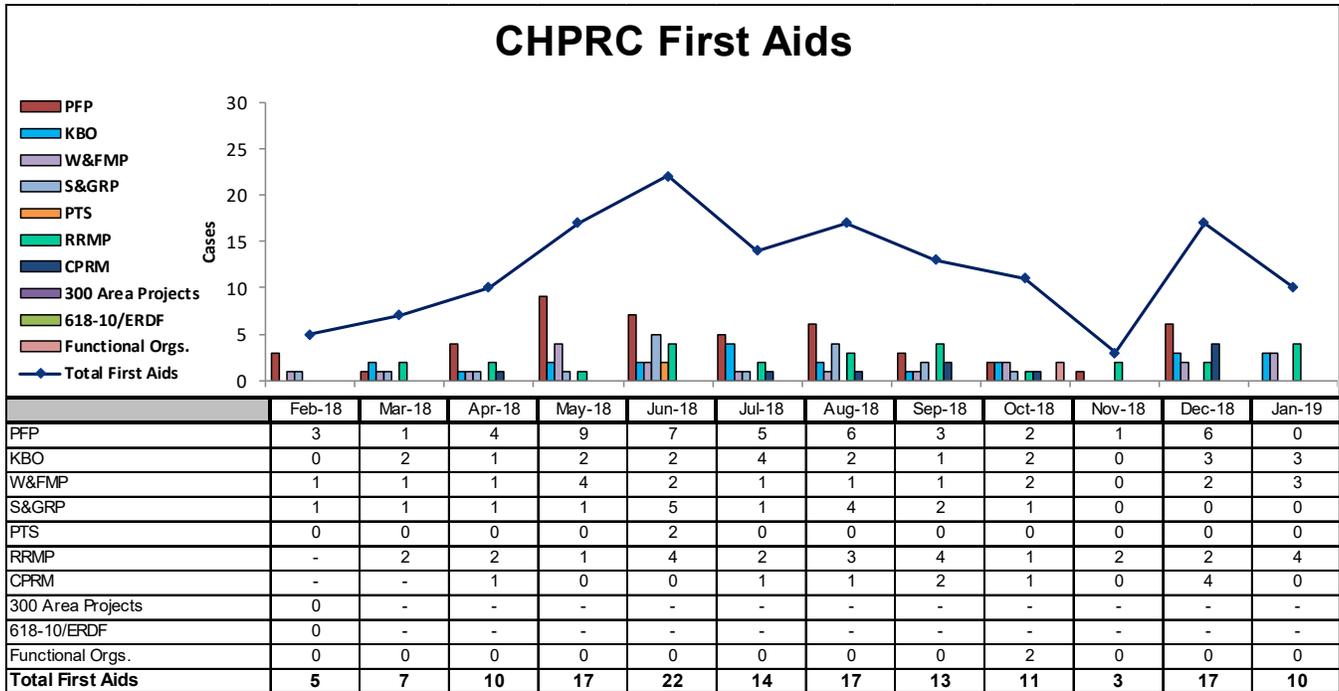
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.27 is based on a total of five Recordable injuries. January 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. January had no reported DART case.



First Aid Case Summary: CHPRC reported ten first aid cases in January. The contributors were six sprains/strains/pains, three abrasions/bruises/contusions and one misc. (burns, rashes, repetitive motion, etc.) injury. There were four self-treat cases reported in January.

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.

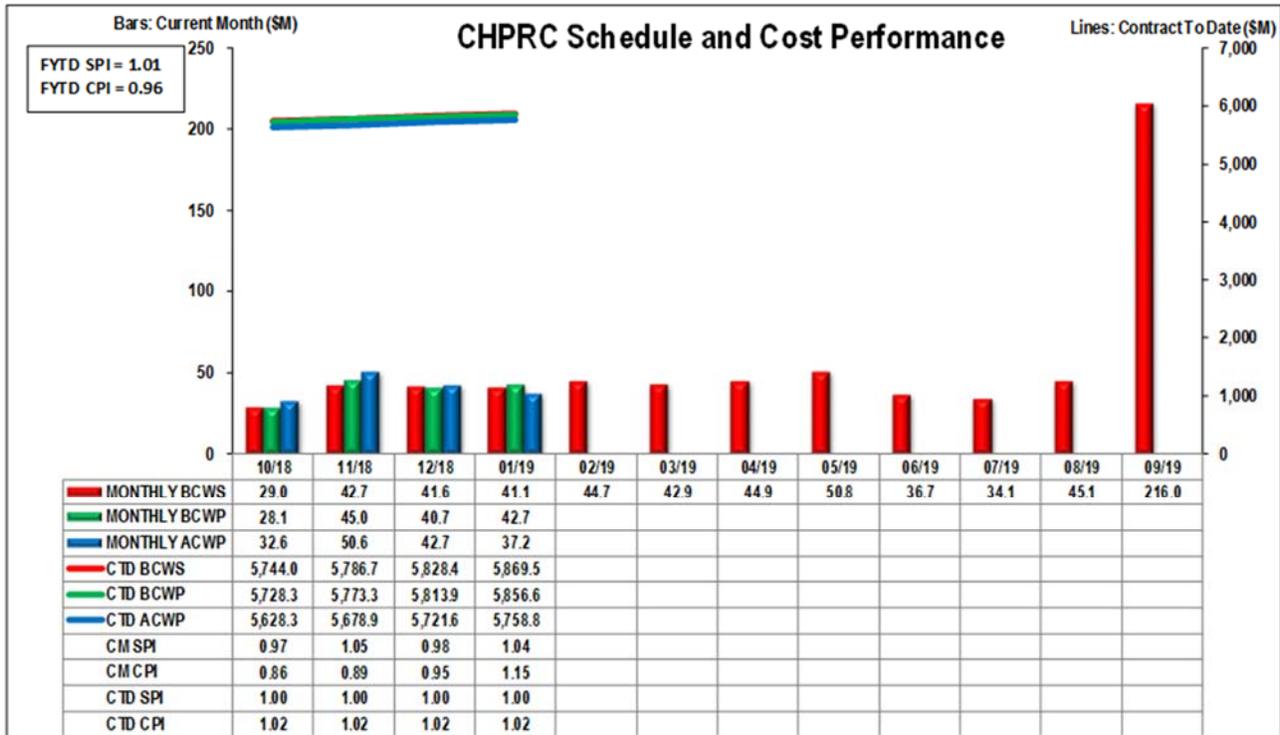
Corrective Action:

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 Period		
	Budgeted Cost		Actual Cost	Variance		Budgeted Cost		Actual Cost	Variance				
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost	BAC	EAC	Variance
RL-0011 - Nuclear Materials Stab & Disp PFP	1.1	1.2	4.9	0.0	(3.7)	995.2	984.0	1161.2	(11.2)	(177.2)	1,006.0	1,216.7	(210.7)
RL-0012 - SNF Stabilization & Disposition	1.3	1.1	1.1	(0.1)	0.1	749.4	749.0	718.9	(0.5)	30.0	762.0	731.2	30.8
RL-0013 - Solid Waste Stab & Disposition	12.7	12.5	10.2	(0.2)	2.4	1391.8	1389.5	1290.9	(2.3)	98.6	1,562.2	1,461.2	100.9
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	9.5	10.4	8.1	0.9	2.3	1561.5	1562.3	1506.6	0.8	55.8	1,717.2	1,661.1	56.1
RL-0040 - Nuc Fac D&D - Remainder	7.0	5.6	4.8	(1.4)	0.8	513.9	517.8	492.0	3.9	25.9	576.9	553.3	23.6
RL-0041 - Nuc Fac D&D - RC Closure Project	9.4	11.7	8.0	2.3	3.7	630.6	627.0	566.7	(3.6)	60.3	732.2	672.2	60.0
RL-0042 - Nuc Fac D&D - FFTF Project	0.1	0.1	0.2	0.0	(0.0)	27.0	27.0	22.6	(0.0)	4.4	28.2	24.4	3.8
Total	41.1	42.7	37.2	1.6	5.5	5,869.5	5,856.6	5,758.8	(12.9)	97.8	6,384.7	6,320.1	64.6

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

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

Performance Summary

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$64.6 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$127.9 million. For January, the project was 3.8 percent ahead of schedule and 12.9 percent under planned cost. Contract to date (CTD); the project was 0.2 percent behind schedule and 1.7 percent under planned cost.

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

The CM positive cost variance is primarily due to project breakdown structure (PBS) RL-0041 related to the performance being taken on previously completed 324 Facility Modifications scope. This scope was added in January via BCR-041-19-006R0 - 324 Building Disposition Project Carryover Scope and Latent Conditions. Additionally, Remaining Closure Operations gained efficiencies by hiring one subcontractor to revegetate the 618-10 Burial Ground concurrently, as opposed to the original plan of performing the revegetation on each waste site separately and experienced optimal soil conditions and good weather.

Also contributing to the positive variance is PBS-0013 associated with PFP TRU Commercial Repackaging (NCA) and Large Box Commercial TRUM Repack Group, where a new contract was negotiated and new pricing went into effect for shipments starting in November 2018. Cost savings should continue through the year.

In Addition, PBS-0030 contributed to the positive variance due to streamlining of the Internal Draft and Regulator Review Draft Engineering Evaluation Reports. 200-ZP-1 well realignment material procurement was less than planned because the project is utilizing on-hand materials and equipment instead of purchasing new inventory. Also, the Ferric Chloride vs. Aluminum conceptual design resulted in less change than anticipated, eliminating the need for planned Pacific Northwest National Laboratory and General Electric subcontract support to the evaluation.

Finally, via Letter, 19-FIN-0007, *Proposed Fiscal Year (FY) 2019 CH2M Hill Plateau Remediation Company (CHPRC) Provisional Billing Rates*, received January 3, 2019, RL directed CHPRC to utilize the FY2018 Effective Rates for FY2019 Direct and Indirect Labor, Waste Pool, Absence Adder (ABS), Continuity of Service (COS), Continuity of Service Overtime (CSO), and General and Administrative (G&A), effective October 1, 2018. When FY2019 to date cost through January was repriced from the higher FY2018 Forward Pricing Rates to the lower FY2018 Effective Rates, all cost to date was effectively reduced.

The positive cost variance was partially offset by PBS-0011 predominantly due to unplanned training support activities for the 31 new Decontamination and Decommissioning (D&D) workers, as well as ongoing repairs and maintenance to high-risk demo equipment, and planning and mockups of higher-risk work.

FUNDING ANALYSIS

FY2019 Funds vs. Fiscal Year Spend Forecast

(\$M)

PBS	Project	FY2019		Variance
		Projected Funding	Spending Forecast	
Estimate at Complete				
RL-0011	Nuclear Materials Stabilization and Disposition	70.0	65.6	4.4
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	18.0	2.1
RL-0012	15-D-401 Sludge Retrieval Project	11.3	0.0	11.3
RL-0013	Waste and Fuels Management Project	173.5	156.9	16.6
RL-0013	Management of Cesium and Strontium Capsules	6.6	3.0	3.6
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	125.2	7.7
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	70.2	11.6
RL-0041	Nuclear Facility D&D, River Corridor	148.3	126.4	22.0
RL-0042	Fast Flux Test Facility Closure	4.3	2.6	1.7
Total Estimate at Complete		649.0	568.0	81.0
Scope Pending Change Management				
RL-0013	Waste and Fuels Management Project	0.0	0.1	(0.1)
RL-0013	Management of Cesium and Strontium Capsules	0.0	0.0	(0.0)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	3.4	(3.4)
Total Incremental Work Scope		0.0	3.5	(3.5)
Total Fiscal Year Spend Forecast				
RL-0011	Nuclear Materials Stabilization and Disposition	70.0	65.6	4.4
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	18.0	2.1
RL-0012	15-D-401 Sludge Retrieval Project	11.3	0.0	11.3
RL-0013	Waste and Fuels Management Project	173.5	157.0	16.5
RL-0013	Management of Cesium and Strontium Capsules	6.6	3.1	3.6
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	125.2	7.7
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	73.6	8.2
RL-0041	Nuclear Facility D&D, River Corridor	148.3	126.4	22.0
RL-0042	Fast Flux Test Facility Closure	4.3	2.6	1.7
Total		649.0	571.5	77.5

Funds/Variance Analysis

For January, there was no change to overall FY2019 projected funding of \$649 million. The spending forecast decreased \$2.3 million from last month, primarily in RL-0030 aligning subcontracts with current trends.

BASELINE CHANGE REQUESTS

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

Change Request #	Title	PBS	Summary of Change
BCR-013-19-003R0	<i>Incorporate FY2018 IDF 30% Design into FY2019</i>	RL-0013	This BCR incorporated work scope for the preparation of the 30 percent Design for the IDF facility and infrastructure modifications. This BCR increased the PMB value by \$191K.
BCR-030-19-007R0	<i>Move Operational Acceptance Test Activity from Capital WBS to Expense WBS</i>	RL-0030	This BCR moved an operational acceptance test activity from a capital WBS element to the appropriate expense WBS element. This BCR did not change the PMB value.
BCR-040-19-003R0	<i>Additional FY2019 Work Authorization 200-MG-1 Waste Sites Eco/Cultural Reviews</i>	RL-0040	This BCR incorporated scope to support confirmatory sampling/no further action (CS/NFA) for 6 sites in the 200-MG-1 Operable Unit in support of TPA M-016-255, which was authorized by the RL Contracting Officer by email, B.S. Valadez, RL, to L.J. Horton, CHPRC, <i>Additional FY19 Work Authorization</i> . This BCR increased the PMB value by \$22K.
BCR-041-19-005R0	<i>Additional FY2019 300-296 Waste Site Remediation Work Authorization</i>	RL-0041	This BCR added scope to initiate 324 Building structural modifications, which was authorized by the RL Contracting Officer by email, B.S. Valadez, RL, to L.J. Horton, CHPRC, <i>Additional FY19 Work Authorization</i> . This BCR increased the PMB value by \$3,688K.
BCR-041-19-006R0	<i>324 Building Disposition Project FY2018 Carryover Scope and Latent Conditions</i>	RL-0041	This BCR incorporated scope that did not get completed in FY2018 and therefore is not planned in the FY2019 PMB, and adds in scope, unplanned work associated with completion of the project objectives. This scope is required in order to initiate 324 Building structural modifications, which was authorized by the RL Contracting Officer by email, B.S. Valadez, RL, to L.J. Horton, CHPRC, <i>Additional FY19 Work Authorization</i> . This BCR increased the PMB value by \$4,781K.
BCR-041-19-007R0	<i>Geophysical Survey and Additional Engineering - 100KE ISS</i>	RL-0041	This BCR incorporated additional 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, <i>Additional FY19 Work Authorization</i> . This BCR increased the PMB value by \$88K.
BCRA-PRC-19-008R0	<i>HPIC Updates January 2019</i>	000, RL-0011, RL-0013, RL-0030, RL-0040, RL-0041	This BCR incorporated January FY2019 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

The allocated (distributed) budget increased by \$8,770K.

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 January.

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 January.

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 January.

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).

January 2018 Summary of Changes

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	Contract Period Total	Total PMB
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
January 2019 Change										
PMB										
Change to PMB	0	0	0	0	0	0	0	8,770	8,770	8,770
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	8,770	8,770	8,770
January 2019 Estimate										
PMB	3,391,477	391,653	471,323	504,826	485,028	470,649	2,323,478	669,765	6,384,720	6,384,720
MR	0	0	0	0	0	0	0	63,278	63,278	63,278
Fee	155,504	14,325	14,501	27,804	10,612	18,860	86,101	0	241,605	241,605
Total	3,546,981	405,978	485,824	532,630	495,639	489,509	2,409,579	733,043	6,689,603	6,689,603

Changes to/Utilization of Management Reserve in January 2018

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	FY2019	Total
Decemeber 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
January 2019 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
January 2019 MR Totals									
RL-0011	0	0	0	0	0	0	0	5,828	5,828
RL-0012	0	0	0	0	0	0	0	8,163	8,163
RL-0013	0	0	0	0	0	0	0	6,185	6,185
RL-0030	0	0	0	0	0	0	0	17,863	17,863
RL-0040	0	0	0	0	0	0	0	8,700	8,700
RL-0041	0	0	0	0	0	0	0	16,350	16,350
RL-0042	0	0	0	0	0	0	0	189	189
Total	0	0	0	0	0	0	0	63,278	63,278

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 - 1/31/2019					
Reporting Category					
	\$ Value	%	Goal %		
SB	\$1,576.5	55.55%	49.3%	PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
SDB	\$282.9	9.97%	8.2%		
SWOB	\$290.4	10.23%	7.5%		
HUB	\$90.8	3.20%	2.2%		
VOSB	\$242.6	8.55%	3.5%	CHPRC Contract Value:	\$5,824.8
SDVO	\$153.0	5.39%	1.3%	SB actual:	\$1,576.5
NAB	\$75.6	2.66%	N/A	SB Performed %:	27.06%
Large	\$760.3	26.79%	N/A	PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed	
UNK	\$0.3	0.01%	N/A	CHPRC Contract Value:	\$5,824.8
GOVT	\$5.0	0.18%	N/A	CHPRC Self Performed:	\$3,217.8
GOVT CONT	\$483.2	17.03%	N/A	CHPRC Self Performed %:	55.24%
EDUCATION	\$0.2	0.01%	N/A		
NONPROFIT_	\$4.1	0.15%	N/A		
FOREIGN	\$8.4	0.29%	N/A		
Total	\$2,838.0	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



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

January 2019
CHPRC-2019-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Loadout of existing 234-5Z Facility debris continued throughout January. Approximately 56 percent of the existing debris pile has been shipped to the Environmental Restoration Disposal Facility (ERDF) for disposal. Low-risk demolition is scheduled to resume in late February. The higher-risk demolition scheduled to begin in May 2019 is being planned, and preparations for a second Management Assessment (MA) 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	268 m ³	18,031 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 Environmental Management System (EMS) presentations at minimum; involve one to two employees in compliance review, and facility walk-downs	9/30/19	40%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	1	1	1/15/2019 – An employee received a cut to the right index finger when their gloved right hand was caught in a pinch point when adjusting a forklift tine. Employee immediately went to the onsite medical provider. Employee was evaluated by HPMC and was sent to the emergency room at Kadlec for further evaluation. (25054)
First Aid Cases	0	47	N/A
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments:

- Loaded and shipped existing 234-5Z rubble debris. Approximately 56 percent of existing debris has been shipped in total.
- Completed field mentoring and mock-up activities with 31 newly hired Decontamination and Decommissioning (D&D) workers.
- Preparations for a MA are being made for the higher-risk demolition in May 2019. Subcontract requisitions have been developed and will be awarded in February.
- Ion exchange exhauster units have been moved for maintenance and high-efficiency particulate air filter replacement. The ion exchange exhauster units will be used in high-risk demolition activities.
- Safely removed sections of roofing that came loose after a high wind event.

MAJOR ISSUES

Issue:

The Plutonium Finishing Plant (PFP) project realized a loss of 20 D&D workers due to hiring by Washington River Protection Solutions, LLC (WRPS), another Hanford contractor. Half of the D&D workers transferred to WRPS in December and the other half 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 31 D&D workers who began training on December 3, 2018. Classroom training at Volpentest HAMMER Federal Training Center completed January 11, 2019. Field mentoring training activities were completed January 24, 2019. To prepare new

hire D&D workers for safe work activities at PFP, experienced workers and managers have been dedicated to bring new staff up to speed to resume demolition and debris loadout.

Issue:

The project lacks adequate resource coverage (RCTs, and D&D workers) to complete work package development and field work activities. Efforts to employ adequate Radiological Control Technicians (RCTs), via contract or otherwise, have been exhausted. The project has not realized efficient staffing support for ongoing activities at PFP.

Corrective Action:

CHPRC has teamed with Washington River Protection Solutions LLC (WRPS) to hire and train RCTs to fulfill sitewide resource needs.

Status:

The teaming companies have performed initial screening/aptitude testing of applicants. A 25-person RCT training class is currently in development with an anticipated February 25, 2019, start date.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- Increased Confidence
- No Change
- Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0011/WBS-011.OA																
Explanation of major changes to the project monthly stoplight chart: Risk PFP-P-002, Unavailable Resources, was added to the stoplight chart as a realized risk in January.																
Realized Risks (Risks that are currently impacting project cost/schedule)																
PFP-P-002: Unavailable Resources	The project lacks adequate resource coverage (RCTs, and D&D workers) to complete work package development and field work activities. Risk Handling Strategy: Control Probability: Very Likely (>90%) Worst Case Impacts: \$0, 120 days	●		<p>Risk Event: Inadequate D&D and RCT availability sitewide has compelled the CHPRC to initiate a new hire RCT training program.</p> <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Hire and train additional 25 RCT workers needed to perform CHPRC project work.</td> <td>TBD</td> <td>2%</td> </tr> <tr> <td>Complete new hire D&D field mentoring activities</td> <td>1/24/18</td> <td>100%</td> </tr> <tr> <td>Conduct FTE analysis and identify corrective actions to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: 31 D&D workers hired in December completed field mentoring activities January 24, 2019, and supporting staff have resumed regular project activities. 25 RCT applicants (to be assigned across CHPRC Projects) completed screening/aptitude testing and will begin training February 25, 2019.</p>	Risk recovery action(s)	FC Date	%	Hire and train additional 25 RCT workers needed to perform CHPRC project work.	TBD	2%	Complete new hire D&D field mentoring activities	1/24/18	100%	Conduct FTE analysis and identify corrective actions to ensure adequate resource profiles.	Ongoing	N/A
Risk recovery action(s)	FC Date	%														
Hire and train additional 25 RCT workers needed to perform CHPRC project work.	TBD	2%														
Complete new hire D&D field mentoring activities	1/24/18	100%														
Conduct FTE analysis and identify corrective actions to ensure adequate resource profiles.	Ongoing	N/A														
PFP-P-014: Bump and Roll, Labor Assets Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit Employees Affecting Productivity	Plutonium Finishing Plant (PFP) Hanford Atomic Metal Trades Council (HAMTC) labor resources are unavailable or unqualified due to the bump and roll, LAMP, or other job postings, resulting in schedule impacts to the project. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 128 days	●		<p>Risk Event: Twenty D&D workers have been hired by other projects on the Hanford Site and have left PFP. The process to hire and train new D&D workers has been initiated.</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>1/24/19</td> <td>100%</td> </tr> </tbody> </table> <p>Risk Action Assessment: New D&D workers completed training/field mentoring activities January 24, 2019.</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.	1/24/19	100%			
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.	1/24/19	100%														
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																

No critical risks in January .																			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																			
No high risk threat value risks in January .																			
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 January. 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 January. 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																	
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 Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 54 days	●	↔	<p>Risk Trigger: Additional soil, above planned value, is required to be removed due to contamination or regulatory concerns.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Engage early with RL to identify a path forward associated with the additional soil.</td> <td>11/9/18</td> <td>100%</td> </tr> <tr> <td>Collect and provide radiological mapping data to RL.</td> <td>TBD</td> <td>TBD</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. Continued communication with RL on required soil removal. No additional soil above planned quantity is required at this time. RL has requested radiological data to help them determine no additional soil disposition than planned is required.</p>	Mitigation action(s)	FC Date	%	Engage early with RL to identify a path forward associated with the additional soil.	11/9/18	100%	Collect and provide radiological mapping data to RL.	TBD	TBD						
				Mitigation action(s)	FC Date	%													
Engage early with RL to identify a path forward associated with the additional soil.	11/9/18	100%																	
Collect and provide radiological mapping data to RL.	TBD	TBD																	
Unassigned Risks (Pending ownership of identified risks/opportunities)																			
No unassigned risks identified in January .																			

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	1.1	1.2	4.9	0.0	1.9%	(3.7)	-320.3%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Variance: (+\$0.0M/+1.9%)

The CM schedule variance is within threshold.

CM Cost Variance: (-\$3.7M/-320.3%)

The current month negative cost variance is predominantly due to unplanned training support activities for the 31 new D&D workers, as well as ongoing repairs and maintenance to high-risk demolition equipment, and planning and mockups of higher-risk work.

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	995.2	984.0	1,161.2	(11.2)	-1.1%	(177.2)	-18.0%	1,006.0	1,216.7	55.5	(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: (-\$177.2M/-18.0%)

The negative CTD cost variance is primarily a result of unplanned costs to support implementation of schedule efficiency initiatives at PFP (i.e., foaming, Perma-Fix Northwest [PFNW] size reduction support, implementation of the PremAire Breathing System); increased training costs of additional RCTs and D&D workers assigned to PFP; additional resources to recover schedule for asbestos removal activities and to support the unplanned asbestos identified for removal (about 10,000 feet); unplanned shipping materials (waste shipping containers TL-1800s, SLB2s, IP-1 bags, etc.) required to support waste loadout activities for TRU waste disposition efforts; and unplanned work to reconfigure the high-density polyethylene (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, LLC (MSA) resources retained to prevent bump and roll impacts. Recognition of efficiencies associated with demolition of 242-Z, 291-Z, and 234-5ZA are also contributing to the offset of the negative variance.

Variance at Completion: (-\$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 Independent Review.

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	4.4
RL-0011 - Total	70.0	65.6	4.4

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

Fiscal Year (FY) 2019 spending forecast for PBS RL-0011 is \$65.6 million to allow for continuation of demolition activities to achieve slab-on-grade. Projected funding is \$70.0 million.

Critical Path Schedule

The PFP Critical Path Schedule begins with debris disposition of the 234-5Z rubble piles starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of Zones 2 and 7, with the exception of the drain line. Remote Mechanical C process line demolition, Remote Mechanical A process line demolition, and loadout of glovebox HA-46, in parallel with completion of the basement of 234-5Z demolition, will begin after a second MA and concurrence is obtained to resume high-risk demo from RL. The 234-5Z demolition is projected to complete 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	Transition and disposition activities remain on target for September 16, 2019. Loadout of the existing debris continued in January with approximately 56 percent of the total debris pile shipped to ERDF for disposal

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
CONTRACT			
J.12/C.2.2, C.2.3	PBS RL-0011, PFP Closure Project	Offsite transportation of radioactive material: RL provides equipment and government drivers to transport TRU materials outbound/inbound between the Hanford Site and PFNW locations. RL is the authorized shipper and acts as signatory on the shipping papers, and ensures compliance with DOE Manual 460.2-1. RL arranges for Commercial Motor Vehicle Safety Alliance Level VI vehicle inspections and verifies that the government drivers meet the applicable Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or transportation safety document requirements.	Ongoing

DOE ACTIONS / DECISIONS

DOE activities supporting approval for ancillary facility status change forms in progress.

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

January 2019
CHPRC-2019-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The eighth Sludge Transport & Storage Container (STSC) was shipped to T Plant on January 11, 2019.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Dart Injuries	0	1	N/A
Recordable Injuries	0	0	N/A
First Aids	2	18	1/2/2019 - Employee stepped on a frozen area, lost footing and fell. Affected shoulder and leg. Employee was taken to HPMC and released back to work without restrictions. (25038) 1/3/2019 - Employee dropped instrument on foot causing a contusion. Affected right toe. Employee was taken to HPMC and released back to work without restrictions. (25041)
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 eighth STSC was filled and shipped to T Plant on January 11, 2019.
- Submitted the Documented Safety Analysis (DSA) Annual update for RL approval, incorporating RL comments and adding the option to layer sludge from engineered containers (EC) 210/220 with K East sludge.

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 (mass = density x volume = $\rho \cdot V$) 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 (late-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 January .																			
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 Event: Due to the current job market, K Basin Operations (KBO) personnel have elected to leave the project to pursue other opportunities.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th style="text-align: center;">Risk Recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Monitor employee job satisfaction to evaluate/maintain morale.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Actively pursue filling open positions and train/qualify personnel.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Establish enhanced work schedule. (KWD7442)</td> <td style="text-align: center;">02/19/19</td> <td style="text-align: center;">75</td> </tr> </tbody> </table> <p>Risk Action Assessment: Since the initiation of sludge removal activities in June 2018, there has been greater than 25 percent attrition of qualified NCOs and RCTs. The loss of qualified personnel has negatively impacted achieving sludge removal schedule goals. Both operations and radiation protection management are aggressively backfilling open positions. Both organizations are expecting to have fully trained and qualified staff to support an enhanced work shift by February 19, 2019, if required.</p>	Risk Recovery action(s)	FC Date	%	Monitor employee job satisfaction to evaluate/maintain morale.	Ongoing	100	Actively pursue filling open positions and train/qualify personnel.	Ongoing	100	Establish enhanced work schedule. (KWD7442)	02/19/19	75			
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Actively pursue filling open positions and train/qualify personnel.	Ongoing	100																	
Establish enhanced work schedule. (KWD7442)	02/19/19	75																	
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;"> <thead> <tr style="background-color: #f2f2f2;"> <th style="text-align: center;">Risk Recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Perform periodic video camera inspections throughout sludge removal campaign to plan retrieval strategies.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">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 style="text-align: center;">Complete</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Consider sampling heels in ECs to facilitate achieving end-point criteria using more accurate source term.</td> <td style="text-align: center;">6/30/19</td> <td style="text-align: center;">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 was submitted to RL on January 7, 2019.</p>	Risk Recovery action(s)	FC Date	%	Perform periodic video camera inspections throughout sludge removal campaign to plan retrieval strategies.	Ongoing	N/A	Develop and submit DSA/TSR revisions that facilitate layering KW sludge (SCS-CON-210/220) with KE Sludge (SCS-CON-240/250/260).	Complete	100	Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)	Complete	100	Consider sampling heels in ECs to facilitate achieving end-point criteria using more accurate source term.	6/30/19	5
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Unmitigated Risk Impacts	Assessment		Comments																			
	Month	Trend																				
RL-0012/WBS-012																						
STP-156: Sludge Removal Campaign Impacted by Variations in Engineered Container Sludge Density/Volume	<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 = $\rho \cdot V$) is greater than the mass currently projected in source documents, resulting in the need for additional STSCs to remove and store the remaining sludge.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Complete visual inspections of sludge stored in ECs SCS-CON-210/220/230 (at a minimum) to assess volume information specified in technical basis documents.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Evaluate and implement feasible opportunities to more efficiently disposition remaining EC sludge. (KWD7442)</td> <td>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 fiscal year (FY) 2018. 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>	Risk Recovery action(s)	FC Date	%	Complete visual inspections of sludge stored in ECs SCS-CON-210/220/230 (at a minimum) to assess volume information specified in technical basis documents.	Complete	100	Evaluate and implement feasible opportunities to more efficiently disposition remaining EC sludge. (KWD7442)	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 fiscal year (FY) 2018. 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																				
STP-156-C: Sludge Removal Campaign Extended Due to Discovery of High Dose Material	<p>Additional high-dose “sludge-like” material is discovered on the 105KW Basin floor during 100K Closure Project characterization activities that is best dispositioned with the EC sludge waste stream. Adding this additional “sludge-like” material to the SRP campaign negatively impacts existing SRP cost and/or the schedule baseline.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very Likely (>90%)</p> <p>Worst Case Impacts: \$500K, 24 days</p>	●	↔	<p>Risk Triggers: Additional sludge may be discovered that must be put into ECs and processed with the balance of the EC sludge as 100K Closure Project personnel conduct characterization efforts in the 105KW Basin.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continue to monitor conditions identified by the baseline characterization efforts.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Collect and quantify the volume and weight of the high-dose material in the 105 KW Basin. (KWD90111)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90121)</td> <td>2/28/19</td> <td>40</td> </tr> </tbody> </table> <p>Mitigation Assessment: During January, 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>	Risk Recovery action(s)	FC Date	%	Continue to monitor conditions identified by the baseline characterization efforts.	Ongoing	N/A	Collect and quantify the volume and weight of the high-dose material in the 105 KW Basin. (KWD90111)	Complete	100	Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90121)	2/28/19	40						
Risk Recovery action(s)	FC Date	%																				
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Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90121)	2/28/19	40																				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																						
No critical risks identified in January .																						
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																						
No high threat value risks identified in January .																						
FY2019 Risk Triggers (Risk could be realized in FY2019)																						
STP-073-C: Processing Efficiency - Retrieval & Shipping	<p>The realized processing efficiency associated with sludge retrieval and shipping operations does not match the baseline plan.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$0K, 54 days</p>	●	↔	<p>Risk Triggers: Actual processing efficiency associated with sludge retrieval and shipping operations does not match baseline assumptions. This risk will continue in FY2019 during operations campaign.</p> <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>95</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	95						
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Unmitigated Risk Impacts	Assessment		Comments																		
	Month	Trend																			
RL-0012/WBS-012																					
			<p>Mitigation Assessment: No major changes in January. 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>60</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. Due to IXM system challenges (potential unavailability), an alternate water supply modification has been generated and hardware procured. Plans are to install this modification in the future to mitigate unavailability of IXM system impact on sludge removal.</p>	Mitigation action(s)	FC Date	%	Conduct full-scale testing at the 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	60
Mitigation action(s)	FC Date	%																			
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Modifications to the skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90091)	3/25/19	60																			
Unassigned Risks (Pending ownership of identified threats/opportunities)																					
No unassigned risks identified in January .																					

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	1.3	1.1	1.1	(0.1)	-9.7%	0.1	7.2%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$0.1M/-9.7%)

The variance is within reporting thresholds.

CM Cost Performance (+\$0.1M/+7.2%)

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	749.4	749.0	718.9	(0.5)	-0.1%	30.0	4.0%	762.0	731.2	12.3	30.8

Numbers are rounded to the nearest \$0.1 million

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

The variance is within reporting thresholds.

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

The variance is within reporting thresholds.

Variance at Completion (+\$30.8M/+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	18.0	2.1
Incremental Scope Pending Change Management	0.0	0.0	0.0
Expense – Subtotal	20.1	18.0	2.1
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	18.0	13.4

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

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

Critical Path Schedule

The project critical path schedule runs through completion of retrieval operations, including the filling of STSCs with sludge, transporting to T Plant, and placement in 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		10/07/2019	On Schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
Approval of DSA Annual Update	1/7/2019 (A)	2/28/2019

Section C

Solid Waste Stabilization and Disposition (RL-0013)

CH2MHILL
Plateau Remediation Company



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

January 2019
CHPRC-2019-01, 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 January reporting period, December 24, 2018 – January 27, 2019, Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. The River Risk Management Project (RRMP) operated the Environmental Restoration Disposal Facility (ERDF) and continued document preparation for the Integrated Disposal Facility (IDF) permits.

This month:

- For the Management of Cesium and Strontium Capsules (W-135) Project, the subcontractor continues addressing final design review comments. Approximately 75 percent of the comments have been returned to CHPRC for review. Comment dispositions are scheduled to be completed by the end of January. The 60 percent Preliminary Design presentation for the Maintenance and Storage Facility (MASF) Mockup Facility design is scheduled for January 30, 2019. The mockup facility will simulate the G Cell, canyon and truck port, and will be used to test equipment, develop procedures and train personnel. Work packages for the Capsule Storage Area (CSA) Utility Test Pits are under development and field activities are scheduled for mid-February 2019. The test pits are required to determine the integrity and location of existing firewater pipelines.
- The sludge receipt team received the eighth Sludge Transport and Storage Containers (STSC). To date there are three STSCs in cell 10L and five STSCs in cell 15L from the 100K West Reactor Basin or interim storage at T Plant. The ninth STSC is scheduled to be received February 11, 2019.
- At Waste Encapsulation and Storage Facility (WESF), the project continues decontamination efforts in G Cell by removing contaminated equipment and performing radiological surveys. Once decontamination efforts are complete, G Cell will be painted in support of the W-135 Project.

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	50%
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	24%

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	3	18	<p>1/2/2019 – Employee noticed what appeared to be a bug bite at the time on forearm after swiping away a piece of skin from the top of the seemingly bite. The employee was not sure what caused the spot to develop or what potential exposure could have caused the injury. Employee notified Acting Shift operations manager (SOM) of the concern and was taken to HPMC to be evaluated and was released to work with no restrictions. (25039)</p> <p>1/8/2019 – Employee stepped on the transition between the sidewalk in front of their office and the gravel parking lot and rolled their ankle resulting in a fall to the ground. Employee was taken to HPMC and was released to work with no restrictions. (25045)</p> <p>1/16/2019 – Employee was bending over the table to retrieve a copy of Daily Operations Report. A Chair was behind the employee. Another employee walked behind and pushed the chair to pass between wall and chair. The chair struck the employee bending over the table at the back of the legs at the knee joint. The employee had weight on right leg while stretching for papers and noticed immediate pain in right leg at knee joint. Employee was taken to HPMC and was released to work with no restrictions. (25049)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- Waste & Fuels Management (WFM) personnel updated the 221-T tank system closure plan to reflect the Option 2 approach, and distributed the plan for joint CHPRC/RL review on January 16, 2019. The Option 2 approach reflects the Resource Conservation and Recovery Act (RCRA) -

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) past practices process.

- WFM personnel drafted the low level burial grounds Green Islands training addendum and distributed for joint CHPRC/RL review on January 21, 2019.
- Held data quality objectives (DQO) workshop number 1 with State of Washington, Department of Ecology (Ecology). The DQO workshops address Outside Storage Area (OSA) A and OSA B.

13.02 Capsule Storage & Disposition

- Performed removal of contaminated equipment, radiological surveys and continued decontamination in G Cell. Several canyon and G Cell entries were made to obtain additional ventilation balance airflow velocities and additional 15-ton crane up/down travel measurements to support the W-135 Project.
- Performed scaffolding installation around the ion exchange module (IXM) received from 100-K project. The IXM will be used to reduce Tk-100 radiological contaminants by recirculating the liquid through the resin contained within IXM.

13.03 Canister Storage Building (CSB)

- Obtained Hanford Fire Marshall permit approvals and initiated implementation actions to transition the “fire water” pump house and water tank to a “service water” system.
- Completed 28 preventative maintenance (PM) packages.

13.06 Transuranic (TRU) Repackaging

- Completed Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestone M-091-52-T01B on January 17, 2019, to remove ten (10) additional mixed waste containers from OSA A and/or OSA B.

13.07 Waste Receiving and Processing (WRAP)

- Completed scheduled operations, radiological control (RADCON), safety inspections, weekly fire suppression system surveillance, weekly facility lay-up inspections, one year swinging door inspection, air compressor control panel and heaters maintenance.
- Completed 221 surveillances and eight PM packages.

13.08 T Plant

- Completed canyon crane guardrail addition.
- Completed 549 surveillances and 33 PM packages.

Sludge Receipt

Received the eighth STSC from 105KW which was placed in T Plant for interim storage.

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

- Completed scheduled operations and RADCON inspections, emergency light/exit sign and ground-fault circuit interrupter inspections, one year lifting hook PM, three month lifting attachment inspections, fire systems maintenance reset tripped dry riser at 2402WC, 2402WK security testing/maintenance and loaded Super 7A (TC198).
- Completed 342 surveillances and 24 PM packages.
- Shipped four 1800TL and two Super 7A from CWC to Perma-Fix Northwest (PFNW) in six shipments.
- Received one 1800TL and two Super 7A from PFWN into CWC in three shipments.

13.15 TRU Disposition

- Completed enhancement of acceptable knowledge of the TRU waste streams RLGEV-01 (second of ten waste streams to be enhanced in FY2019).
- Continuing enhancement work on third waste stream RL325-01; work has also commenced on fourth (RLBAT-08).

13.16 Offsite Spent Nuclear Fuel Disposition

- Maintained coordination of offsite spent nuclear fuel disposition.

13.21 Mixed Waste Disposal Trenches

- Completed 149 surveillances.
- Completed Mixed Waste Trench 31 and 34 (MWT-31/34) leachate tank third party inspection (TPI) fieldwork. The TPI report is in progress.
- Received five boxes from PFNW into MWT 31 in two shipments.

13.24 Management of Cesium and Strontium Capsules Project

- Work continues with the final WESF Modifications Design. Heating, ventilation, and air conditioning and interface designs with NAC equipment are planned to be completed in February 2019.
- The 60 percent preliminary design presentation for the MASF Mockup design is scheduled for January 30, 2019. The mockup facility will simulate the G Cell, canyon and truck port, and will be used to test equipment, develop procedures and train personnel.
- Work packages for the Capsule Storage Area (CSA) utility test pits are under development and field activities are scheduled for mid-February 2019.

13.25 Capsules Interim Storage Operations

- The CSS final design review comments were transmitted to NAC International and about 75 percent of the comments have been returned to CHPRC for review.

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

- Received 7,430 tons of waste for disposal in January.
- Received 51,927 tons of waste for disposal fiscal year to date (FYTD.)
- Received 40 shipments (376 tons) of Plutonium Finishing Plant (PFP) waste and used the new enhanced radiological controls during disposal operations.

13.12 Integrated Disposal Facility (IDF)

- Care and Custody, completed January monthly inspections and one storm event inspection.
- CHPRC, RL, DOE Office of River Protection (ORP), and Washington River Protection Solutions LLC (WRPS) presented a preliminary model of the IDF Risk Budget Tool to Ecology.
- Selected the waste management data system for use at IDF.
- IDF Operational Readiness RCRA Permit Modifications
 - Development of the Addenda D, Groundwater Monitoring Plan was initiated by the Soil and Groundwater Project, with River Risk Management Project input and reviews.
 - Continued resolution of Ecology comments on Addenda A, Part A and Addenda E, Security.
 - Continued initial development of RCRA Permit Addenda C, Process Information; Addenda G, Training; Addenda H, Closure Plan; Addenda K, Post-Closure; Addenda I, Inspection; and Addenda B, Waste Analysis Plan and the waste acceptance criteria to support IDF RCRA permit modifications.

Project Technical Services Support

- Conducted initial scenario review group for WESF evaluated full up drill. This drill is planned for February and the scenario review group provided key information to support drill package development.
- Conducted T Plant evaluated limited scope drill. This drill provided proficiency for the building emergency director, incident command post (ICP) communicator, and ICP hazard communicator.
- Completed preconstruction and premobilization activities for W-135 Project Utility Line Investigation. Work package planning completed. Site mobilization scheduled for February 11, 2019.

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 continues to await direction from RL.

Issue:

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

Corrective Action:

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

Status:

Continuing to use the best-demonstrated available technology to provide adequate configuration and minimize the potential for contamination spread during the long-term storage (i.e., protecting boxes with tarps or protective shoring; over-packing drums). Streamlined and consolidated container management

procedures. RL authorized the additional fiscal year (FY) 2019 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue throughout the year.

Issue:

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

Corrective Action:

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

Status:

Planning efforts have been completed which include using an ion-exchange module to reduce the Cs-137 inventory, thereby allowing shipment of the liquid to the ETF. A work package has been prepared and passed through a Hazard Review Board. Work to be performed 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 three percent higher than the historical baseline documents for the cover block. This weight exceeds the rated capacity of the WESF canyon crane by 900 pounds (three percent).

Corrective Action:

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

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

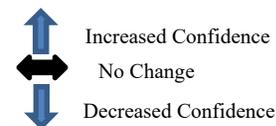
Status:

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

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments		
		Month	Trend			
RL-0013/WBS-013						
Explanation of major changes to the project monthly spotlight chart: No major changes to the spotlight chart in the month of January .						
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. The PDSA development cannot complete until CSS design is complete.		
				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	85
Submit PDSA to DOE for approval.	5/24/19	0				
Risk Action Assessment: No significant changes in January . The design contractor submitted the CSS final design to CHPRC for review in November. Review comment disposition and resolution is in progress. 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 January .						
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)						

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0013/WBS-013																
WSD-013B: TRU Waste Volumes or Characteristics - Processing	TRU waste not identified in records or higher-than-planned volumes due to inaccurate records or unexpected soil contamination impacts TRU processing. This waste is derived from retrieval of waste, non-compliant newly generated waste received from generators, TRU waste that is determined to be low-level and requires further treatment, or more waste is generated than in the plan, resulting in unplanned in-scope cost impacts. Risk Handling Strategy: Accept Probability: Medium (26% to 74%) Worst Case Impacts: \$2 million, 0 day			<p>Risk Trigger Metric: A significant volume of newly generated waste is received or nonconforming waste results in the need for new capabilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. 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														
WSD-097: Major Equipment Failure – T Plant	T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$3 million, 96 days			<p>Risk Trigger Metric: During planned facility operation activities, a suspected system component is discovered that requires attention or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC (September 30, 2019) contract.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Identify and procure critical spare parts for the T Plant crane.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Implement aggressive CM/PM program.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. 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 progressing as planned and will complete in February. The canyon crane is currently operational and spare parts have been procured for most critical spares.</p>	Mitigation Action(s)	FC Date	%	Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A	Implement aggressive CM/PM program.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%														
Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A														
Implement aggressive CM/PM program.	Ongoing	N/A														
WSD-136: CWC/WRAP Components Fail	CWC facilities and components may reach their end of life. These items will need to be replaced and/or repaired outside of planned funding profiles, resulting in cost impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$2 million, 0 days			<p>Risk Trigger Metric: Maintenance activities at CWC increase due to aging facilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct fieldwork for 2727W deactivation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Conducting doorframe replacements and electrical equipment repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. The WRAP roof was analyzed for structural integrity following water intrusion. There was insufficient basis for the roof's integrity, which may lead to an eventual roof replacement. The MDSA container stacking requirements are complete. Maintenance work at CWC will be scheduled based on facility work priorities. Additional Fire Alarm Control Units (FACU) spare parts were obtained from the deactivation of 2727W. Additional parts will be obtained through the deactivation of MO433 but this deactivation is a low priority given the number of spare parts already salvaged from 2727W.</p>	Mitigation Action(s)	FC Date	%	Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A	Conduct fieldwork for 2727W deactivation.	Complete	100	Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A
Mitigation Action(s)	FC Date	%														
Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A														
Conduct fieldwork for 2727W deactivation.	Complete	100														
Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0013/WBS-013																						
WSD-CSA-006: Ecology Temporary Authorization contingent on 90% Design for CSA RCRA Permit Application	The State of Washington, 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. Risk Handling Strategy: Accept Probability: Very Likely (>90%) Worst Case Impacts: \$0, 96 days	●	↔	<p>Risk Trigger Metric: Ecology requires the 90 percent design package for the CSA to be completed prior to issuing the permit for public comment.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. 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												
Mitigation Action(s)	FC Date	%																				
None identified at this time.	N/A	N/A																				
FY2019 Risk Triggers (Risk could be realized in FY2019)																						
WSD-125: Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues	A pause in waste processing results in an unexpected container degradation within Solid Waste Operations Complex (SWOC) (excluding TRU retrieval activities) and requires additional resources to respond. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$3 million, 0 day	●	↑	<p>Risk Trigger Metric: Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procuring stainless steel 85-gallon overpacks for alternative storage of containers that show signs of degradation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>FY2019 overpacks planned: 200</td> <td>9/25/2019</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. The project continued to perform container surveillances in January 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																				
WSD-W135-19: Unexpected Contamination is Found in the WESF Facility	More contamination is found at WESF resulting in the need to clean it up to reduce worker exposure or requiring more worker protection. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$2,000K, 32 days	●	↔	<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"> <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 January. Waste packaging in the canyon is substantially complete; however, waste removal is impacted by WESF canyon crane and truckport coverblock weight issues. To date, no excessive contamination has been discovered in the canyon. Decontamination efforts are underway in G Cell, with no excessive contamination encountered to date.</p>	Mitigation Action(s)	FC Date	%	Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.	Ongoing	N/A	Implement lessons learned.	Ongoing	N/A	Continuously utilize respiratory protection.	Ongoing	N/A						
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																				

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0013/WBS-013																			
WSD-W135-31: Canyon Crane non-functional/not Serviceable	<p>The existing WESF crane was put back into limited usage for the W-130 Project; however, the crane is found to be unserviceable, cannot be repaired for use, or fails during the W-135 operational activities.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$300K, 96 days</p>	●	↔	<p>Risk Trigger Metric: The canyon crane fails during use or cannot be returned to service after maintenance.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure new crane hook and block.</td> <td>9/30/18</td> <td>100</td> </tr> <tr> <td>Perform preventive/corrective maintenance procedures (i.e. replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.</td> <td>9/30/19</td> <td>50</td> </tr> <tr> <td>Refurbish current crane block.</td> <td>9/30/20</td> <td>0</td> </tr> <tr> <td>Procure critical spares.</td> <td>9/30/21</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. Performance of the full annual preventive maintenance package is complete. As part of mitigation actions for canyon crane capacity issue, the crane manufacturer was consulted to gain insight on any issues with this make/model of crane. Manufacturer does not have data on WESF crane, but recommended inspection of the gears for stress fractures. Planning to perform this inspection is in progress and will occur in parallel with replacement of the wire rope and hook. 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	%																	
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																	
WSD-CSS-002: CSS Subcontractor Change Orders & Claims	<p>The CSS construction contractor submits excessive change orders and claims, resulting in schedule delays and increased subcontractor cost.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$2,900K, 24 days</p>	●	↔	<p>Risk Trigger Metric: The CSS construction contractor will fabricate CSS equipment under a fixed price contract. If changes to the design are found to be necessary during fabrication, change orders may be submitted by the fabricator.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Bid award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure scope is understood and estimated correctly.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Scope of each task will be reviewed prior to initiation to ensure contractor is in alignment for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for face-to-face interface meetings.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. CSS final design review comment disposition and comment resolution is in progress. Fabrication of CSS equipment is not planned until FY2020.</p>	Mitigation Action(s)	FC Date	%	Bid award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure scope is understood and estimated correctly.	Complete	100	Scope of each task will be reviewed prior to initiation to ensure contractor is in alignment for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for face-to-face interface meetings.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%																	
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																	
WSD-CSS-011: Greater than Expected Comments on CSS Design are Received	<p>The CSS design receives more comments than originally expected, resulting in schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$600K, 48 days</p>	●	↓	<p>Risk Trigger Metric: CSS final design review comment resolution exceeds the time planned due to volume or difficulty in comments.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>CHPRC will provide recommendations for comment resolution, minimizing the effort to respond.</td> <td>4/30/19</td> <td>39</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>39</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 nearly complete providing disposition to comments and is working on comment incorporation. Some comments generated during the final design review necessitate additional analysis to resolve. Project team is working with design contractor to prioritize analysis and aggressively maintain schedule.</p>	Mitigation Action(s)	FC Date	%	CHPRC will provide recommendations for comment resolution, minimizing the effort to respond.	4/30/19	39	CHPRC will work closely with NAC during comment resolution to ensure all comments are understood.	4/30/19	39						
Mitigation Action(s)	FC Date	%																	
CHPRC will provide recommendations for comment resolution, minimizing the effort to respond.	4/30/19	39																	
CHPRC will work closely with NAC during comment resolution to ensure all comments are understood.	4/30/19	39																	
Unassigned Risks (Pending ownership of identified risks/opportunities)																			
No unassigned risks identified in January .																			

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	12.7	12.5	10.2	(0.2)	-1.4%	2.4	18.9%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$0.2M/-1.4%)

The CM schedule variance is within threshold.

CM Cost Performance (+\$2.4M/+18.9%)

The CM positive cost variance for Waste and Fuels, ERDF, and IDF is primarily associated with letter 19-FIN-0007, *Proposed Fiscal Year 2019 CH2M Hill Plateau Remediation Company Provisional Billing Rates*, received January 3, 2019, directed CHPRC to utilize the FY2018 Effective Rates for FY2019 Direct and Indirect Labor, Waste Pool, Absence Adder (ABS), Continuity of Service, Continuity of Service Overtime, and General and Administrative, effective October 1, 2018. When FY2019 fiscal year to date cost through January was repriced from the approved FY2018 forward pricing rates to the FY2018 effective rates, an over liquidation of all pools was experienced and variances from all pools were distributed, effectively reducing costs to date. In addition, PFP TRU commercial repackaging and Large Box Commercial TRUM Repack Group subcontract pricing contributed to the variance. A new contract was negotiated and the new pricing went into effect for shipments starting in November 2018. This cost savings should continue through the year.

Contract-to-Date (CTD)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,391.8	1,389.5	1,290.9	(2.3)	-0.2%	98.6	7.1%	1,562.2	1,461.2	170.3	100.9

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$2.3M/-0.2%)

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$98.6M/+7.1%)

The CTD favorable cost variance is a result of realizing efficiencies such as organizational flattening and streamlining; right-sizing capabilities for planned scope; optimizing resources with reorganization and consolidation of engineering capabilities across W&FMP; combined administrative/records functions across WESF and CSB; removing waste from building(s) and reducing the need for inspections/surveillances; reducing the size and number of radioactive areas/radioactive material areas

(RMA) and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of PM activities; increasing shared resources across all of SWOC; reducing dedicated resources for the Corrective Action System (CAS) and using project-wide support; optimizing maintenance scheduling and execution reducing operations field work supervision; increasing emphasis on managing planned absence coverage within existing resources; simplifying and optimizing acquisition and procurement management within W&FMP; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and the Solid Waste Inventory Tracking System (SWITS). The cost variance is also partially due to significant credits from the transportation and disposal of other Hanford contractor waste at ERDF.

Variance at Completion (+\$100.9M/+6.5%)

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

Contract Performance Report Formats are provided in Appendix A

FUNDS vs. SPEND FORECAST (\$M)

WBS 013/RL-0013	FY2019		Variance
	Projected Funding	Spending Forecast	
Waste Stabilization & Disposition	173.5	156.9	16.6
Management of Cesium and Strontium Capsules (Line Item)	6.6	3.0	3.6
Incremental Scope Pending Change Management	0.0	0.1	(0.1)
RL-0013 – Total	180.1	160.0	20.1

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The FY2019 projected funding level for project baseline summary (PBS) RL-0013 of \$180.1 million is based on the RL integrated priority list. The fiscal year spending forecast of \$160.0 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	2/28/2019		2/28/2019	On schedule
M-091-03M	Submit Revision of TRUM Waste and MLLW PMP to Ecology	6/30/2019		4/30/2019	On schedule
M-091-52-T01B	Remove 10 Additional Mixed Waste Containers from Outside Storage Area A and/or B	11/30/2019	1/17/2019 (A)		Complete

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
CSB – Obtain RL DSA Approval	1/31/2018 (A)	4/30/2019
Retrieve RSW EE/CA for CH & RH – RL Complete Review of Draft Document	3/1/2019	3/30/2019
DOE Review IDF DSA	3/29/2019	7/26/2019
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	9/26/2019	10/23/2019

Section D

Soil and Groundwater Remediation Project (RL-0030)

CH2MHILL
Plateau Remediation Company



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

M. A. Wright
Vice President for
Project Technical
Services

January 2019
CHPRC-2019-01, 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 January 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	27.6	110.6	2.3	10.9						
HX P&T	24.0	96.4	2.4	9.7						
KR-4 P&T	11.3	44.2	0.1	0.4						
KW P&T	13.4	51.7	0.5	2.2						
KX P&T	40.9	155.7	2.3	8.9						
200 West P&T	96.0	372.2	8.1	33.8	197	715	1.9x10 ¹¹	7.6x10 ¹¹	6.1	21.6
Combined	213.1	830.8	15.8	65.9	197	715	1.9x10¹¹	7.6x10¹¹	6.1	21.6
FY2019 KPG	--	1,800.0	--	N/A	--	N/A	--	N/A	--	N/A

Well Drilling by Area	FY2019 Planned	Current Month	FY2019 Cumulative
100-KR-4	2	0	2
100-HR-3	9	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	0	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	50%
19-EMS-SGRP-OBJ2-P1	Installation and testing of a high-density polyethylene (HDPE) pipeline between Modular Storage Units (MSU) and the 200 West P&T. Objective will eliminate the need to truck the MSU water to the P&T and thereby reduce greenhouse gas emissions and other waste production from vehicle use.	12/31/2018	100%

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

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	NA
Total Recordable Injuries	0	0	NA
First Aid Cases	0	17	NA
Near-Misses	0	0	NA

KEY ACCOMPLISHMENTS

Strategic Integration

- RL review of the cumulative impact evaluation (CIE) approach document Chapter 2 (Contaminant Sources, Inventory, and Waste Release Models) was completed.
- Received all hardware required for the new computing system. The new computing system will replace the aging (Tellus) system. Initiated installation in January.
- Conducted a lead author training for CHPRC projects and functions on January 8, 2019, as part of a continuous improvement initiative for document quality. The course covered the topics of document planning, writing, and finalization along with resources and tools that are available to support authors.

River Corridor

300-FF-5 Operable Unit (OU)

- Collected electro-resistivity tomography data during 300-FF-5 Stage B injections on January 7, 2019, and completed the phosphate and uranium extraction testing of the Stage B sequestration soil samples on January 8, 2019.
- Completed sampling associated with the unplanned release (UPR) from the purge water tank that occurred during Stage B injections on January 22, 2019.

100-HR-3 OU

- Transmitted the Draft A Remedial Design/Remedial Action Work Plan to RL on January 15, 2019, ahead of the January 28, 2019, due date to State of Washington, Department of Ecology (Ecology) for their review.

- Completed drilling at well 199-H3-12 on January 10, 2019. Well construction and development activities to follow.
- Completed construction of well 199-H3-21 on January 15, 2019, and well 199-H3-22 on January 22, 2019. Well development activities to follow.

100-KR-4 OU

- Delivered the draft 100-KR-4 technical impracticability (TI) waiver document and TI evaluation checklist to RL on January 23, 2019, for transmittal to U.S. Environmental Protection Agency (EPA).

200-UP-1 OU

- Submitted resolution to RL comments on the performance monitoring plan (PMP) on January 17, 2019.
- Developed resolution for the two EPA comments received on the Draft A Southeast Chromium Plume Remedial Design Investigation Report. A meeting is scheduled February 7, 2019, with EPA to resolve these comments and to discuss the path forward.

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

- Completed an RL senior management briefing on the Central Plateau (CP) groundwater remediation strategy and issues/decision needs on January 15, 2019. RL senior management provided direction to proceed with Alternative 2 as the preferred option in the Draft A proposed plan.
- Submitted draft Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) change notices to RL and Ecology for review on January 23, 2019, for the 200-BP-5 Action Memorandum and Removal Action Work Plan (RAWP) to add flexibility to increase the pumping rate.

200-ZP-1 OU

- Held a workshop with RL on January 8, 2019, to help identify the path forward for a future Record of Decision (ROD) modification for the 200-ZP-1 OU. This workshop also helped to define additional groundwater modeling scenarios needed for the future ROD modification.
- Briefed RL senior management on January 15, 2019, on the 200 Area Plateau Groundwater Strategy to support a future 200-ZP-1 ROD modification. RL concurred with the approach, which is scheduled to be presented to EPA on February 7, 2019.
- Met with RL to review 200 West P&T quarterly injection well performance on January 23, 2019. Improvement in injection well performance is resulting from chlorine disinfection.
- Met with RL on cyanide in groundwater on the Central Plateau on January 23, 2019. Generally, cyanide concentrations are decreasing at the T/TX/TY WMA and the B/BX/BY WMA for total and free cyanide, but still exceed 200 µg/L and 4.8 µg/L, respectively.

200-DV-1 OU

- Submitted the Draft A, Technology Evaluation and Treatability Studies Assessment for the Hanford Central Plateau Deep Vadose Zone report to RL on January 17, 2019. This report was provided to support a meeting with Ecology and EPA on January 28, 2019, to discuss the path forward for the deep vadose zone.

200-EA-1 OU

- Provided draft Interagency Management Integration Team (IAMIT) issue forms to RL on January 8, 2019. These forms provide two options for addressing polychlorinated biphenyl congeners during the next IAMIT meeting.

Central Plateau Closure Plans

- Completed CHPRC certification of the 216-A-36B Crib closure plan on January 23, 2019.
- Completed CHPRC certification of the 216-A-37-1 Crib closure plan on January 23, 2019.
- Held a workshop with RL and Ecology on January 10, 2019, to discuss the technical elements of the 216-A-29 Ditch closure plan.

Project Technical Services Accomplishments

- Training and Procedures worked with facility subject matter experts to identify and issue change to 2WPT-PRO-MN-53093, Periodic Inspection of Fire Dampers. This change was required to address actions needed when a damper fails to close and latch per CR-2018-2893.
- Operations Program -Conduct of Operations/Work Control/Conduct of Work supported S&GRP management team by providing controlling organization administrator gap (scenario based) training. This is one of the initiatives from the Hazardous Energy Control Corrective Action Plan.
- Project Delivery:
 - Completed YE32 tie in work, demobilized site and obtained CCD sign off (200-BP-5 OU).
 - Completed KW Soil Flushing PVC pipe fabrication of infiltration gallery (shop work), mobilized materials to the site, and performed ground scans of leach field area.
 - Completed YE33 electrical and mechanical rack shop fabrication and commenced YE35 mechanical rack fabrication.
 - Completed 100-HR-3 well electrical and mechanical rack shop fabrication.

200 West P&T

- Operated the 200 West P&T at an average of 2,157 gallons per minute (gpm) in January.
- Completed installation of the chlorine injection system in Injection Transfer Building 2.
- Completed transition of coagulant from ferric chloride to ferric sulfate to reduce manganese in effluent.

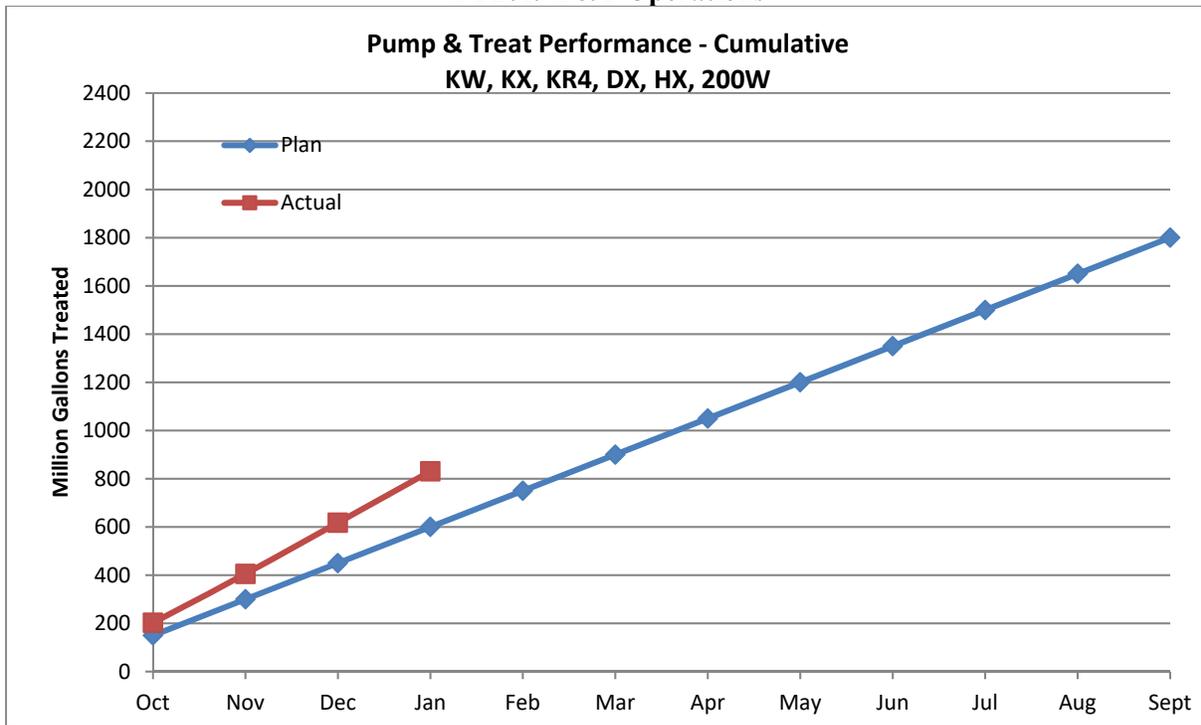
100 Area P&Ts

- 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. Completed distributor replacement in three ion exchange vessels.

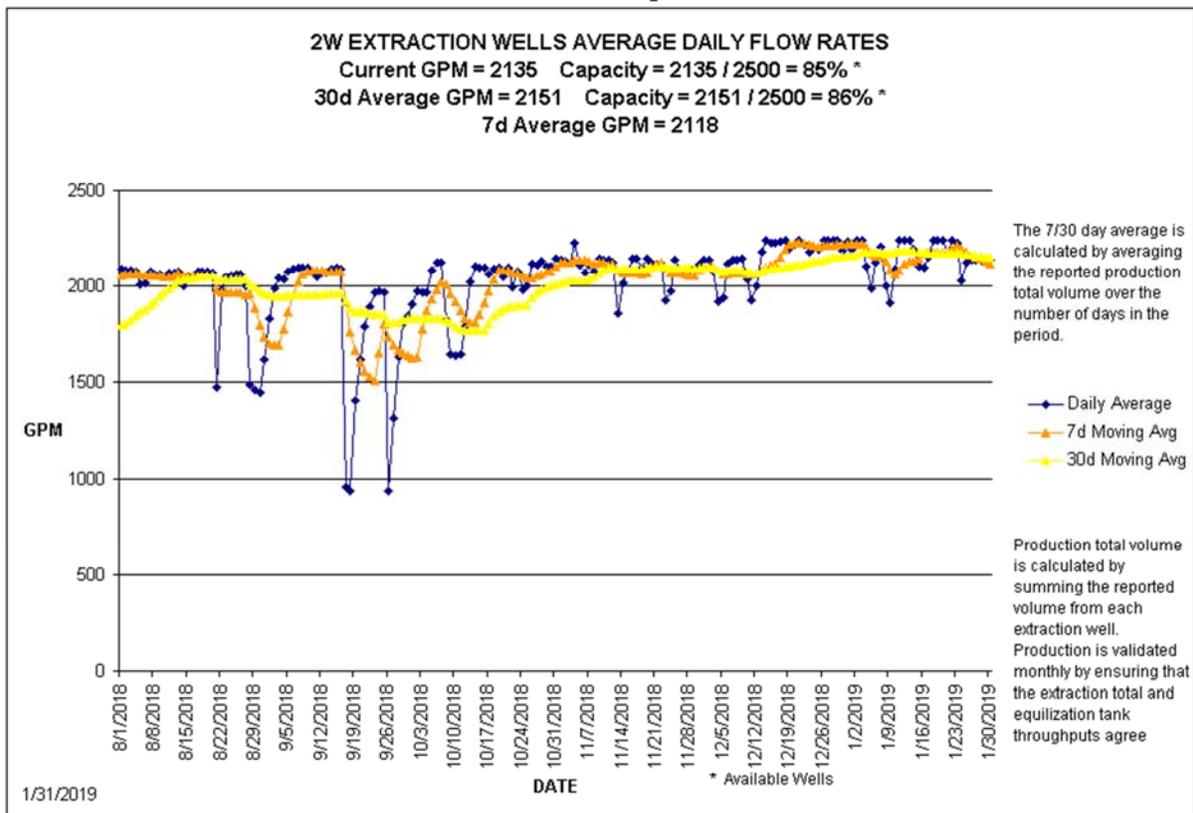
Groundwater P&T Facilities

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

FY2019 P&T Operations



200 West P&T Operations



MAJOR ISSUES

Issue:

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

Corrective Action:

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

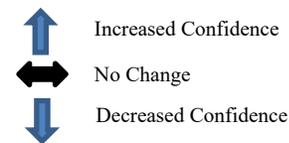
Status:

The partial government shutdown temporarily ended on January 25, 2019. Key agency meetings and document reviews will be rescheduled based on their availability. Impacts to the FY2019 project scope and schedule will be evaluated consistent with CHPRC-1900478.

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

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	9.5	10.4	8.1	0.9	9.6%	2.3	22.1%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (+\$0.9M/+9.6%)

The favorable current period schedule variance (SV) is the result of:

- Tellus computer replacement equipment was received ahead of schedule.
- 200-ZP-1 well realignment design and procurement activities were planned to initiate in February but started in October and progressed significantly in January.
- The 200-ZP-1 evaluation of hypochlorite versus alum completed ahead of schedule after the conceptual design determined that very few changes would be required to implement the design; subsequently report preparation took much less time and effort than planned.
- 100-HR-3 P&T optimization well-rack design, build, and construct activities were started early.
- The Revision 9 permit modification team agreed to combine/streamline the internal draft and regulator review draft engineering evaluation reports, allowing the internal draft activities to be earned this period.
- Procurements for the planned automated water level network installations were completed in January, months ahead of planned completion.

The positive schedule variances were offset, in part, by:

- 100-KR-4 soil flushing drilling campaign and field support activities were planned in January but performed early in the first quarter of FY2019; the SV is returning to zero.
- Extra pumping was required to achieve required turbidity for sampling during drilling at 100-HR-3 which slowed progress on the drilling campaign overall.

CM Cost Performance (+\$2.3M/+22.1%)

The favorable current period cost variance is the result of:

- A labor adder and G&A cost pass-back resulted in over \$1 million credit to cost. Letter 19-FIN-0007, *Proposed Fiscal Year (FY) 2019 CH2M Hill Plateau Remediation Company (CHPRC) Provisional Billing Rates*, received January 3, 2019, directed CHPRC to utilize the FY2018 Effective Rates for FY2019 Direct and Indirect Labor, Waste Pool, Absence Adder (ABS), Continuity of Service (COS), Continuity of Service Overtime (CSO), and General and Administrative (G&A), effective October 1, 2018. When FY2019 to date cost through January was repriced from the approved FY2018 Forward Pricing Rates to the FY2018 Effective Rates, an over liquidation of all pools was experienced, and variances from all pools were distributed, effectively reducing cost to date.
- Groundwater Data Evaluation & Reporting experienced a significant cost under-run due to the streamlining of the Internal Draft and Regulator Review Draft Engineering Evaluation Reports, and the reversal of an erroneous December 2018 accrual.
- 200-ZP-1 well realignment material procurement was less than planned because the project is utilizing on-hand materials and equipment instead of purchasing new inventory, and the Ferric Chloride vs. Aluminum conceptual design resulted in less change than anticipated, eliminating the

need for planned Pacific Northwest National Laboratory and General Electric subcontract support to the evaluation.

- 100-KR-4 P&T Operations realized a cost under-run due to shared labor resources spending more time at the 100-HR-3 P&T and smooth operations requiring less preventative and corrective maintenance, therefore requiring less subcontract and material support than was planned.
- 300-FF-5 subcontract costs were less than planned due to prior period corrections for Mission Support Alliance, LLC (MSA) equipment rental (previously over-charged) and fewer samples were taken than were planned resulting in less sample analyses.
- Well maintenance experienced less MSA roads and grounds maintenance in January than was planned.

The positive cost variances were offset, in part by:

- The FY2019 geophysical logging services contract was awarded with a significantly different rate structure than was assumed in the FY2019 baseline, which was based on prior year costs, resulting in subcontract costs higher than planned. This will continue for the remainder of the fiscal year.
- Subcontract support to the installation of permanent power at the 200-BP-5 well 361 site was higher than planned; the subcontract bid for the work came in significantly higher than the original MSA estimate used for planning.

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	1,561.5	1,562.3	1,506.6	0.8	0.1%	55.8	3.6%	1,717.2	1,661.1	154.6	56.1

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (+\$0.8M/+0.1%)

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

CTD Cost Performance (+\$55.8M/+3.6%)

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

Variance at Completion (+\$56.1M/+3.3%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0030 Soil and Groundwater Remediation	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0030 Spending Forecast	132.9	125.2	7.7

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 \$125.2 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		3/30/2019	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).
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)	2/17/2019
RL Review 100-NR-2 RI/FS Decisional Draft B	11/5/2018 (A)	2/16/2019
RL Provide Concurrence of DV-1 Decision Draft Treatability Test Evaluation Report (TTER) Comments	12/13/2018 (A)	1/2/2019 (A)
RL Review of 200-BP-5 Draft IROD-PP	12/20/2018 (A)	1/3/2019 (A)
RL Review 100-KR-4 RD/RAWP Revision	1/3/2019 (A)	2/1/2019
RL Transmit Draft A 100-HR-3 RD/RAWP to Regulators for review	1/18/2019 (A)	1/23/2019 (A)
RL Final Review of 100-KR-4 TI Document	1/24/2019 (A)	2/7/2019
RL Validate Draft B of the 100-KR-4 RI/FS	1/28/2019	2/11/2019
RL Submit Revision 0 100-BC-5 Proposed Plan to Regulators	2/5/2019	2/19/2019
RL Review CIE Approach Document Chapter 3	2/5/2019	2/12/2019
RL Review Biomobilization & Biointrusion Decisional Draft SAP	2/5/2019	3/06/2019
RL Review CIE Approach Document Chapter 4	2/7/2019	3/19/2019
RL Transmit 100-KR-4 TI Document to EPA for evaluation	2/11/2019	2/14/2019
RL Submit 216-B-3 Pond Engineering Evaluation Report to Ecology	2/13/2019	2/13/2019
RL Submit U-Farm 8C Groundwater Monitoring Plan for regulator review	2/14/2019	3/01/2019
RL Submit T-Farm 8C Groundwater Monitoring Plan for regulator review	2/15/2019	2/15/2019
RL Review of 100- HR-3 Revised Primary Drilling SAP Draft Rev 1	2/15/2019	3/16/2019
RL Review of 100-KR-4 Explanation of Significant Difference (ESD)	2/20/2019	3/6/2019
RL Review 300-FF-5 Environmental Calculation File (ECF) for calendar year 2019 Groundwater Performance Monitoring	2/26/2019	3/8/2019
RL Review 200-EA-1 RI/FS Work Plan – Redline	3/5/2019	3/12/2019
RL Transmit 200-UP-1 PMP Rev 1 Draft A to Regulators for review	3/6/2019	3/19/2019
RL Review CIE Approach Document Chapter 5 and 6	3/7/2019	3/19/2019
RL Review Ringold Decisional Draft A DQO/SAP	3/8/2019	4/1/2019
RL Certify New NRDWL information and submit to Ecology	3/19/2019	3/23/2019
RL Transmit 100-KR-4 RI/FS Draft B to EPA for Review	3/20/2019	4/03/2019
RL Transmit 200-ZP-1 RD/RAWP Draft A to EPA	3/20/2019	4/02/2019
RL Transmit Draft IDF Engineering Evaluation Report to Ecology for review	3/21/2019	3/25/2019
RL Submit SST WMA A-AX Engineering Evaluation Report to Ecology for review	3/21/2019	4/3/2019
RL Transmit Rev. 0 SST WMA C Engineering Evaluation report to Ecology	3/21/2019	4/3/2019
RL Transmit Rev. 0 SST WMA A-AX-Engineering Evaluation Report to Ecology	3/21/2019	4/3/2019
RL Submit SST WMA-C Engineering Evaluation Report to Ecology for review	3/21/2019	4/21/2019
RL Transmit Rev. 0 IDF Engineering Evaluation Report to Ecology	3/21/2019	3/25/2019
RL Submit 216-A-37-1 Crib Engineering Evaluation Report Rev. 0 to Ecology	3/22/2019	4/4/2019

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

January 2019
CHPRC-2019-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

M. A. Wright
Vice President for
Project Technical
Services

PROJECT SUMMARY

The revised Resource Conservation and Recovery Act (RCRA) permit including addendums for the Plutonium Uranium Extraction Plant (PUREX) Tunnel 2 stabilization became effective on January 16, 2019, following a 30-day appeals period. The State of Washington, Department of Ecology (Ecology) issued the permit in December 2018. Installation of the new insertion devices, cameras, and high-efficiency particulate air (HEPA) skid associated with grouting PUREX Tunnel 2 were completed in January. Grout placement resumed at PUREX Tunnel 2. Approximately 71 percent of the tunnel has been filled to date. Steam line crossover removals completed in the 200 West Area. The 242-B/BL D&D project team initiated cold and dark activities 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	0	10	N/A
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0040 Accomplishments

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

- Completed removal of lockout/tagout (LOTO) supporting the crossover steam-line removal.
- Completed post-job As Low As Reasonably Achievable review for B-Plant pre-filter change outs.
- Supported LOTO for B-Plant exhaust fans and performed the task to clean, inspect, and balance exhaust fans.

- Performed preparation to replace 242-AB Electrical Substation uninterruptible power supply battery cells.
- Performed intrusive electrical investigations at 242-B/242-BL.

PUREX Tunnel 2 Stabilization Project

Project Technical Services (PTS) Support

- The revised RCRA permit became effective on January 16, 2019.
- Successfully completed Hazard Review Board for installation of the secondary insertion devices.
- Completed installation of the 10 new insertion devices and cameras required for the topping-off plan.
- Completed connection of the new HEPA skid to riser three.
- Resumed grout placement at PUREX Tunnel 2 on January 17, 2019. Approximately 2,565 cubic yards of grout were placed this month and 28,166 cubic yards of grout have been placed fiscal year to date.

REDOX Canyon Risk Mitigation

- Completed walk downs of REDOX with Mission Support Alliance (MSA) communications and selected exact locations for installation of exterior antenna and bidirectional antenna.
- Continued engineering field walk downs for mechanical cold and dark isolations.
- Continued equipment preparation for installation of additional temporary electrical lighting and energy in REDOX.
- Completed installation of shelving and benches in MCC020 for RadCon and industrial hygiene instrument calibrations support.
- Continued removal of combustible waste items not requiring size reduction from crane way and crane maintenance platform.
- Placed all remaining waste not requiring size reduction from the storage gallery into Environmental Restoration Disposal Facility waste cans.
- Completed all remaining beryllium sampling in the canyon crane way and crane maintenance platform
- Initiated procurement of vacuum units to deploy in REDOX for removal of dirt/dust.
- Installed temporary leak containment for Tank 604.
- Completed sampling of sodium hydroxide material in Tanks 604 and 508.
- Completed safety walk down for fall protection plan needed for tank draining work packages.
- Dispositioned all required REDOX Silo eighth floor tank samples.
- Completed additional engineering and planning walk downs of new mobile trailers and access road locations.
- Provided plant forces work reviews for installation of access road, mobile trailers and container transfer areas to support waste and combustible removal campaign.

Steam Line Removal

- Completed remaining planned 200 West Area crossover removals for the fiscal year.
- Initiated glove bag installation and asbestos abatement for 200 West REDOX steam lines.
- Completed initial planning and work package preparation for 200 East crossovers.
- Completed radiological surveys for 200 East crossovers at locations 22 through 25.

242-B/BL Demo Preparation

- Completed asbestos and hazmat removal/fixative application work packages.
- Initiated cold and dark (mechanical/electrical) and de-water/grout slump basin work packages.
- Issued request for proposal (RFP) and awarded contract for 242-B/BL trailer install.
- Completed walk through and exterior ground scans of 242-B/BL.
- Completed electrical investigation planning for isolations.

MAJOR ISSUES

Issue

On January 11, 2018, 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 two that process knowledge is not sufficient to support designation.
5. If sampling is required to support designation, CHPRC will determine if designation can be accomplished in the required 90-day period, and notify RL if an extension is needed.

Status

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

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

Issue

On September 25, 2018, an entry into the REDOX canyon was performed for the first time since 1997. During the entry, significant combustible loading (liquid and solid) 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 was submitted in January 2019. There is a high likelihood of further discoveries of combustible material in the east end of the canyon once further entries are performed.

Issue

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

Corrective Action

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

Status

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

Issue

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

Corrective Action

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

Status

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

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0040/WBS-040				
Explanation of major changes to the project monthly spotlight chart:				
No major changes to the spotlight chart in January.				
Realized Risks (Risks that are currently impacting project cost/schedule)				

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>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Action Assessment: Implementation of the topping off plan was achieved in January, as the insertion devices were installed and grout placement successfully resumed. The "topping off plan" required the grout contractor to fabricate and install insertion devices for 10 new injection points on the PUREX Tunnel and place grout via the pumper truck for the last phase of grout placement. Additionally, two PTZ70 (cameras) were purchased and installed in new risers.</p>	Risk Recovery action(s)	FC Date	%	Work 5/10 shift to accelerate schedule.	Ongoing	N/A	Use of overtime before and after shift.	Ongoing	N/A	Fabricate and install 10 new injection points.	Complete	100			
Risk Recovery action(s)	FC Date	%																	
Work 5/10 shift to accelerate schedule.	Ongoing	N/A																	
Use of overtime before and after shift.	Ongoing	N/A																	
Fabricate and install 10 new injection points.	Complete	100																	
PRXT-S2-010: Inclement Weather	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms will result in in-scope unplanned work and result in schedule impacts to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 68 day			<p>Risk Event: The work was assumed to be performed in fall weather conditions.</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> <tr> <td>Renegotiate unit rate with contractor for grout placement</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in January. To mitigate potential bad weather, grout placement has been working a 5/10 schedule. Additionally, the project team and grout contractor worked with facility support (Radcon) in order to perform startup and shut down sequence of activities as efficiently as possible, thus maximizing the hours available to grout during shift. CHPRC procurement and the grout contractor renegotiated the unit rate for grout placement after December 9, 2018. The contract change was initiated to incorporate impacts for cold weather grout placement and redefine standby/conveyance system maintenance usage and rates in attempt to minimize stand down/delay time change orders but still incentivize the contractor to complete as quickly as possible.</p>	Risk Recovery action(s)	FC Date	%	Purchase freeze protection equipment.	Complete	100	Drain booms after each shift.	Ongoing	N/A	Running extension boom heater off shift.	Ongoing	N/A	Renegotiate unit rate with contractor for grout placement	Complete	100
Risk Recovery action(s)	FC Date	%																	
Purchase freeze protection equipment.	Complete	100																	
Drain booms after each shift.	Ongoing	N/A																	
Running extension boom heater off shift.	Ongoing	N/A																	
Renegotiate unit rate with contractor for grout placement	Complete	100																	
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: No major changes in January. 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>Sep 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: No major changes in January. Integrity failures could lead to water issues within radiological contaminated areas causing a hazard to personnel. Going cold and dark will minimize the risk for electrical shock due to water. Making minor repairs to leaking parts of the roof can significantly reduce water intrusion.</p>	Risk Recovery action(s)	FC Date	%	Perform cold and dark activities to shut off building power.	Sep 2019	35	Repair minor roof defects.	Ongoing	N/A						
Risk Recovery action(s)	FC Date	%																	
Perform cold and dark activities to shut off building power.	Sep 2019	35																	
Repair minor roof defects.	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>June 2019</td> <td>50%</td> </tr> <tr> <td>Use bracing when digging.</td> <td>Not yet digging</td> <td>N/A</td> </tr> <tr> <td>Implement communication plan between other Hanford contractor and other CHPRC projects.</td> <td>Ongoing</td> <td>NA</td> </tr> <tr> <td>Engineering to conduct structural integrity and equipment stand-off evaluations.</td> <td>Ongoing</td> <td>NA</td> </tr> <tr> <td>Follow the critical lift process, and hoisting and rigging manual.</td> <td>Ongoing</td> <td>NA</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. The project is working to ensure that the steam line removal efforts consider sand filters while planning. The project has been in communication with the 222-S Labs about future work scope at REDOX. Engineering has also been involved in structural evaluations of the sand filters. These evaluations will be used for establishing an equipment stand-off distances. Additionally, discussions for the initial planning of the critical lift process has started.</p>	Mitigation Action(s)	FC Date	%	Establish project boundary.	June 2019	50%	Use bracing when digging.	Not yet digging	N/A	Implement communication plan between other Hanford contractor and other CHPRC projects.	Ongoing	NA	Engineering to conduct structural integrity and equipment stand-off evaluations.	Ongoing	NA	Follow the critical lift process, and hoisting and rigging manual.	Ongoing	NA
Mitigation Action(s)	FC Date	%																				
Establish project boundary.	June 2019	50%																				
Use bracing when digging.	Not yet digging	N/A																				
Implement communication plan between other Hanford contractor and other CHPRC projects.	Ongoing	NA																				
Engineering to conduct structural integrity and equipment stand-off evaluations.	Ongoing	NA																				
Follow the critical lift process, and hoisting and rigging manual.	Ongoing	NA																				
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																						
No high risk threat value risks in January .																						
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 has hired D&D workers in anticipation of another 25 NCO openings at WRPS in second quarter FY2019.</p>	Mitigation action(s)	FC Date	%	Conduct full time equivalent personnel analysis and identify corrective actions to ensure adequate resource profiles.	Ongoing	N/A												
Mitigation action(s)	FC Date	%																				
Conduct full time equivalent personnel analysis and identify corrective actions to ensure adequate resource profiles.	Ongoing	N/A																				
Unassigned Risks (Pending ownership of identified risks/opportunities)																						
No unassigned risks identified in January .																						

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	7.0	5.6	4.8	(1.4)	-19.7%	0.8	14.7%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance: (-\$1.4M/-19.7%)

The current month negative schedule variance is primarily due to a hold on grout placement at PUREX Tunnel 2 during a two-week installation of new insertion devices as part of the “topping off” plan. The “topping off” plan is a revision to the baseline strategy by creating ten new injection points to accommodate the peaks and valleys of the grout placed in the tunnel as equipment in the tunnel hindered

the grout flowability. Additionally, the grout contractor was offsite for two weeks during the Christmas holiday, one of which fell into the January reporting period.

The negative schedule variance was partially offset by significant schedule gains associated with the 200 West steamline and crossover removal work scope. Additional insulator resources were assigned in January in order to accelerate completion of work scope before the warmer spring and summer months arrive. Also contributing to the partial offset was completion of work within REDOX associated with the north sample gallery cleanout and cold and dark preparations.

CM Cost Performance: (+\$0.8M/+14.7%)

The current month cost variance is primarily due to a \$810K credit received in January related to letter 19-FIN-0007, Proposed Fiscal Year (FY) 2019 CH2M HILL Plateau Remediation Company (CHPRC) Provisional Billing Rates, received January 3, 2019, directed CHPRC to utilize the FY2018 Effective Rates for FY2019 Direct and Indirect Labor, Waste Pool, Absence Adder (ABS), Continuity of Service (COS), Continuity of Service Overtime (CSO), and General and Administrative (G&A), effective October 1, 2018. When FY2019 fiscal year to date cost through January was repriced from the approved FY2018 Forward Pricing Rates to the FY2018 Effective Rates, an over liquidation of all pools was experienced, and variances from all pools were distributed, effectively reducing cost to date.

**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	513.9	517.8	492.0	3.9	0.8%	25.9	5.0%	576.9	553.3	61.3	23.6

Numbers are rounded to the nearest \$0.1 million

Cost to Date (CTD) Schedule Performance: (+\$3.9M/+0.8%)

The CTD schedule variance is within reporting thresholds.

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

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

Variance at Completion (+\$23.6M/+4.1%)

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

Contract performance report formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 040/RL-0040 Nuclear Facility D&D	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0040 Spending Forecast	81.8	70.2	11.6
Incremental Scope Pending Change Management	0.0	3.4	(3.4)
RL-0040 – Total	81.8	73.6	8.2

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

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

Critical Path Schedule

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
224-B (B Plant) Removal Action Work Plan (RAWP) (2017-34) to RL for Review	8/16/2017 (A)	3/30/2019
202-A (PUREX) Draft B Engineering Evaluation/Cost Analysis (EE/CA) Ecology Review	12/11/2017 (A)	2/28/2019
REDOX RAWP (2017-06) Rev. 0 Complete	3/15/2018 (A)	2/28/2019
REDOX SAP (2017-05) Draft C Environmental Protection Agency (EPA) Review	4/11/2018 (A)	3/15/2019
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

January 2019
CHPRC-2019-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

M. A. Wright
Vice President for
Project Technical Services

PROJECT SUMMARY

K Basin Operations (KBO):

Combined efforts with 100K Closure, Project Technical Services, and River Risk Management, workers completed the revegetation of the 618-10 complex. 100K Closure team completed the removal of the radioactively contaminated wooden crib in Waste Site 116-KE-2; began grooming the excavation site for surveying and soil sampling; and continued excavation and loadout of Waste Site 100-K-47:1. The 100K Closure basin characterization team completed sparging and collecting high dose material (HDM) in K West Basin Center Bay, and using the material hopper and screen assembly, loaded the HDM into fuel canisters for transfer into Engineered Container 230. Workers successfully deployed the gamma camera surveying the first 11 of 25 high dose debris bins. Engineers at the Maintenance and Storage Facility (MASF) modified the prototype processing unit for found fuel specimens to include a submersible motor and gear system. Geophysical and topographical surveys were completed around the 105KE Reactor Building to support reducing the site soil classification and International Building Code (IBC) seismic classification from D to C in support of interim safe storage of the reactor.

River Risk Management Project (RRMP)

At the 324 Building, the RRMP team completed the repair and successfully tested the A Cell crane door hoist. Installed the final camera control station in the Cask Handling Area, as well as, completed installation and construction acceptance testing of C Cell cameras and lights, D Cell light and the B Cell north camera. The third of four remote excavator arm (REA) thru supports was installed in B Cell. To support the structural modifications, crews completed the soil stabilization of 72 stages of the vertical grout block test and drilling the 20 vertical soil stabilization injection test sites at Pit 6 as well as initiated premobilization efforts for the pilot holes (future micropile) locations by floor scanning Room 18 and continued mock up training and work package development. At the 324 mock-up, continued training on the REA, supported REA TSA installation and initiated the A Cell snorkel installation training.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-RRMP-OBJ1-P1	Increase Environmental Management System (EMS) awareness	Present or facilitate a discussion of EMS topics to 324 Building Disposition Project personnel on a minimum of five different occasions in fiscal year (FY) 2019 and recruit personnel from 324 Building Disposition Project organizations (other than environmental) to participate in at least five compliance review/programmatic walk downs.	9/30/2019	50%
19-EMS-KBOPR-OBJ1-P1	Improve compliance/pollution and spill prevention	Monitor and evaluate universal waste (UW) and recycling accumulation areas for compliance with CHPRC procedures. Survey spill prevention measures.	9/30/2019	32%

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	1	4	1/09/2019 - Employee was using an auger that hit compacted soil. This caused employee to twist injuring lower back. Employee was taken to HPMC and returned to work with a restriction. (25046)
Near Misses	0	2	N/A

KEY ACCOMPLISHMENTS

K Basin Operations

- 100K Closure Project:
 - o 100K Soil Remediation:
 - Initiated removal of the Waste Site 116-KE-2 radioactive crib in early January and continued throughout the month.
 - Continued excavation and loadout of Waste Site 100-K-47:1.
 - Received RL approval of Waste Site Reclassification Form (WSRF) for closure of waste site 100-K-94 and submitted the WSRF to U.S. Environmental Protection Agency (EPA) for approval.
 - o K West Basin Deactivation:
 - Garnet Filter Media Removal System (GFMRS):
 - Conducted planning meeting with 100K Operations and Operations Support Services to discuss GFMRS process equipment installation in preparation to begin equipment connections to Engineered Container Retrieval and Transport System (ECRTS) upon completion of Engineered Container (EC) bulk sludge removal.
 - Sand Filter Media Removal System (SFMRS):
 - Prepared revisions to the Plant Forces Work Review (PFWR) for SFMRS equipment installation and submitted to the RL Labor Standards Board for review.
 - Continued preparation of the design change notice and facility modification package for SFMRS equipment fabrication and installation. They are approximately 70 percent complete.
 - K East Reactor Interim Safe Storage (ISS)
 - Approved the contract requisition for the safe storage enclosure (SSE) design modification, and incorporated CHPRC buyer comments into the statement of work (SOW) to reflect authorized FY2019 activities. Began development of the SSE design modification request for proposal.
 - Performed geophysical and topographical surveys around the 105KE Reactor building to collect data for analysis to support reducing the site soil classification and IBC seismic classification from D to C.
 - K West Basin Below-Water Debris Characterization:

- Completed draft waste characterization input for defense determination and provided to CHPRC TRU Program. In conference with RL, provided status and description of process for Carlsbad Field Office acceptance of all K Basin TRU waste streams, which include the following:
 - K East Basin North Loadout Pit (NLOP) sludge, stabilized and packaged as Contact-handled transuranic (CH-TRU).
 - K West Basin NLOP sludge and skimmer system sand filter media.
 - K West Basin integrated water treatment system garnet filter media.
 - K West Basin ECRTS decant filter media.
 - Debris generated by demolition of the K West Basin characterized as Remote-Handled transuranic (RH-TRU) based on radiological property when packaged.
- Completed underwater gamma camera surveys of 11 of 25 total debris bins requiring surveys. The gamma camera performance achieved all desired functionality in the underwater setting, including hot spot imaging, laser range measurement, tablet dose rate response, high spectrum quality, and data transfer to shared directory for subsequent off-line analysis by Radiological Engineers.
- Progressed preparation of the vertical pipe casing design and fabrication SOW.
- Ancillary Facility Deactivation and Demolition (D&D):
 - Issued the RFP to procure a vendor to pump out oily water from Fuel Storage Bunker 166KE (Waste Site 130-KE-2).
 - Provided responses to EPA/Department of Health (DOH) comments to RL on draft Removal Action Work Plan for 100K Reactor and Ancillary Facilities and the supporting Air Monitoring Plan.
- Completed revegetation of the 618-10 complex and project and contract closeout activities.

River Risk Management Project, 324 Building Disposition Project

- Equipment Procurement and Fabrication:
 - Awarded the cell dams contract.
 - Received the heating ventilation and air conditioning training snorkel at the Mockup.
 - Received four 955 waste containers at Acquisition Verification Services.
 - Continued the design and fabrication of the rad assay system, waste box shielding, floor saw system for 324, miscellaneous items for the REA, miscellaneous items for the lights and cameras, filter frames, water delivery system for the 324 Building, and shielded probe collimator.
- Cell Cleanout
 - Installed REA control station in Cask Handling Area (CHA). Completed installation and construction acceptance testing of C Cell cameras and lights, and B Cell North camera.
 - Reinstalled A Cell crane door hoist wire rope.
- Facility Preparations
 - Completed go-gauge in B Cell NW REA location.
 - Initiated core drilling for NE REA through support assembly (TSA).
 - Completed drilling on the south water delivery location.
 - Completed drilling and epoxied anchors for NW TSA anchor bolts.
 - Completed airlock core drilling for light installation.
- Structural Modifications
 - Installed permanent shield plates in B Cell Gallery second floor.
 - Completed soil stabilization of 72 stages of the vertical grout block test; 142 stages remain.
 - Completed drilling the 20 vertical soil stabilization injection test sites at Pit 6.
 - Conducted pilot hole Hazard Review Board mockup at the Nicholson offsite location.
 - Completed floor scanning of Room 18 to support micropile installation.

- Mockup
 - o Continued remote equipment operator qualification and proficiency training.
 - o Continued operator proficiency training with REA.
 - o Tested a Brokk hydraulic power unit for use with REAs and prepared it for shipment to 324 Building.
 - o Initiated A Cell snorkel installation testing at the Mockup.
 - o Relocated a manipulator to the south wall in preparation for use during floor saw testing.

Project Technical Support

- Training and Procedures worked with facility and subcontractor personnel to identify individuals who fall under the new NFPA 70E requirements for electricians. Helped document that current staff meet the requirements for verification of electrician credentials, which helped ensure there were no impacts to scheduled work activities.
- Operations Program, ConOps/Work Control/Conduct of Work supported the River Risk Management Project management team by participating in the Hazard Review Board for 324 Pilot Hole work package.

MAJOR ISSUES

Issue

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

Corrective Action

The project continues to work with labor relations and central radiation protection management to fill needed positions.

Status

The number of RCTs at 100K has improved. 100K Radcon currently has 27 CHPRC and 7 contract RCTs onboard

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 January .																
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> <th style="text-align: center;">Recovery Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Airlock entry recovery from A Cell crane door malfunction</td> <td style="text-align: center;">7/10/2018</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Clean Airlock Trench for A Cell Crane Door Repairs</td> <td style="text-align: center;">12/5/2018</td> <td style="text-align: center;">100</td> </tr> <tr> <td>A Cell crane door malfunction recovery</td> <td style="text-align: center;">2/6/2019</td> <td style="text-align: center;">95</td> </tr> </tbody> </table> Recovery Assessment: No major changes in January . A Cell crane door became restricted from closing, prohibiting airlock entry. No personnel were affected. Recovery continues to progress, as the A Cell crane door inspection and surveys, along with cleaning of the airlock trench were performed. The remaining repairs were slightly delayed in January due to RWP rad limitations that prevented progress. Completion is expected in early February.	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	2/6/2019	95
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	2/6/2019	95														
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. 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. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Recovery Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Contractor prepare and submit structure modification design - 30%-60% (VE2810)</td> <td style="text-align: center;">8/15/2018</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Contractor prepare and submit structure modification design (VN1220)</td> <td style="text-align: center;">2/4/2019</td> <td style="text-align: center;">86</td> </tr> </tbody> </table> Recovery Assessment: No major changes in January . 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. Additional efforts through progressing on the final design activities have been incorporated into the field execution schedule, along with the estimate to complete to reflect impacts of risk being realized.	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)	2/4/2019	86			
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)	2/4/2019	86														

<p>RCC-300-296-03: Mockup Testing and Qualification of Remote Equipment/ Process Identifies Major Modification Requirements.</p>	<p>Issues such as equipment interferences, differing as-found conditions than planned, equipment reliability, etc., arise prior to/during mockup testing, leading to re-design of equipment and resulting in cost and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$773K, 80 Days</p>			<p>Risk Event: During vendor FAT and/or mockup testing, issues and conditions were identified with mockup equipment, resulting in additional redesign, materials, and/or fabrication efforts greater than planned. Remote equipment procurements that have resulted in cost and/or schedule impacts include the REA system components (through supports and dummy post assemblies) and transfer mechanism (electrical components).</p> <table border="1" data-bbox="878 394 1563 510"> <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>2/27/2019</td> <td>-</td> </tr> </tbody> </table> <p>Recovery Assessment: No major changes in January. Construction acceptance testing 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)	2/27/2019	-
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)	2/27/2019	-											
<p>100K-KWB-102: KW Basin – Resources Unavailable</p>	<p>Other higher CHPRC priority work results in reallocation of key resources (Rad Planners, RCTs, IH, and NCOs), which results in cost and schedule delays as projects compete for key CHPRC resources.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$15K, 16 Days</p>			<p>Risk Event: 100K Closure Project soil remediation and basin characterization work is experiencing a shortage of RCTs, radiation control engineers, radiation control work planners, and radiation control first line managers.</p> <table border="1" data-bbox="878 930 1563 1104"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Radcon and Labor Relations have hired two rad engineers/planners and transferred a radcon first line manager (experienced in soil remediation and D&D) to 100K. Radcon has also staffed up to 37 RCTs and is in the process of hiring an additional 3 RCTs, which will provide sufficient resources to cover 100K Closure, 100K Operations, and 100K MinSafe work.</td> <td>3/15/2019</td> <td>25</td> </tr> </tbody> </table> <p>Recovery Assessment: The number of RCTs at 100K has improved. 100K Radcon currently has 27 CHPRC and 7 contract RCTs.</p>	Recovery action(s)	FC Date	%	Radcon and Labor Relations have hired two rad engineers/planners and transferred a radcon first line manager (experienced in soil remediation and D&D) to 100K. Radcon has also staffed up to 37 RCTs and is in the process of hiring an additional 3 RCTs, which will provide sufficient resources to cover 100K Closure, 100K Operations, and 100K MinSafe work.	3/15/2019	25			
Recovery action(s)	FC Date	%											
Radcon and Labor Relations have hired two rad engineers/planners and transferred a radcon first line manager (experienced in soil remediation and D&D) to 100K. Radcon has also staffed up to 37 RCTs and is in the process of hiring an additional 3 RCTs, which will provide sufficient resources to cover 100K Closure, 100K Operations, and 100K MinSafe work.	3/15/2019	25											
<p>100K-KWB-092: KW Basin - Fuel or Residual Material Discovered</p>	<p>Unexpected fuel is discovered during KW Basin Closure activities. This will result in increased cost and schedule delays to disposition fuel before the basin is deactivated.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$2,000K, 96 Days</p>			<p>Risk Event: Additional fuel specimens were discovered that will require removal, dewatering, and packaging in a found fuel cask (FFC) for shipment to the CSB.</p> <table border="1" data-bbox="878 1329 1563 1482"> <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: No major changes in January. The Safeguards termination request is with RL, awaiting final approval. Upon termination, the disposition path for the fuel specimens is clear; current holdings as well as any further discoveries will be managed as RH TRU waste.</p>	Recovery action(s)	FC Date	%	Pursue formal termination of safeguards of existing and any further discoveries up to 10Kg of material. Safeguards termination enables waste classification as 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											
<p>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</p>													
<p>No critical risks identified in January.</p>													
<p>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</p>													
<p>RCC-300-296-07: 300-296 Failure of a REC Cranes (B Cell, A Cell, A-D & Airlock, or CHA cranes)</p>	<p>Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project.</p> <p>Risk Handling Strategy: Accept</p>			<p>Risk Trigger Metric: REC crane failure occurs during operations.</p> <table border="1" data-bbox="878 1829 1563 1885"> <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>1/24/2019</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment:</p>	Mitigation action(s)	FC Date	%	Order and Procure Spare Parts – REC Cranes	1/24/2019	100			
Mitigation action(s)	FC Date	%											
Order and Procure Spare Parts – REC Cranes	1/24/2019	100											

	<p>Probability: Likely (75% to 90%) Worst Case Impacts: \$1,561K, 208 days</p>			<p>No major changes in January. 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. Project management was briefed on vendor-assessed data to determine procurements of identified crane parts. The project is determining the potential for acquiring crane replacement. These efforts are expected to reduce the potential for impacts.</p>						
RCC-300-296-15: 300-296 Cell sealing, interference removal and/or core drilling takes longer than planned	<p>Unexpected field conditions encountered during interference removal, sealing of cell penetrations, and/or core drilling work scope. The unexpected field conditions subsequently cause in-scope unplanned work and result in schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very Likely (>90%) Worst Case Impacts: \$145.8K, 90 days</p>	● ↔		<p>Risk Trigger Metric: The project experiences unexpected field conditions outside their control that make cell sealing, interference removal, and core drilling more difficult than planned.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform Core Drilling and Shield Plug Installation (VN1200)</td> <td>3/20/2019</td> <td>Ongoing</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. 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)	3/20/2019	Ongoing
Mitigation action(s)	FC Date	%								
Perform Core Drilling and Shield Plug Installation (VN1200)	3/20/2019	Ongoing								
FY2019 Risk Triggers (Risk could be realized in FY2019)										
RCC-300-296-01: Latent Conditions Impact Facility Modification	<p>Latent conditions, poor visibility in REC cells, or drawing omissions, inconsistencies, or errors impact facility modifications (e.g. mechanical, electrical IH/Radcon hazards), resulting in unplanned work and subsequently, cost and schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$294.5K, 256 days</p>	● ↔		<p>Risk Trigger Metric: Available drawings may not reflect the actual conditions in the 324 Building or REC cells. Debris within the REC cells, as well as poor visibility may prevent the verification of in-cell features for installing penetrations, removing interferences, and supporting preparation activities for structural modifications.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform routine preventative maintenance activities</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. 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								
Unassigned Risks (Pending ownership of identified risks/opportunities)										
RCC-300-296-04DOE: 300-296 Seismic Event (Force Majeure)	<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>									
RCC-300-296-23DOE: 300-296 Large Brush Fire (Force Majeure)	<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>									
RCC-300-296-27: 300-296 Requirement Changes Result in Additional Work/Entry Prerequisite Training	<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	9.4	11.7	8.0	2.3	24.8%	3.7	31.8 %

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (+\$2.3M/+24.8%)

The current month favorable schedule variance is primarily due to the 324 Structural Modifications account and is related to performance being taken on previously completed micropile demonstrations and verification support for structural modification design, Pit 6 soil verification testing, and micropile design comment resolution activities. In January, a portion of BCR-041-19-006R0 - 324 Building Disposition Project Carryover Scope and Latent Conditions, incorporated the necessary budget for the remaining 324 structural modification design. Within that BCR, the baseline for this scope was planned for February 2019 as the project assumed the additional scope could not be planned within the freeze period. This has created a favorable schedule variance for January and will become an unfavorable schedule variance in February.

CM Cost Performance (+\$3.7M/+31.8%)

A portion of the current month's favorable cost variance is related to the performance being taken on previously completed micropile demonstrations and verification support for structural modification design activities and "SLO Room Interferences Removal" in 324 Facility Modifications in January when the work was actually performed from October through December. This scope was added in January via BCR-041-19-006R0 - 324 Building Disposition Project Carryover Scope and Latent Conditions. Additionally, Remaining Closure Operations gained efficiencies this month (\$672.7K) by hiring one subcontractor to revegetate the 618-10 Burial Ground concurrently, as opposed to the original plan of performing the revegetation on each waste site separately; the co-located revegetation sites resulting in less site contouring; and optimal soil conditions were experienced along with good weather. Sand filter media removal design was simplified by retrieving the sand filter media to the NLOP versus the Sludge Transport & Storage (STSC) resulting in 20 less drawings than expected. Fuel specimen disposition is under running due to determination that the material is of no programmatic value and could therefore be terminated from further Safeguards controls with RL approval. An error in rules of performance coding caused performance in January instead of December when it was performed. Baseline scheduled work presumed the termination effort would require DOE HQ approval, requiring added time and staff resources.

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	630.6	627.0	566.7	(3.6)	-0.6%	60.3	9.6%	732.2	672.2	105.5	60.0

Numbers are rounded to the nearest \$0.1 million

Contract-to-Date (CTD) Schedule Performance (-\$3.6M/-0.6%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance (+\$60.3M/+9.6%)

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

Variance at Completion (+\$60.0M/+8.2%)

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0041 Spending Forecast	148.3	126.4	22.0

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. The variance primarily reflects the work scope included in the IPL that is pending authorization.

Critical Path Schedule:

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Forecasted Date	Status/Comment
M-016-85A	Complete Remote Excavation of 300-296 Waste Site	9/30/2019	11/24/2020	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
Review DSA/TSR Revision	12/4/2018 (A)	1/31/2019
DOE Authorize SPA SEC for Soils – 300-296	1/7/2019 (A)	3/7/2019
DOE Authorize SPA SEC for Hot Cell Disposal	1/7/2019 (A)	3/7/2019
RL Provide Comments on DSA/TSR in RCR	2/1/2019	2/3/2019
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 Review EPHA Draft	3/1/2019	3/15/2019

Description	CHPRC Delivery Date	Expected RL Due Date
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
RL Approval EPHA Final	4/2/2019	4/16/2019
DOE Independent Design Review - IFC Structural Modification	5/10/2019	5/29/2019

Section G

Fast Flux Test Facility Closure (RL-0042)

CH2MHILL
Plateau Remediation Company



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

January 2019
CHPRC-2019-01, 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 development of a rough order of magnitude estimate to complete preventative maintenance on hundreds of electrical components in the FFTF buildings to comply with National Fire Protection Association 70E.
- Completed draft engineer change request (ECR) to replace the variable frequency drive for the P-16 pump and completed internal reviews.
- Continued preparation of an ECR for replacement of power panel B37 and panel board LP-1L in Building 481.
- Performed review of draft ECR to replace obsolete panel boards and associated cables in Building 480A (LPN-43), Building 480B (LPN-18) and Building 4842B (LPN-51).
- Installed and removed lockout/tagout and installed electrical barriers in the fire alarm control units of Building 402.
- Completed annual surveillances of the Sodium Storage Facility, FFTF, and Fuels and Materials Examination Facility.
- Completed job hazards analysis planning meeting for Building 4717 roof access inspection.
- Completed field work for the 400 Area buildings annual surveillance.
- Supported Refrigeration Equipment Services at 402/400 Area to repair/replace heat pump.
- Supported critique pertaining to missed compensatory measures on fire alarm control unit panel inside Building 4703/400 Area.

MAJOR ISSUES

Issue

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

Corrective Action

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

Status

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

RISK MANAGEMENT STATUS

None currently identified.

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	0.1	0.1	0.2	0.0	0.0%	(0.0)	-30.9%

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/-30.9%)

The cost variance is within reporting thresholds.

Contract-to-Date (\$M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	27.0	27.0	22.6	(0.0)	-0.0%	4.4	16.4%	28.2	24.4	1.8	3.8

Numbers are rounded to the nearest \$0.1 million

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

The schedule variance is within reporting thresholds.

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

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

Variance at Completion (+\$3.8M/+13.5%)

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	2.6	1.7

Numbers are rounded to the nearest \$0.1 million

Funds Analysis

Fiscal year 2019 funding for project breakdown structure (PBS) RL-0042 is \$4.3 million. The spending forecast is \$2.6 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



January 2019
CHPRC-2019-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

FORM APPROVED
OMB No. 0704-0188

DOLLARS IN Thousands of \$

1. CONTRACTOR		2. CONTRACT				3. PROGRAM			4. REPORT PERIOD								
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract				a. NAME Plateau Remediation Contract			a. FROM (YYYYMMDD) 2018 / 12 / 24								
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788				b. PHASE			b. TO (YYYYMMDD) 2019 / 01 / 27								
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 851,999	d. TARGET PROFIT/FEE 241,605	e. TARGET PRICE 5,830,563	f. ESTIMATED PRICE 6,625,012	g. CONTRACT CEILING 5,830,563	h. ESTIMATED CONTRACT CEILING 6,625,012	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		6,320,128			c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)									
b. WORST CASE		6,535,394															
c. MOST LIKELY		6,383,406	6,440,957	57,550													
8. PERFORMANCE DATA																	
CAPN.PBS ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)							
RL-0011 Nuclear Mat Stab & Disp PFP	1,142	1,163	4,890	22	-3,727	995,223	983,999	1,161,224	-11,224	-177,225	0	0	0	1,001,762	1,212,478	-210,716	
RL-0012 SNF Stabilization & Disp	1,265	1,142	1,060	-123	82	749,414	748,953	718,908	-461	30,045	0	0	0	761,876	731,069	30,806	
RL-0013 Solid Waste Stab & Disp	12,706	12,524	10,151	-182	2,373	1,391,777	1,389,500	1,290,853	-2,278	98,647	0	0	0	1,498,841	1,397,902	100,939	
RL-0030 Soil & Water Rem-Grndwtr/Vadose	9,534	10,446	8,140	912	2,306	1,561,530	1,562,317	1,506,557	787	55,760	0	0	0	1,649,060	1,592,951	56,109	
RL-0040 Nuc Fac D&D - Remainder Hanfrd	6,984	5,607	4,781	-1,377	825	513,927	517,830	491,978	3,903	25,852	0	0	0	556,294	532,677	23,618	
RL-0041 Nuc Fac D&D - RC Closure Proj	9,355	11,677	7,970	2,322	3,708	630,587	627,003	566,696	-3,584	60,307	0	0	0	713,332	653,307	60,024	
RL-0042 Nuc Fac D&D - FFTF Proj	133	133	174	0	-41	27,018	27,007	22,580	-11	4,427	0	0	0	28,197	24,387	3,811	
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	0	
e. SUBTOTAL	41,118	42,693	37,167	1,574	5,526	5,869,477	5,856,609	5,758,796	-12,868	97,813	0	0	0	6,384,720	6,320,128	64,591	
f. MANAGEMENT RESERVE														63,278			
g. TOTAL	41,118	42,693	37,167	1,574	5,526	5,869,477	5,856,609	5,758,796	-12,868	97,813	0	0	0	6,447,998	6,320,128	127,869	
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																	
a. VARIANCE ADJUSTMENT																	
b. TOTAL CONTRACT VARIANCE												-12,868	97,813	6,447,998	6,320,128	127,869	

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

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

CLASSIFICATION (When Filled In)

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

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

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD)	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		2018 / 12 / 24	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18		b. TO (YYYYMMDD) 2019 / 01 / 27	

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)							
34 - Env Program & Strategic PIng	1,311	1,733	1,618	421	115	89,214	89,697	82,325	483	7,372	0	0	0	98,807	91,576	7,230	
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	126	126	41	0	85	8,199	8,199	4,977	0	3,222	0	0	0	9,314	5,885	3,430	
3B - PFP Closure Project	1,142	1,163	4,890	22	-3,727	906,441	895,217	1,080,159	-11,224	-184,942	0	0	0	912,980	1,131,413	-218,433	
3C - Waste & Fuels Management Project	10,104	9,680	8,023	-424	1,658	1,236,017	1,233,630	1,145,475	-2,387	88,155	0	0	0	1,319,969	1,228,840	91,129	
3D - Soil & Groundwater Remediation	8,191	8,682	6,518	491	2,164	1,370,605	1,370,909	1,316,688	304	54,222	0	0	0	1,448,264	1,393,603	54,661	
3G - K Basin Oper & Plateau Remediation Project	6,203	6,182	4,181	-21	2,001	1,061,083	1,059,452	998,580	-1,631	60,872	0	0	0	1,112,368	1,050,543	61,825	
3H - River Risk Management Project	6,956	9,419	6,954	2,462	2,465	267,120	264,815	241,412	-2,305	23,403	0	0	0	333,594	311,452	22,142	
3K - Central Plateau Risk Reduction	7,085	5,708	4,943	-1,377	765	452,392	456,284	435,092	3,892	21,192	0	0	0	495,660	477,370	18,289	
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)	41,118	42,693	37,167	1,574	5,526	5,869,477	5,856,609	5,758,796	-12,868	97,813	0	0	0	6,384,720	6,320,128	64,591	
f. MANAGEMENT RESERVE														63,278			
g. TOTAL	41,118	42,693	37,167	1,574	5,526	5,869,477	5,856,609	5,758,796	-12,868	97,813	0	0	0	6,447,998			

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

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 / 12 / 24	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 01 / 27	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group	ACTUAL CURRENT PERIOD	ACTUAL END OF CURRENT PERIOD (Cumulative)	FORECAST (Non-Cumulative)												AT COMPLETION	
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS							
			+1 FEB 2019	+2 MAR 2019	+3 APR 2019	+4 MAY 2019	+5 JUN 2019	+6 JUL 2019	AUG 2019	FY19 END	OCT 2019	FY20-LC	ATCOMPLETE			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		
300 - Office of the President	7	833	7	7	7	7	7	7	7	7	7	7	7	7	7	888
303 - Internal Audit	6	552	6	6	6	6	6	6	6	6	6	6	6	6	6	599
304 - General Counsel	5	511	4	4	4	4	4	4	4	4	4	4	4	4	4	546
31 - Communications	8	1149	8	8	8	8	8	8	8	8	8	8	8	8	8	1216
32 - Safety Health Security & Quality	63	8015	70	68	69	69	69	72	69	68	68	68	68	68	68	8566
34 - Env Program & Strategic Plng	45	5472	45	47	47	47	47	47	47	46	47	47	47	47	47	5844
35 - Business Services	57	7635	58	58	58	58	58	58	58	58	58	58	58	58	58	8098
36 - Prime Contract & Proj Integr	40	4089	38	38	41	41	41	42	42	42	42	42	42	42	42	4417
37 - Resource Mgmt & Strategic Intg	39	3013	38	42	43	44	44	46	46	46	46	46	46	46	46	3362
38 - Project Technical Services	39	6142	36	39	38	38	38	38	38	38	38	38	38	38	38	6443
3B - PFP Closure Project	214	52117	211	203	203	203	203	203	203	196	201	197	41	0	53980	
3C - Waste & Fuels Management Project	384	55313	382	388	383	387	395	372	378	366	366	387	9	9	58381	
3D - Soil & Groundwater Remediation	270	40651	276	309	305	286	292	283	270	238	238	224	8	25	42943	
3G - K Basin Oper & Plateau Remediation Project	218	35014	222	237	238	227	247	235	233	224	224	20	51	0	36948	
3H - River Risk Management Project	228	7133	225	224	225	224	221	221	223	223	223	25	173	0	9116	
3K - Central Plateau Risk Reduction	215	18264	228	231	226	216	198	189	187	162	162	4	0	0	19906	
g. TOTAL DIRECT	1839	245904	1854	1908	1900	1865	1883	1828	1809	1738	263	299	0	0	261252	

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

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

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$64.6 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$127.9 million. For January, the project was 3.8 percent ahead of schedule and 12.9 percent under planned cost. Contract to date (CTD); the project was 0.2 percent behind schedule and 1.7 percent under planned cost.

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

Five of the seven BCRs implemented in the period impacted the PMB:

- BCR-013-19-003R0, Incorporate FY2018 IDF 30% Design into FY2019
- BCR-040-19-003R0, Additional FY2019 Work Authorization 200-MG-1 Waste Sites Eco/Cultural Reviews
- BCR-041-19-005R0, Additional FY2019 300-296 Waste Site Remediation Work Authorization
- BCR-041-19-006R0, 324 Building Disposition Project FY2018 Carryover Scope and Latent Conditions
- BCR-041-19-007R0, Geophysical Survey and Additional Engineering -100KE 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 +\$64.6 million, +1.0% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

CPS - In Process		
	Total Authorized Unpriced Work	\$851,999
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	Grand Total Adjustments	\$851,999

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 January.

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 January.

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 January.

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

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

Prepared by:
Project Control Staff

Date:
02/20/2019

Approved by:

Date:

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

Appendix B

Project Services and Support (WBS 000)



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

M. A. Wright
Vice President for
Project Technical
Services

January 2019
CHPRC-2019-01, 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

This section is reported quarterly.

Appendix C

Capital Asset Projects

CH2MHILL
Plateau Remediation Company



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

January 2019
CHPRC-2019-01, 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)



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

January 2019
CHPRC-2019-01, 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 debris disposition has resumed. After completing lower-risk demolition outside of Remote Mechanical A (RMA), glovebox HA-46 will be removed during higher-risk demolition. The higher-risk demolition, scheduled to begin in May 2019, is currently being planned and preparations for a second management assessment (MA) are in progress.

MAJOR ISSUES

Issue:

The Plutonium Finishing Plant (PFP) project realized a loss of 20 D&D workers due to hiring by Washington River Protection Solutions, LLC (WRPS), another Hanford contractor. Half of the D&D workers transferred to WRPS in December and the other half 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 31 D&D workers who began training on December 3, 2018. Classroom training at HAMMER completed January 11, 2019. Field mentoring training activities followed HAMMER training and completed January 24, 2019. To prepare new hire D&D workers for safe work activities at PFP, experienced labor workers and managers alike have been dedicated to bring new staff up to speed to resume demolition and debris loadout.

Issue:

Efforts to employ adequate Radiological Control Technicians (RCTs), via contract or otherwise, have been exhausted before realization of efficient staffing support for ongoing activities at PFP.

Corrective Action:

The Company will team with WRPS to hire and train RCTs to fulfill sitewide resource needs.

Status:

The teaming companies have performed initial screening/aptitude testing for applicants. A 25-person RCT training class is currently in development with an anticipated February 25, 2019, start date. Allocation of RCT resources is subject to the availability and needs of the company at the time of training completion.

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 January .				
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 January .				
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 January .				
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 January .				
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in January .				

CRITICAL PATH SCHEDULE

The PFP critical path schedule begins with debris disposition of the 234-5Z rubble piles, starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of Zones 2 and 7, with the exception of the drain line. Remote Mechanical C (RMC) process line 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 CAP 1 project forecasted completion date remains on target for October 1, 2019.

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Nothing to report at this time.

DOE ACTIONS / DECISIONS

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

Appendix C.1

RL-0011.C1 – PFP D&D

(Removal of 174 Gloveboxes from 234-5Z)

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



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

January 2019
CHPRC-2019-01, 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 / 12 / 24										
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 01 / 27										
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18										
5. CONTRACT DATA																
a. QUANTITY 1	b. NEGOTIATED COST 330,987	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 9,878	e. TARGET PRICE 340,865	f. ESTIMATED PRICE 344,857	g. CONTRACT CEILING 340,865	h. ESTIMATED CONTRACT CEILING 344,857									
6. ESTIMATED COST AT COMPLETION				7. AUTHORIZED CONTRACTOR REPRESENTATIVE												
MANAGEMENT ESTIMATE AT COMPLETION (1)		CONTRACT BUDGET BASE (2)		VARIANCE (3)		a. NAME (Last, First, Middle Initial) Underwood, Teresa										
a. BEST CASE 332,586						b. TITLE Prime Contract Compliance Manager										
b. WORST CASE 334,991		330,987		-3,992		c. SIGNATURE										
c. MOST LIKELY 334,979						d. DATE SIGNED (YYYYMMDD)										
8. PERFORMANCE DATA																
CAPN.PBS Control Account.PARS 2 WBS (2)		CURRENT PERIOD				CUMULATIVE TO DATE				REPROGRAMMING ADJUSTMENTS			AT COMPLETION			
ITEM (1)	BUDGETED COST		ACTUAL COST WORK PERFORMED (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	-24,296	0	0	0	235,514	259,799	-24,284
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	-17,446	0	0	0	315,152	332,586	-17,434
f. MANAGEMENT RESERVE														2,393		
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545		
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																
a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE																
									-19	-17,446				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 / 12 / 24	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 01 / 27	
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	-17,446	0	0	0	315,152	332,586	-17,434		
f. MANAGEMENT RESERVE														2,393				
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545				

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2018 / 12 / 24	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 01 / 27	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> X <input type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

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

Appendix C.2

Capital Asset Project

RL-0011.C2 - Demolition of PFP Facilities



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

January 2019
CHPRC-2019-01, 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 56 percent of the existing debris pile has been shipped to the Environmental Restoration Disposal Facility (ERDF) for disposal. Low-risk demolition is scheduled to resume in late February. The higher-risk demolition, currently forecast to begin in May 2019 is being planned, and preparations for a second Management Assessment (MA) are in progress.

<i>Key Metrics</i>	<i>Current Month Plan</i>	<i>Current Month Actuals</i>	<i>Cumulative Plan</i>	<i>Cumulative Actuals</i>
COMPLETE Cold and Dark/Demo Ready activities for 234-5Z	-	-	1	1
COMPLETE Cold and Dark/Demo Ready activities for 236-Z	-	-	1	1
COMPLETE Cold and Dark/Demo Ready activities for 242-Z	-	-	1	1
COMPLETE Cold and Dark/Demo Ready activities for 291-Z	-	-	1	1
Complete Cold and Dark/Demo Ready activities for 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 56 percent of existing debris has been shipped.
- Completed field mentoring and mock-up activities with 31 newly hired Decontamination and Decommissioning (D&D) workers.
- Preparations for a second MA are being made to prepare for the higher-risk demolition in May 2019. Subcontract requisitions have been developed and plan to be awarded in February.
- Ion exchange exhauster units have been moved for maintenance and High-efficiency Particulate Air (HEPA) filter replacement. The ion exchange exhauster units will be used in high-risk demolition activities.
- Safely removed sections of roofing that came loose after a high wind event.

MAJOR ISSUES

Issue:

The Plutonium Finishing Plant (PFP) project realized a loss of 20 D&D workers due to hiring by Washington River Protection Solutions, LLC (WRPS), another Hanford contractor. Half of the D&D workers transferred to WRPS in December and the other half 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 31 D&D workers who began training on December 3, 2018. Classroom training at HAMMER completed January 11, 2019. Field mentoring training activities followed HAMMER training and completed January 24, 2019. To prepare new hire D&D workers for safe work activities at PFP, experienced labor workers and managers alike have been dedicated to bring new staff up to speed to resume demolition and debris loadout.

Issue:

The project lacks adequate resource coverage (RCTs, and D&D workers) to complete work package development and field work activities. Efforts to employ adequate Radiological Control Technicians (RCTs), via contract or otherwise, have been exhausted. The project has not realized efficient staffing support for ongoing activities at PFP.

Corrective Action:

The Company will team with WRPS to hire and train RCTs to fulfill sitewide resource needs.

Status:

The teaming companies have performed initial screening/aptitude testing for applicants. A 25-person RCT training class is currently in development with an anticipated February 25, 2019, start date.

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: Risk PFP-P-002, Unavailable Resources, was added to the spotlight chart as a realized risk in January.																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
PFP-P-002: Unavailable Resources	The project lacks adequate resource coverage (RCTs, and D&D workers) to complete work package development and field work activities. Risk Handling Strategy: Control Probability: Very Likely (>90%) Worst Case Impacts: \$0, 120 days	●	↓	<p>Risk Event: Inadequate D&D and RCT availability sitewide has compelled the CHPRC to initiate a new hire RCT training program.</p> <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Hire and train additional 25 RCT workers needed to perform CHPRC project work.</td> <td>TBD</td> <td>2%</td> </tr> <tr> <td>Complete new hire D&D field mentoring activities</td> <td>1/24/18</td> <td>100%</td> </tr> <tr> <td>Conduct FTE analysis and identify corrective actions to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: 31 D&D workers hired in December completed field mentoring activities January 24, 2019, and supporting staff have resumed regular project activities. 25 RCT applicants (to be assigned across CHPRC Projects) completed screening/aptitude testing and will begin training February 25, 2019.</p>	Risk recovery action(s)	FC Date	%	Hire and train additional 25 RCT workers needed to perform CHPRC project work.	TBD	2%	Complete new hire D&D field mentoring activities	1/24/18	100%	Conduct FTE analysis and identify corrective actions to ensure adequate resource profiles.	Ongoing	N/A			
Risk recovery action(s)	FC Date	%																	
Hire and train additional 25 RCT workers needed to perform CHPRC project work.	TBD	2%																	
Complete new hire D&D field mentoring activities	1/24/18	100%																	
Conduct FTE analysis and identify corrective actions to ensure adequate resource profiles.	Ongoing	N/A																	
PFP-P-014: Bump and Roll, Labor Assets Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit Employees Affecting Productivity	Plutonium Finishing Plant (PFP) Hanford Atomic Metal Trades Council (HAMTC) labor resources are unavailable or unqualified due to the bump and roll, LAMP, or other job postings, resulting in schedule impacts to the project. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 128 days	●	↓	<p>Risk Event: Twenty D&D workers have been hired by 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>1/24/19</td> <td>100%</td> </tr> </tbody> </table> <p>Risk Action Assessment: New D&D workers completed training/field mentoring activities January 24, 2019.</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.	1/24/19	100%						
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.	1/24/19	100%																	
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
No critical risks in January.																			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																			
No high risk threat value risks in January.																			
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 January. 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	●	↔	<p>Risk Trigger: Equipment failures result in delays to fieldwork.</p>															

	be required, resulting in cost and schedule impacts. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$1 million, 48 days			<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 January. 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														
PF-P5-006: Additional Soil Removal is Required	Prior to the placement of the cover cap, the additional soil added for contamination control is required to be dispositioned, resulting in cost and schedule delays to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 54 days	● ↔		<p>Risk Trigger: Additional soil, above planned value, is required to be removed due to contamination or regulatory concerns.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Engage early with RL to identify a path forward associated with the additional soil.</td> <td>11/9/18</td> <td>100%</td> </tr> <tr> <td>Collect and provide radiological mapping data to RL.</td> <td>TBD</td> <td>TBD</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. Continued communication with RL on required soil removal. No additional soil above planned quantity is required at this time. RL has requested radiological data to help them determine no additional soil disposition than planned is required.</p>	Mitigation action(s)	FC Date	%	Engage early with RL to identify a path forward associated with the additional soil.	11/9/18	100%	Collect and provide radiological mapping data to RL.	TBD	TBD			
Mitigation action(s)	FC Date	%														
Engage early with RL to identify a path forward associated with the additional soil.	11/9/18	100%														
Collect and provide radiological mapping data to RL.	TBD	TBD														
Unassigned Risks (Pending ownership of identified risks/opportunities)																
No unassigned risks identified in January .																

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	11/26/2019	Completion of Demolition of all PFP Facilities remain on target for November 26, 2019. Loadout of the existing debris continued in January with approximately 56 percent of the total debris pile shipped to ERDF for disposal.

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

DOE ACTIONS / DECISIONS

Working with RL on CD-4 closure actions.

Appendix C.2

RL-0011.C2 - Demolition of PFP Facilities

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



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

January 2019
CHPRC-2019-01, Rev. 0
Contract DE-AC07-08RL14788
Deliverable C.3.1.3.1 - 1

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

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

FORM APPROVED

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2018 / 12 / 24	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 01 / 27	
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	26	3,320	26	-3,294	55,307	44,172	110,739	-11,135	-66,567	0	0	0	55,307	151,258	-95,951	
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	26	3,320	26	-3,294	55,307	44,172	110,739	-11,135	-66,567	0	0	0	55,307	151,258	-95,951	
f. MANAGEMENT RESERVE														3,434			
g. TOTAL	0	26	3,320	26	-3,294	55,307	44,172	110,739	-11,135	-66,567	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 / 12 / 24	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 01 / 27	
		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		FORECAST (Non-Cumulative)													AT COMPLETION (15)
WBS.Resp Org Group	ACTUAL CURRENT PERIOD	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 FEB 2019 (4)	+2 MAR 2019 (5)	+3 APR 2019 (6)	+4 MAY 2019 (7)	+5 JUN 2019 (8)	+6 JUL 2019 (9)	AUG 2019 (10)	FY19 END (11)	OCT 2019 (12)	FY20-LC (13)	ATCOMPLETE (14)		
3B - PFP Closure Project	172	2828	162	154	154	154	154	153	152	152	152	24	0	4239	
g. TOTAL DIRECT	172	2828	162	154	154	154	154	153	152	152	152	24	0	4239	

CLASSIFICATION (When Filled in)										
CONTRACT PERFORMANCE REPORT										
FORMAT 5 - Explanations and Problem Analysis										
FORM APPROVED										
OMB No. 0704-0188										
1. CONTRACTOR		2. CONTRACT		3. PROGRAM			4. REPORT PERIOD			
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2018/12/24			
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019/01/27			
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	26.2	3,320.4	26.2	0	-3,294.3	-12596.4%	0	0.01
Cumulative:		55,306.9	44,171.9	110,738.8	-11,134.9	-20.1%	-66,566.9	-150.7%	0.80	0.40
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		55,306.9	151,258.0	-95,951.1	-173.5%	0	0.27			
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 work to size reduce and loadout debris associated with demolition, equipment maintenance, and training cost related to the realized risk of Bump and Roll, Labor Asset Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit employees.										
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 the Plutonium Reclamation Facility (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 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 Mission Support Alliance (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 HAMTC union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As the project gets further into the demolition phase of the PRF Canyon, increased utilization of Personnel Protective Equipment to align with the original plan as well as increased material procurements to align with the scope being performed (i.e., P-100 filters, Labounty Shear, additional fixative, etc.) are also contributing to this variance. An adjustment to the General & Administrative (G&A) Rate for FY2017 resulted in a reduction to the Performance Measurement Baseline (PMB) of \$463K. Finally, impacts from a contamination event that occurred on Friday, December 15, 2017 swing shift where RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis was conducted and resumption actions identified. This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
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 January
3. Forecast Schedule with No Baseline: No change in the month of January
4. UB Balance: No change in the month of January
5. Negative ACWP: No change in the month of January
6. EAC Analysis: Best Case = \$151,258; Most Likely = \$154,692; Worst Case = \$154,692. The Best Case EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no use of management reserve. The Most Likely EAC is the EAC reported this month plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will remain at completion but all available management reserve is used (e.g., all identified risks realized). The Worst Case EAC is the ACWP plus the ETC or BCWR if greater plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will be eroded at completion and all available management reserve is used (e.g., all identified risks realized), plus the scope identified in the Trend Log that is not in the EAC. The Best/Worst and Most Likely EAC values are documented in the Format 1 Report.
7. Negative CV > VAC: No change in the month of January
8. MR Transactions: No change in the month of January
9. Freeze Period Changes: No change in the month of January
10. Retroactive Changes: No change in the month of January
11. EVT Changes: No change in the month of January

Prepared by: Jessica Mares

Date: 02/12/19

Approved by:

Date: