

Monthly Performance Report

December 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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Date Published
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APPROVED
By Janis D. Aardal at 12:39 pm, Jan 23, 2020

Release Approval

Date

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CH2MHILL
Plateau Remediation Company
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L. Ty Blackford
President and
Chief Executive Officer

Monthly Performance Report

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December 2019
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EXECUTIVE SUMMARY

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

- Waste and Fuels Management Project (W&FMP):** The consent package for the W-135 Management of the Cesium and Strontium Capsules (MCSC) project cask storage system subcontract award was transmitted to the U.S. Department of Energy (DOE), Richland Operations Office (RL) for concurrence. The transuranic waste program upgrades and assessment team transmitted the 2019 update of the Container Specific Inventory to Los Alamos National Laboratory for review. At T Plant, the crew installed new canyon crane bridge driveline covers to widen the walkway.



Crews recently finished drilling 21 vertical micropiles outside the 324 Building – a key step in stabilizing the foundation to support the future removal of highly radioactive soil beneath the building.

- Soil and Groundwater Remediation Project (S&GRP):** Revegetation of the former 100-N Pump and Treat (P&T) facility site was completed and turned over to Mission Support Alliance, LLC (MSA) for annual monitoring. Success of the revegetation will be determined as identified in the memorandum of understanding between RL and the Tribes for mitigation actions addressing the adverse effects associated with decommissioning and disposition of systems and equipment in the 100-N Area. The temporary chlorination systems at the Injection Transfer Buildings 1 and 2 were taken offline and the new permanent chlorination system in the 289T Building is online at normal flow (providing remote monitoring capabilities, more reliability and disinfection from the main process building to the injection wells). The 200 West P&T continued to operate at record flow rates.
- Plutonium Finishing Plant (PFP) Closure Project:** Crews completed removal and size reduction of drainpipes in Tunnels 4 and 5, structural demolition and debris loadout of Remote Mechanical C line and structural demolition of Remote Mechanical A (RMA) line. While demolishing RMA line, crews removed glovebox HA-46 and packaged it for disposal, indicating completion of the Capital Asset Project RL-0011.C1. Six containers of lower-risk demolition debris and 51 containers of final phase demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal.
- Central Plateau Risk Management (CPRM) Project:** Crews abated more than 2,400 feet of steamline asbestos insulation in the 200 East Area along 7th Street. At the 224-B Facility, completed activities include characterization of the first floor, biological hazard cleanup and temporary lighting installation on the non-contaminated side of the facility. At Plutonium Uranium Extraction Plant (PUREX) North, walkdowns were completed to verify mechanical and electrical isolations within the complex. At Reduction-Oxidation (REDOX), the contract was awarded to procure a substation to transition the facility to temporary power. The Radiation Area Remedial Action team repaired 18 waste site washout locations and armored waste sites 216-A-19 and 216-A-20 near the Hanford Waste Vitrification Plant. Finally, crews completed non-destructive assay (NDA) for eventual treatment of 19 drums containing sodium-contaminated waste from the Fast Flux Test Facility (FFTF).
- K Basins Operations (KBO):** Crews at 105KW Basin continued clearing the northern part of west bay to create an open footprint for the installation of the sparging station and vertical pipe casings. This new equipment will segregate high dose basin debris, perform dosing and consolidate basin debris in the east and center bays. After deactivation of the basin water recirculation and cooling system, a letter was submitted to

RL documenting the completion of *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) milestone M-016-178, “Initiate Deactivation of 105-KW Fuel Storage Basin.” Tri-Party Agreement milestone M-093-28, “Submit Change Package for Proposed Interim Milestones for 105-KE/KW Reactor Interim Safe Storage,” was also submitted to RL for approval. The subcontract was awarded to fabricate the high dose and north loadout pit vertical pipe casing sections.

- **River Risk Management Project (RRMP):** At the 324 Building, the project resumption team for the November 14, 2019, skin contamination event continued to look at opportunities to minimize contamination risks and optimize radiological controls and worker safety. The remaining four north-shoring piles were drilled and 11 vertical piles grouted, completing installation for soil stabilization prior to initiating remediation of the 300-296 Waste Site beneath the 324 Building. Requests for proposal were released for the modified airlock rail track and concrete shielded container, and a proposal for the design and fabrication of the remote excavator arm universal cutting tool was received. Training was completed on the B Cell filter frame installation and initiated on the waste box grouting. At the Integrated Disposal Facility (IDF), the *Resource Conservation and Recovery Act of 1976 (RCRA)* Permit Modification Application to add secondary waste disposal was certified and submitted to RL. RL certified and forwarded the proposed permit modification to the Washington State Department of Ecology (Ecology), completing Tri-Party Agreement Milestone M-062-57A ahead of schedule. The first public comment period to review the IDF RCRA permit modification commenced in mid-December.

The President's Zero Accident Council meeting for December was hosted by Business Services and Resource Management and Strategic Integration. The three main ideas were:

- Pre-job for travel.
- Personal Protective Equipment (PPE) for travel.
- Post travel time to refocus.

Five "Thinking Target Zero" bulletins were published to convey important occupational, safety, health and environmental messages:

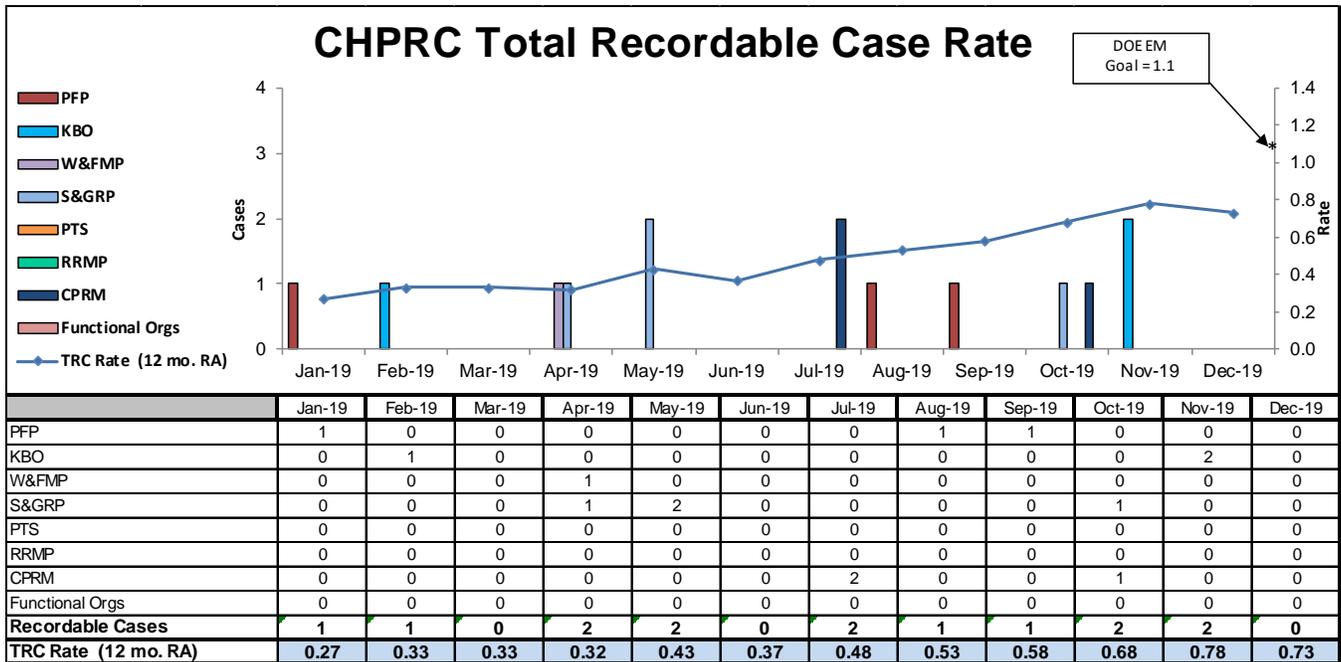
- Winter driving.
- Voluntary Protection Program 2020 goals.
- Freezing temps.
- Winter PPE.
- Clean recycling.

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

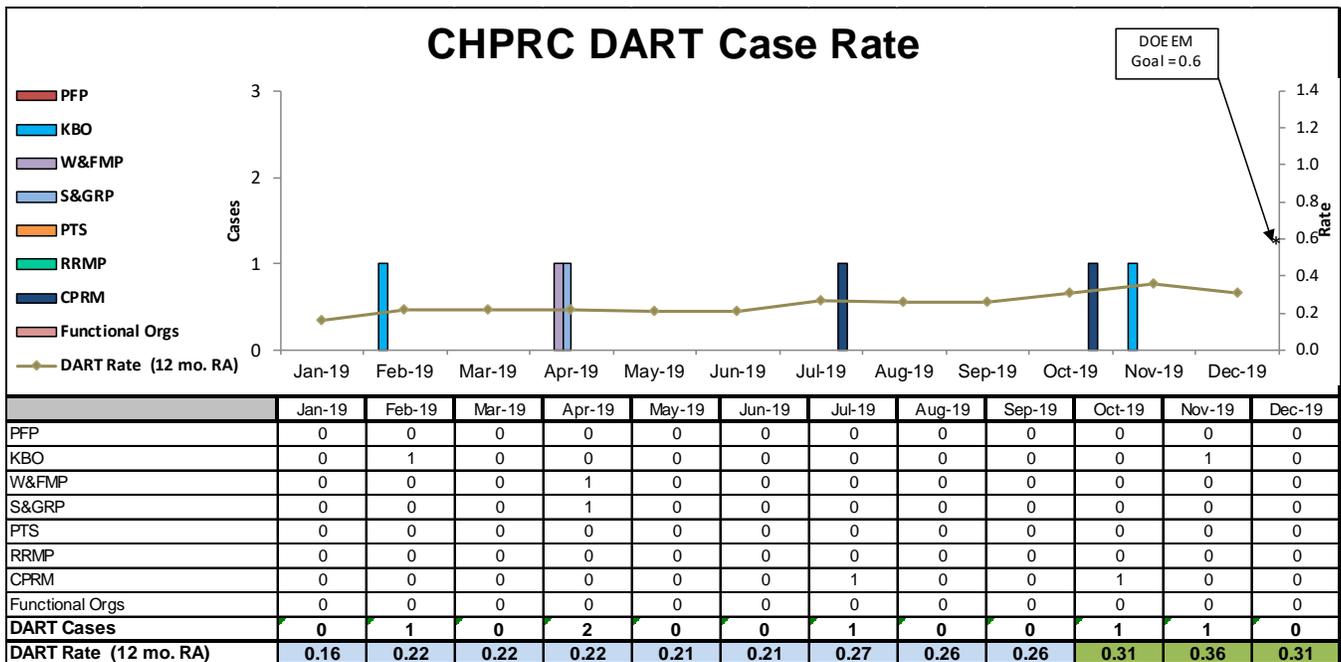
- Five Lessons Learned:
 - OPEXShare: 2019-RL-HNF-64365 Vibration Analysis Equipment Shipped without Electronic Clearance (MSA).
 - OPEXShare: 2019-BNL-I-1424 Worker Inclusion, Procedure Validation – Crucial to Implementation During Process Development/Modification.
 - OPEXShare: 2019-W&FMP-0008 Consequences of DOE-0359 may be new to workers coming from commercial workforces.
 - OPEXShare: 2019-12-17 Prepare-For-Winter-Driving.
 - OPEXShare: 2019-SGRP-0004 Hazardous Energy Must Be Controlled Following the Approved Process – Inspect Generators Brought Onsite by Contractors Prior to Use.
- Injuries.
- Weekly ethics moments.
- Vehicle events.
- Welcome back! Re-FOCUS.
- Preventing cut hazard.
- Winter travel reminders.
- Training and work delays.
- Reporting injuries.
- Need a tow on site?
- Security reminder.
- Phone app: What3words.
- Year-End dosimeter exchange.
- Voluntary PPE upgrades.
- Holiday safety.
- Inclement weather.
- Welcome Back! Safety re-focus.

TARGET ZERO PERFORMANCE

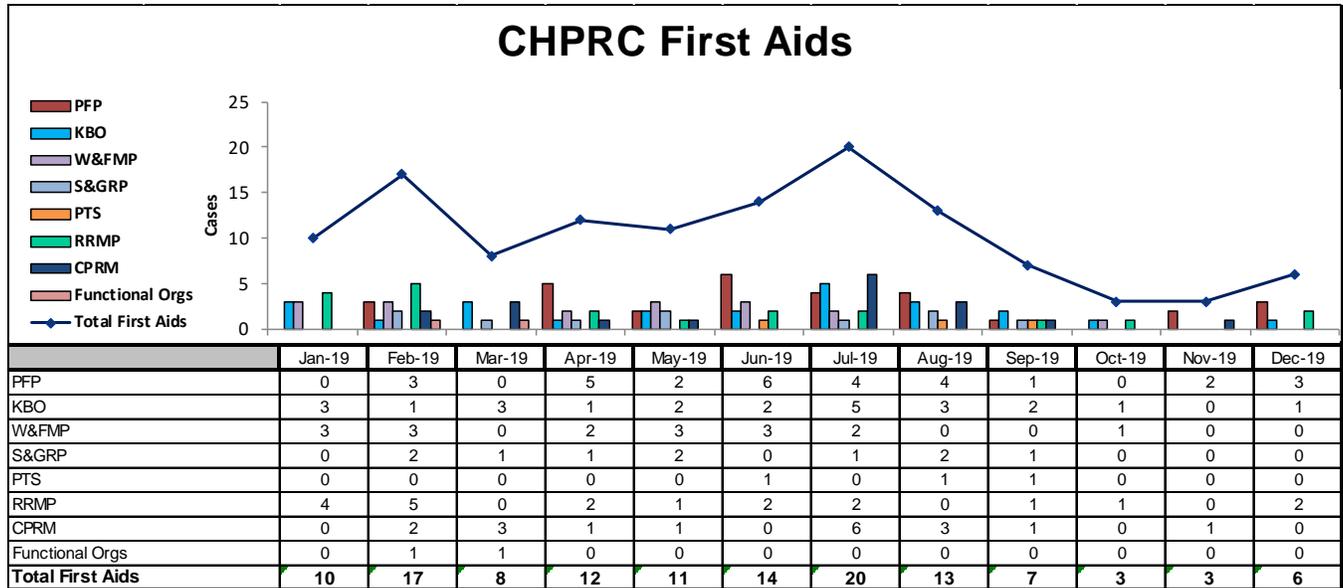
CHPRC continued to focus on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.73 is based on a total of 14 Recordable injuries. December had no reported Recordable cases. Note: One report only case from October 2019 at CPRM was changed to Recordable.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.31 is based upon a total of six Days Away cases. December had no reported DART cases. Note: One report only case from October 2019 at CPRM was changed to Reportable.



First Aid Case Summary: CHPRC reported six first aid cases in December. The contributors were three sprains/strains/pains, one abrasion/bruise/contusion, one cut/laceration/puncture and one undescribed/precautionary injury.

KEY ACCOMPLISHMENTS

Projects

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

Project Services and Support

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

MAJOR ISSUES

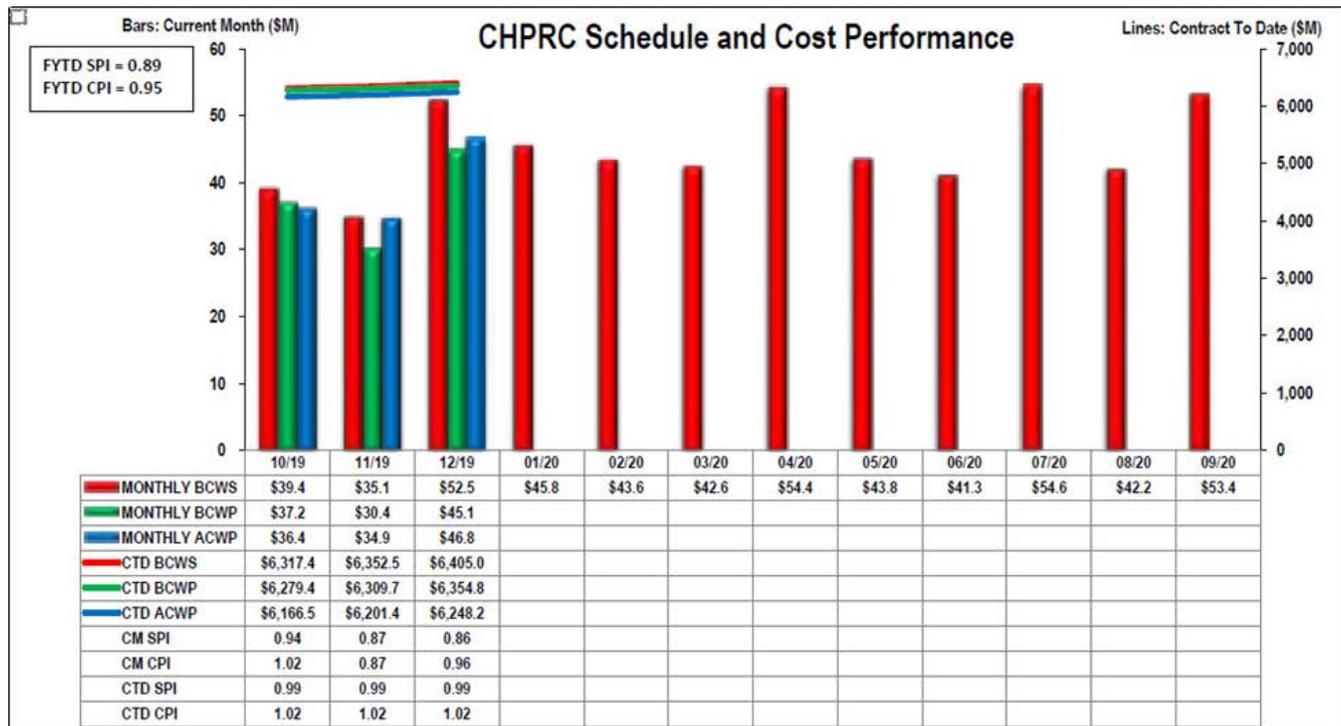
Projects

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

Project Services and Support

- No major issues to report for current month.

EARNED VALUE MANAGEMENT



	\$M						\$M					\$M		
	Current Period						Contract to Date					Contract Period		
	Budgeted Cost		Actual Cost		Variance		Budgeted Cost		Actual Cost		Variance			Variance
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost	BAC	EAC	Variance	
RL-0011 - Nuclear Materials Stab & Disp PFP	6.4	7.5	5.5	1.1	2.0	1,134.6	1,123.7	1,218.4	(10.9)	(94.7)	1,143.6	1,236.9	(93.4)	
RL-0012 - SNF Stabilization & Disposition	0.1	0.1	0.0	-	0.1	759.6	759.6	729.9	(0.0)	29.7	759.6	729.9	29.7	
RL-0013 - Solid Waste Stab & Disposition	17.7	14.5	14.3	(3.2)	0.2	1,521.2	1,512.4	1,428.4	(8.8)	84.0	1,678.2	1,589.7	88.5	
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	10.7	9.1	9.1	(1.6)	(0.0)	1,659.5	1,653.3	1,605.5	(6.2)	47.9	1,764.1	1,708.4	55.7	
RL-0040 - Nuc Fac D&D - Remainder	5.4	4.2	5.5	(1.2)	(1.2)	578.5	571.5	554.2	(7.0)	17.3	625.8	611.7	14.1	
RL-0041 - Nuc Fac D&D - RC Closure Project	11.9	9.4	11.9	(2.5)	(2.5)	722.2	704.9	687.1	(17.4)	17.7	822.5	799.2	23.3	
RL-0042 - Nuc Fac D&D - FFTF Project	0.3	0.3	0.5	-	(0.2)	29.4	29.4	24.7	0.0	4.7	33.0	28.4	4.6	
(Values are rounded to the nearest \$0.1M)	Total	52.5	45.1	46.8	(7.4)	(1.7)	6,405.0	6,354.8	6,248.2	(50.2)	106.6	6,826.8	6,704.2	122.6

Performance Summary

CHPRC continues to track completion of the contract within budget. Currently, a variance at completion of \$122.6 million is projected, with an additional \$48.4 million of management reserve (MR), for a total positive variance of \$171 million. For December, the project was 14.2 percent behind schedule and 3.8 percent over planned cost. Contract to date, the project was 0.8 percent behind schedule and 1.7 percent under planned cost.

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

The CM negative schedule variance comes from several areas. For W&FM's MCSC project, the transfer system fabrication and ancillary fabrication is delayed while awaiting receipt of the consent package from RL. Additionally, the mobilization and training of the Capsule Storage Area (CSA) construction subcontract is intentionally delayed due to significant positive float and the opportunity to avoid winter weather. At S&GRP, the negative schedule variance is the result of unanticipated issues requiring resolution associated with the composite analysis and the late air stripper submittal. At RRMP, the November 14, 2019 contamination event resulted in a continued management-directed stand-down for work in radiologically contaminated areas at the 324 Building facility. Additionally, the IDF earthworks subcontract is for five (instead of three) months. At CPRM, delays continue due to the management-directed work stand-down at REDOX due to concerned stakeholders. At KBO, the unexpected contents of the oil tanks delayed demolition, and the garnet filter media removal system work package was reworked to pass the hazard review board.

FUNDING ANALYSIS

FY2020 Funds vs. Fiscal Year Spend Forecast

(\$M)

PBS	Project	FY2020		Variance
		Projected Funding	Spending Forecast	
Estimate at Complete				
RL-0011	Nuclear Materials Stabilization and Disposition	29.5	32.4	(2.9)
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	0.6	(0.0)	0.6
RL-0013	Waste and Fuels Management Project	198.8	198.3	0.5
RL-0013	Management of Cesium and Strontium Capsules	14.3	0.7	13.6
RL-0030	Soil, Groundwater and Vadose Zone Remediation	134.7	130.3	4.4
RL-0040	Nuclear Facility D&D, Remainder of Hanford	93.3	67.2	26.0
RL-0041	Nuclear Facility D&D, River Corridor	150.9	148.8	2.1
RL-0042	Fast Flux Test Facility Closure	4.8	4.6	0.2
Total Estimate at Complete		626.8	582.4	44.4

Funds/Variance Analysis

Fiscal Year (FY) 2020 expected funding of \$602.5 million was increased by \$24.3 million, for a revised expected funding level of \$626.8 million. The increase was driven by passage of the FY2020 appropriation. The spending forecast increase from last month was \$3.6 million. The increase was primarily driven by adjustments in RL-0013 for labor utilization and FY2020 scope that slipped into FY2021 that was pulled back in.

BASELINE CHANGE REQUESTS

In December, CHPRC approved and implemented 12 baseline change requests (BCRs) into the Performance Measurement Baseline (PMB) budget. Four of the 12 BCRs impacted the PMB budget. Each change request is identified in the following tables.

Change Request #	Title	PBS	Summary of Change
BCR-013-20-003R0	<i>Correction to RL-0013 NDA Box Campaign Schedule Activity Description</i>	RL-0013	This BCR revised the NDA box campaign completion milestone to reflect the number of boxes to be assayed in FY2020. The milestone indicated 10; however, the basis of estimate planned for 15. This BCR did not change the PMB value.
BCR-013-20-004R0	<i>Removal of T-Plant PLEX Crane Camera Upgrade & Stack Flow Monitoring System Design</i>	RL-0013	This BCR removed the FY2020 scope in work breakdown structure (WBS) 013.08.02.01.13 to perform the T Plant crane camera upgrade and WBS 013.08.02.01.15 to design the 2706-T T Plant stack flow monitoring system. This BCR decreased the PMB by \$562.1K.
BCR-013-20-005R0	<i>Replan WRAP Roof Design to Planning Package</i>	RL-0013	This BCR modified activities in WBS 013.07.02.01.06 (GCP) WRAP Roof Replacement and moves a portion of the budget to a planning package in WBS 013.07.02.01.07 (GCP) WRAP Roof Replacement Planning Package. This change is being made to permit time to request information from roof industry experts and obtain options for repair/replacement to determine the best path forward. This BCR did not change the PMB value.
BCR-013-20-007R0	<i>Replan FY2020 Retrievably-Stored Waste to a Planning Package</i>	RL-0013	This BCR modified activities in WBS 013.05.01.02.01.01 Contact Handled RSW Retrieval PM and 013.05.01.02.01.11 Contact Handled RSW Retrieval Envir Reg to convert the scope from a work package to a planning package. This change is being made to permit time to resolve M-091 Tri-Party Agreement milestone series negotiations between RL and Ecology. This BCR did not change the PMB value.
BCR-013-20-008R0	<i>RL-0013 Correction of Three Milestone EVM Type</i>	RL-0013	This BCR changed the earn value method (EVM) type of three milestones from “percent complete” to “milestone” to align with PRC-GD-PC-40077, Scheduling Implementation Guide. This BCR did not change the PMB value.
BCR-030-20-002R0	<i>Incorporate Re-planning per the 200-ZP-1 Optimization Study</i>	RL-0030	This BCR incorporated replanning to meet the schedule objectives contained in the 200-ZP-1 Operable Unit Optimization Study Plan (DOE-RL-2019-38), in accordance with the RL FY2020 Work Authorization, 19-AMRP-0084/1904079A, Correspondence No. 1904079A, received September 26, 2019. This BCR decreased the PMB by \$1,931.9K
BCR-030-20-004R0	<i>Remove Duplicate 200- EA-1 Planning</i>	RL-0030	This BCR corrected a planning error for the FY2020 200-EA-1 Remediation Investigation/Feasibility Study Work Plan project. This BCR decreased the PMB by \$29.2K

Change Request #	Title	PBS	Summary of Change
BCR-030-20-005R0	<i>Revise EVT for 100-HR-3 & 100-KR-4 Well Realignment Construction Management</i>	RL-0030	This BCR re-planned the 100-KR-4 and 100-HR-3 well realignment construction management activities from level of effort (LOE) EVM to apportioned or “percent complete” activities within discrete WBS elements, to enable more accurate performance measurement. This BCR did not change the PMB value.
BCR-030-20-006R0	<i>Correct GW Data Evaluation PMP Planning</i>	RL-0030	This BCR corrected a planning error for the FY2020 Groundwater Monitoring Plan project. Activities supporting the preparation of the 200 West Area Single Shell Tank and 200 East Area Single Shell Tank groundwater monitoring plans were unintentionally omitted from the September 2019 PMB update. This BCR adds these associated activities. This BCR increased the PMB by \$78.4K
BCR-042-20-001R0	<i>Replan RL-0042 Compliance Upgrades to Planning Package</i>	RL-0042	This BCR incorporated a deferral and modification for WBS FFTF Compliance Upgrades to transfer scope into a planning package at the end of FY2020 to provide further opportunity to define the unauthorized scope of work with RL. This BCR did not change the PMB value.
BCR-PRC-20-003R0	<i>FY2020 Realignment of Management Reserve - OA</i>	RL-0011 RL-0012 RL-0013 RL-0030 RL-0040 RL-0041 RL-0042	This BCR reallocated management reserve (MR) values and fiscal year spread based on the CHPRC Fiscal Year 2020 Annual Risk Analysis Results. This BCR did not change the value of the PMB.
BCRA-PRC-20-005R0	<i>HPIC Updates December 2019</i>	RL-0013 RL-0030 RL-0040 RL-0041 RL-0042	This BCR incorporated December FY2020 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

The allocated (distributed) budget decreased \$2,444.8K in December.

Undistributed Budget (UB) Activity

BCR Number	Title	PBS	Fiscal Year	UB
N/A	N/A	N/A	2020	\$0

There was no change to UB in December.

Management Reserve (MR) Activity

BCR Number	Title	PBS	Fiscal Year	MR
BCR-PRC-20-003R0	<i>FY2020 Realignment of Management Reserve - OA</i>	RL-0011 RL-0012 RL-0013 RL-0030 RL-0040 RL-0041 RL-0042	2020	\$0

There was no change to MR in December.

Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2020	\$0

There was no change to fee in December.

See the Format 3 Report in Appendix A for a listing of the specific change requests that impacted the PMB budget by fiscal year. The PMB values of change requests are summarized by fiscal year in the following tables (dollars in millions).

December 2019 Summary of Changes (\$M)

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	FY2020	Contract Period Total	Total PMB
November 2019 Estimate											
PMB	3,391.5	391.7	471.3	504.8	485.0	470.6	2,323.5	563.1	551.2	6,829.2	6,829.2
MR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.4	48.4	48.4
Fee	155.5	14.3	14.5	27.8	10.6	18.9	86.1	36.5	0.0	278.1	278.1
Total	3,547.0	406.0	485.8	532.6	495.6	489.5	2,409.6	599.5	599.6	7,155.6	7,155.6
December 2019 Change											
PMB											
Change to PMB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.4	-2.4	-2.4
MR											
Change to MR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fee											
Change to Fee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.4	-2.4	-2.4
December 2019 Estimate											
PMB	3,391.5	391.7	471.3	504.8	485.0	470.6	2,323.5	563.1	548.7	6,826.8	6,826.8
MR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.4	48.4	48.4
Fee	155.5	14.3	14.5	27.8	10.6	18.9	86.1	36.5	0.0	278.1	278.1
Total	3,547.0	406.0	485.8	532.6	495.6	489.5	2,409.6	599.5	597.1	7,153.2	7,153.2

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

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	FY2019	FY2020
November 2019 MR Totals									
RL-0011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
RL-0012	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2
RL-0013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
RL-0030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5
RL-0040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8
RL-0041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.8
RL-0042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.4
December 2019 MR Changes/Utilization									
RL-0011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
RL-0012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.7
RL-0013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
RL-0030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.9
RL-0040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
RL-0041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.2
RL-0042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
December 2019 MR Totals									
RL-0011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
RL-0012	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4
RL-0013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4
RL-0030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6
RL-0040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5
RL-0041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6
RL-0042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.4

SELF-PERFORMED WORK

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

Contract-to-Date Actual Awards & Mods (\$M) 10/1/2008 - 12/22/2019					
Reporting Category					
	\$ Value	%	Goal %		
SB	\$1,704.59	56.67%	49.30%	PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
SDB	\$322.57	10.72%	8.20%		
SWOB	\$305.33	10.15%	7.50%	CHPRC Contract Value:	\$6,596.68
HUB	\$97.98	3.26%	2.20%	SB actual:	\$1,704.59
VOSB	\$261.87	8.71%	3.50%	SB Performed %:	25.84%
SDVO	\$169.27	5.63%	1.30%	PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed	
NAB	\$104.32	3.47%	N/A		
Large	\$801.13	26.63%	N/A	CHPRC Contract Value:	\$6,596.68
GOVT	\$5.41	0.18%	N/A	CHPRC Self Performed:	\$3,881.03
GOVT CONT	\$483.22	16.06%	N/A	CHPRC Self Performed %:	58.83%
EDUCATION	\$0.16	0.01%	N/A		
NONPROFIT_	\$4.42	0.15%	N/A		
FOREIGN	\$9.20	0.31%	N/A		
Total	\$3,008.14	100.00%	N/A		

Notes:

1. Since the contract award in October 2008, CHPRC has subcontracted more than \$3.0 billion in goods and services, with more than 72 percent going to small businesses. All subcontracting goals have been exceeded.
2. Approximately 91 percent of the total dollars arise from service and staffing contracts and contract amendments, with six percent of the remaining expenditures arising from PCard purchases and three percent from the balance in purchase orders for materials and equipment.
3. Data are summarized by business categories (women-owned minority business enterprise codes) in accordance with socioeconomic reporting requirements. Small business categories overlap and should not be added together.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
J.12/C.2.2, C.2.3	PBS-11, <i>Plutonium Finishing Plant Closure Project</i> PBS-13, <i>Solid and Liquid Waste Treatment and Disposal</i>	Offsite Transportation of Radioactive Material: RL provides equipment and government drivers to transport transuranic (TRU) materials outbound/inbound between the Hanford Site and Perma-Fix Northwest locations. RL is the authorized shipper, acts as signatory on the shipping papers and ensures compliance with DOE Manual 460.2-1, <i>Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A</i> . RL arranges for Commercial Motor Vehicle Safety Alliance Level VI Vehicle Inspections and verifies that the government drivers meet the applicable U.S. Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or Transportation Safety Document requirements.	Ongoing.
J.12/C.2.3.6	PBS-13, <i>Transuranic Waste Certification</i>	Waste Isolation Pilot Plan (WIPP) in Carlsbad, New Mexico: Provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable, and the number of shipments is controlled by DOE-Headquarters on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office.	No WIPP shipments are planned within the remaining contract period of performance.

DOE ACTIONS/DECISIONS

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

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

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In December, the Plutonium Finishing Plant's (PFP) Closure Project team safely completed removal and size reduction of drainpipes in Tunnels 4 and 5, structural demolition and debris loadout of the Remote Mechanical C (RMC) line and structural demolition of the Remote Mechanical A (RMA) line. While demolishing the RMA line, crews removed glovebox HA-46 and packaged it for disposal, which was the final glovebox needed to complete Capital Asset Project (CAP) RL-0011.C1. Six containers of lower-risk demolition debris and 51 containers of final phase demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal.

Key Metrics

<i>Key Performance Indicators</i>	<i>Current Month</i>	<i>Contract to Date</i>
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 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
Low-level Waste (LLW)/Mixed (M)LLW Shipped	399 m ³	22,275 m ³

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
20-EMS-PFP-OBJI-P1	Complete <i>Comprehensive Environmental Response, Compensation, and Liability Act</i> (CERCLA) removal action at the PFP Complex	Performs actions for final PFP turnover to surveillance and maintenance	7/30/2020	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	3	N/A
First Aid Cases	3	30	<p>12/05/2019 - Employee fell after missing the top step when ascending trailer metal steps. Employee, carrying multiple items, injured both knees and their forehead made contact with an open door. Worker was taken to HPM Corporation (HPMC) for evaluation, provided a non-zone dressing and released back to work without restriction. (25435)</p> <p>12/09/2019 - Employee injured left shin after inadvertently knocking over a metal folded step stool that was leaned against a conex box and the step stool fell into the left leg. The employee was taken to HPMC, provided wound skin care and released back to work without restriction. (25438)</p> <p>12/09/2019 - Employee felt discomfort in their back upon exiting the contamination area (CA) due to the combination of wearing a powered air-purifying respirator on the lower back while riding in a utility vehicle. Worker was taken to HPMC, provided over-the-counter medicine and released back to work without restriction. (25439)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments:

- Completed removal and size reduction of drainpipes in Tunnels 4 and 5.
- Completed structural demolition and debris loadout of RMC line.
- Completed structural demolition of RMA line.
- Removed glovebox HA-46 and packaged it for disposal. Removal of HA-46 completes CAP RL-0011.C1 scope.
- Repackaged and dispositioned three of four remaining legacy TRU drums.
- Shipped six containers of low-level demolition debris and 51 containers of final phase demolition debris to ERDF.

MAJOR ISSUES

Issue

The project’s fiscal year (FY) 2020 forecast reflects spending approximately \$2.9 million more than the entire allotted carryover balance. Additional funding is required in FY2020 to complete PFP demolition. The immediate forecast reflects that current projected funding would not be exceeded until about April 2020.

Corrective Action

Resolve funding shortfall.

Status

CH2M HILL Plateau Remediation Company (CHPRC) is working with the U.S. Department of Energy (DOE), Richland Operations Office (RL) to address this issue and anticipates resolving it prior to April 2020 so that funding limitations will not impact project 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

	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0011/WBS-011.OA										
Explanation of major changes to the project monthly stoplight chart:										
There are no major changes to the stoplight chart in December .										
Realized Risks (Risks that are currently impacting project cost/schedule)										
No realized risks identified in December .										
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)										
No critical risks identified in December .										
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
PFP-P-002: “Unavailable Resources”	The project lacks adequate resource coverage (Radiological Control Technicians [RCTs] and Deactivation and Decommission [D&D] workers) to complete work package development and fieldwork activities. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$3M, 120 days			Risk Trigger: Due to more stringent work controls, key resources are insufficient to complete work activities as planned. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Mitigation Action(s)</th> <th style="width: 15%;">FC Date</th> <th style="width: 15%;">%</th> </tr> </thead> <tbody> <tr> <td>Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in December . The project continues to review staffing levels on a weekly basis to reduce the probability of this risk occurring.	Mitigation Action(s)	FC Date	%	Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.	Ongoing	N/A
Mitigation Action(s)	FC Date	%								
Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.	Ongoing	N/A								

	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0011/WBS-011.OA																			
PFP-P-014: "Bump and Roll, Labor Assets Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit Employees Affecting Productivity"	<p>PFP Hanford Atomic Metal Trades Council (HAMTC) labor resources are not available or are unqualified due to the bump and roll, LAMP, or other job postings.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$0, 96 days</p>	●	↔	<p>Risk Trigger: Other projects and/or contractors on the Hanford Site request bargaining unit employees. The PFP workforce is affected through loss of employees or is required to train new employees to backfill HAMTC resources affected by the bump and roll, LAMP, or taking a position with a different contractor or project.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communicate with other entities to reduce impact of bump and roll process.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. The project continues to review staffing levels on a weekly basis to reduce the probability of this risk occurring.</p>	Mitigation Action(s)	FC Date	%	Communicate with other entities to reduce impact of bump and roll process.	Ongoing	N/A	Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%																	
Communicate with other entities to reduce impact of bump and roll process.	Ongoing	N/A																	
Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.	Ongoing	N/A																	
FY2020 Key Risks																			
PFP-P3-003: "Weather Impacts During 234-5Z Demolition"	<p>Inclement weather, including moderate winds, low or high temperatures, above average snowfall or thunderstorms will result in in-scope unplanned work and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$0, 8 days</p>	●	↔	<p>Risk Trigger: High winds and cold weather may impact the project in the fall/winter seasons. Average winds above 15 miles per hour (mph) shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and therefore shuts down fieldwork activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install heat trace & installation on fixative tanks</td> <td>1/16/20</td> <td>95</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. Heated fixative tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. Installation of heat trace and insulation on the fixative tanks will be completed in January. The process to blow out water lines at the end of each shift has been successful in avoiding issues.</p>	Mitigation Action(s)	FC Date	%	Install heat trace & installation on fixative tanks	1/16/20	95									
Mitigation Action(s)	FC Date	%																	
Install heat trace & installation on fixative tanks	1/16/20	95																	
PFP-P4-002: "Weather Impacts During 236-Z Demolition"	<p>Inclement weather, including moderate winds, low or high temperatures, above average snowfall or thunderstorms will result in in-scope unplanned work and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$0, 28 days</p>	●	↔	<p>Risk Trigger: High winds and cold weather may impact the project in the fall and winter seasons. Average winds above 15 mph shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and therefore shuts down fieldwork activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install heat trace & installation on fixative tanks</td> <td>1/16/20</td> <td>95</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. Heated tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. Installation of heat trace and insulation on the fixative tanks will be completed in January. The process to blow out water lines at the end of each shift has been successful in avoiding issues.</p>	Mitigation Action(s)	FC Date	%	Install heat trace & installation on fixative tanks	1/16/20	95									
Mitigation Action(s)	FC Date	%																	
Install heat trace & installation on fixative tanks	1/16/20	95																	
PFP-P-004: "Stop Work From Concerned Workers"	<p>Concerned workers can implement a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$0, 52 days</p>	●	↔	<p>Risk Trigger: During PFP demolition activities, an increase in stop works could result in delays.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. Increased communication and worker involvement to avoid confusion and concern to minimize stop works have continued; stop works may impact the project schedule going forward.</p>	Mitigation Action(s)	FC Date	%	Update communications as positions change.	Ongoing	N/A	Provide new maps with entry/exit instructions when boundaries are revised.	Ongoing	N/A	Encourage additional worker involvement.	Ongoing	N/A	Increase frequency of post-job reviews.	Ongoing	N/A
Mitigation Action(s)	FC Date	%																	
Update communications as positions change.	Ongoing	N/A																	
Provide new maps with entry/exit instructions when boundaries are revised.	Ongoing	N/A																	
Encourage additional worker involvement.	Ongoing	N/A																	
Increase frequency of post-job reviews.	Ongoing	N/A																	
Unassigned Risks (Pending ownership of identified threats/opportunities)																			
No unassigned risks identified in December .																			

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled (BCWS)	Budgeted Cost of Work Performed (BCWP)	Actual Cost of Work Performed (ACWP)	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	6.4	7.5	5.5	1.1	17.0%	2.0	27.0%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Variance: (+\$1.1M/+17.0%)

The favorable schedule variance is due to the completion of structural demolition and loadout of the 234-5Z RMC line and structural demolition of RMA line, which was scheduled to complete in March 2019 in the baseline. The work was delayed due to weather, a series approach to demolition, a conservative approach and reshuffling activities based on worker input. Current performance is offset by BCWS based on progress on Plutonium Reclamation Facility rubble disposition, which was pushed by the delays, mentioned above and is now scheduled to begin in January 2020.

CM Cost Variance: (+\$2.0M/+27.0%)

The favorable cost variance is primarily due to completion of structural demolition and loadout of 234-5Z RMC line and structural demolition of RMA line using less craft resources than planned and less material. Material planning was based on material cost per day based on the December 2017 time period. Actual material cost have averaged \$15K less per day due to less fixative required.

Contract to Date (CTD)

(\$M)

WBS 011/ RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,134.6	1,123.7	1,218.4	(10.9)	-1.0%	(94.7)	-8.4%	1,143.6	1,236.9	18.5	(93.4)

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Variance: (-\$10.9M/-1.0%)

The CTD schedule variance is within threshold.

CTD Cost Variance: (-\$94.7M/-8.4%)

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

Contributors to the negative cost variance include resumption actions associated with the December 2017 contamination event encompassing fixative applications, performing radiological surveys, revising

radiological postings, implementing infrastructure modifications and performing stabilization activities. Reassignment of CHPRC personnel to support the radiological control area and programmatic assessments also contributed to the variance.

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

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

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

Variance at Completion (VAC): (-\$93.4M/-8.2%)

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

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0011 Nuclear Matl Stab & Disp PFP	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	29.5	32.4	(2.9)

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

Projected funding in FY2020 of \$29.5 million consists entirely of FY2019 carryover funds. The spend forecast reflects the continuation of demolition activities to achieve slab-on-grade. CHPRC is working with RL to address the projected funding shortfall and anticipates a resolution prior to the issue impacting the project.

Critical Path Analysis

The PFP critical path schedule begins with mobilization of crews to start 236-Z Canyon loadout, which is anticipated to complete by March 9, 2020, meeting the requirements for the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Milestone M-083-00A, "Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities." Demolition completion will be followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities, completing by May 26, 2020.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/Comment
M-083-00A	"Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities"	9/30/2017		3/9/2020	The project recognized a three-day slip to the forecasted completion date since November due to activities for mobilization to start 236-Z taking longer than planned.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS/DECISIONS

DOE activities supporting the approval of ancillary facility status change forms are complete to date.

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)

CH2MHILL
Plateau Remediation Company
a Jacobs company



R. M. Geimer
Vice President for
K Basin Operations

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Sludge removal from the 105K West basin was completed in fiscal year (FY) 2019. Documentation for the completion of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Milestone M-016-176 was submitted to the U.S. Department of Energy (DOE), Richland Operations Office (RL) on December 18, 2019.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	0	15	N/A
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Documentation for the completion of Tri-Party Agreement milestone M-016-176 was submitted to RL on December 18, 2019.

MAJOR ISSUES

None currently identified.

RISK MANAGEMENT STATUS

None currently identified.

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	0.1	0.1	0.0	0.0	0.0%	0.1	98.3%

Numbers are rounded to the nearest \$0.1 million.

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

Variance is within threshold.

CM Cost Performance (+\$0.1M/+98.3%)

Variance is within threshold.

Contract-to-Date (CTD)

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	759.6	759.6	729.9	(0.0)	-0.0%	29.7	3.9%	759.6	729.9	0.0	29.7

Numbers are rounded to the nearest \$0.1 million.

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

The variance is within reporting thresholds.

CTD Cost Performance (+\$29.7M/+3.9%)

The variance is within reporting thresholds.

Variance at Completion (+\$29.7M/+3.9%)

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	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	0.6	0.0	0.6

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

FY2020 funding for Project Breakdown Structure (PBS) RL-0012 is \$0.6 million. The projected funding includes carryover from FY2019 and new budget authority. The FY2020 Spending Forecast reflects early completion of the Sludge Retrieval and Transfer Project and aligns with the RL FY2020 Integrated Priority List.

Critical Path Analysis

All project scope is complete with the exception of closeout-related activities. The project completed Tri-Party Agreement Milestone M-016-176 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	Forecast Date	Status/ Comment
M-016-176	Complete sludge removal	12/31/2019	09/11/2019(A)	Complete

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

None currently identified.

Section C

Solid Waste Stabilization and Disposition (RL-0013)

CH2MHILL
Plateau Remediation Company
a Jacobs company



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

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

M. A. Wright
Vice President for Project Technical Services

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In the December reporting period (November 18 to December 22, 2019), the Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. The River Risk Management Project (RRMP) continued to operate the Environmental Restoration Disposal Facility (ERDF) and the Integrated Disposal Facility (IDF) in a safe and compliant condition.

The following items were accomplished this month:

- The consent package for the award of the W-135 Management of the Cesium (Cs) and Strontium (Sr) Capsules (MCSC) project cask storage system subcontract was transmitted to the U.S. Department of Energy (DOE), Richland Operations Office (RL) for concurrence.
- The Transuranic (TRU) Program Upgrades and Assessment team transmitted the 2019 update of the Container Specific Inventory for review by Los Alamos National Laboratory.
- At T Plant, the crew installed new canyon crane bridge driveline covers to improve walkway width and replaced lights in the canyon with light-emitting diodes (LEDs).
- At the IDF, the *Resource Conservation and Recovery Act of 1976* (RCRA) permit modification application was certified and submitted to RL. RL certified and forwarded the permit to the Washington State Department of Ecology (Ecology) completing the *Hanford Federal Facility Agreement and Consent Order* (TPA) Milestone M-062-57A ahead of schedule. The first public comment period to review the IDF RCRA permit modification started mid-December.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
20-EMS-WFMP-OBJ1-P1	Complete installation of Maintenance and Storage Facility Integrated Testing Mockup and demobilization	Erect mockup structure and demobilization	9/30/2020	0%
20-EMS-WFMP-OBJ2-P1	Receive three garnet filter shipments at T Plant	T Plant Complex to receive three garnet filter shipments	9/30/2020	0%
20-EMS-WFMP-OBJ3-P1	Repackage 400 m ³ of TRU/transuranic mixed (TRUM) waste in preparation for certification/shipment to the Waste Isolation Pilot Plant (WIPP)	Complete repackaging 400 m ³ of TRU/TRUM waste	9/30/2020	29%
20-EMS-RRMP-OBJ1-P1	Track maintenance/recycling activities at ERDF (e.g., used oil recycling, tires, batteries, and product drums, etc.)	On a quarterly basis, track the maintenance recycling activities of the ERDF subcontractor and CH2M HILL Plateau Remediation Company (CHPRC) Transportation organization	9/30/2020	20%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1*	*1 DART, Project Technical Services in support of RL-0013
Total Recordable Injuries	0	1*	N/A
First Aid Cases	1	26	12/18/2019 – Employee slipped on a slick frost covered surface during setup activities. Employee was evaluated at HPM Corporation and released back to work without restrictions. (25445)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- Waste Encapsulation and Storage Facility (WESF) Permit: On November 18, 2019, the Inspection Addendum for WESF was transmitted to RL for concurrent review with CHPRC. Following incorporation of comments, the Inspection Addendum was transmitted to Ecology for informal review. On December 9, 2019, the Closure Plan Addendum for WESF was transmitted to RL for concurrent review with CHPRC. Solid Waste Operations Complex (SWOC) Part B Permit: On December 9, 2019, the Waste Analysis Plan Addendum for Central Waste Complex (CWC) - Waste Receiving and Processing Facility (WRAP) was transmitted to RL for concurrent review with CHPRC.
- SWOC Part B Permit: On December 16, 2019, the Building Emergency Plan for Low-Level Burial Grounds (LLBG) Mixed Waste Trenches (MWT) 31-34-94 was transmitted to RL for concurrent review with CHPRC.
- Hanford Facility Permit, Revision 9: On December 16, 2019, the Building Emergency Plan for LLBG Green Islands was transmitted to RL for concurrent review with CHPRC.
- Capsule Storage Area Permit: On December 5, 2019, CHPRC submitted two formal comments to Ecology on the draft permit to address technical errors.

13.02 Capsule Storage and Disposition

- Completed two operational drills at WESF.
- Completed 49 preventative maintenance (PM) packages.

13.03 Canister Storage Building (CSB)

- Completed one operational drill and one emergency preparedness drill.
- Completed 17 PM packages.

13.06 TRU Repackaging

- Completed repackaging of 63.3 m³ of TRU/TRUM waste in December for a total of 212 m³ fiscal year to date (FYTD).

13.07 Waste Receiving and Processing

- Shipped one 1800TL from WRAP to Perma-Fix Northwest (PFNW).
- Completed 242 surveillances and 17 PM packages.

13.08 T Plant

- Completed development of the statement of work for contractor bids on T Plant spalling repairs.
- Completed replacement of canyon lights with LEDs.
- Completed installation of new canyon crane bridge driveline covers.
- Shipped two drums from T Plant to ERDF in two shipments.
- Shipped two drums from T Plant to Stericycle in one shipment.
- Completed 601 surveillances and 34 PM packages.

13.09 CWC and LLBG

- Shipped one drum from CWC to ERDF.
- Shipped two 1800TLs from CWC to PFNW in two shipments.
- Received 18 standard waste boxes and two drums from PFNW to CWC in four shipments.
- Completed 357 surveillances and 16 PM packages.

13.15 TRU Disposition

- Continuing enhancement of acceptable knowledge on TRU waste streams, one of 10 completed.

13.16 Offsite Spent Nuclear Fuel Disposition

- Maintained coordination of offsite spent nuclear fuel disposition.

13.21 Mixed Waste Disposal Trenches

- Completed 139 surveillances.
- Shipped two drums from MWT 34 to ERDF in one shipment.
- Received 17 boxes and one drum from PFNW into MWT 31 in five shipments.

13.24 Management of Cs and Sr Capsules Project

- The procurement consent package for the Cask Storage System (CSS) was transmitted to RL for approval.

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

- Received 2,367 tons of waste for disposal in December.
- Received 6,697 tons of waste for disposal FYTD. Any corrections in previous months are reflected in this total.
- Received 70 shipments (1,153 tons) of Plutonium Finishing Plant waste using the enhanced radiological controls during disposal operations.
- Offloaded one long-length item for disposal.

13.12 Integrated Disposal Facility

- Care and Custody
 - Completed monthly inspections.
 - Completed quarterly inspections.
 - Completed two significant storm event inspections.
- IDF Operational Readiness
 - The following progress was made on installation of IDF infrastructure:
 - Continued site-grading activities of the waste receiving area for IDF.
 - Continued construction submittal review and acceptance balance of plant contract for facility and utility installation. Field mobilization and construction is anticipated for early January.
 - Received proposals and began evaluation for the supply and construction of the leachate tank domes.
- RCRA Permit Modification Request
 - The IDF RCRA Permit Modification Request (PMR) was certified by CHPRC and submitted to RL to initiate the 60 day public comment period.

- The RL 60 day public comment period for the IDF RCRA PMR was initiated December 16, 2019. Comments are due to Ecology by February 14, 2020.
A public meeting on the IDF RCRA PMR is scheduled for January 21, 2020, in Richland.

MAJOR ISSUES

Issue

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

Corrective Action

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

Status

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 FY2020 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue throughout the year.

Issue

CHPRC submitted CHPRC-1901804, *Preliminary Documented Safety Analysis for the Capsule Storage Area*, to RL for review on May 13, 2019, and anticipated receiving approval 120 days later on September 12, 2019. Due to the extent and complexity of DOE-Headquarters (HQ) comments, approval of the preliminary documented safety analysis (PDSA) did not occur on September 12, 2019, and that delay impacts initiation of CSA procurement/construction and CSS procurement/ fabrication.

Corrective Action

An early procurement request was initiated to RL for approval to commence CSA procurement/ construction and CSS procurement/fabrication prior to RL approval of the PDSA. CHPRC personnel continue to work with RL personnel to resolve outstanding comments.

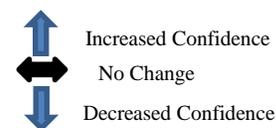
Status

CHPRC submitted an early procurement request to RL for review/approval on October 21, 2019. RL subsequently authorized early procurement for the construction and fabrication of the CSA, Universal Capsule Sleeves and the Transportable Storage Container Baskets (reference 1905014/20-PFD-0003, dated November 26, 2019). RL has also shared that they are withholding authorization of early procurement of the Transportable Storage Containers and Vertical Concrete Casks until the associated RL PDSA review comments are satisfactorily resolved. CHPRC and RL personnel continue working to resolve outstanding PDSA comments.

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: There are no major changes to the spotlight chart in December.													
Realized Risks (Risks that are currently impacting project cost/schedule)													
13-RCRA-REV9-001: "RL-13 - Additional Dangerous Waste Management Units (DWMUs)"	Unplanned DWMUs are added to the scope, requiring additional document support, impacting the project in both cost and schedule. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$0, 48 days			<p>Risk Event: Ecology provided technical comments on the permit addendum, expanding the number of DWMUs.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct weekly meetings with Ecology and RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in December. Impacts associated with realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project.</p>	Risk Recovery Action(s)	FC Date	%	Conduct weekly meetings with Ecology and RL.	Ongoing	N/A			
Risk Recovery Action(s)	FC Date	%											
Conduct weekly meetings with Ecology and RL.	Ongoing	N/A											
13-RCRA-REV9-003: "RL-13 - Ecology Delays"	Scope supported by Ecology is impacted by delays in Ecology review time that do not align with the Permit Management Schedule. This issue requires that the project take recovery actions that result in schedule impacts. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$0, 96 days			<p>Risk Event: Ecology's review time is impacting the Permit Management Schedule.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct routine meetings with Ecology and the contractor to promote communication efforts.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in December. Select staff are prepared to respond to comments when they are received. Impacts associated with realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project.</p>	Risk Recovery Action(s)	FC Date	%	Conduct routine meetings with Ecology and the contractor to promote communication efforts.	Ongoing	N/A			
Risk Recovery Action(s)	FC Date	%											
Conduct routine meetings with Ecology and the contractor to promote communication efforts.	Ongoing	N/A											
WSD-138: "Regulatory Document (Closure Plan with Ecology) Results in Significant Comments from the Regulator"	Significant comments from the regulator on closure plans submitted for approval results in non-approval of the permit or rework, causing schedule impacts to the project. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$0, 96 days			<p>Risk Event: Eight closure plans were formally resubmitted to Ecology in August and November 2018. In January 2019, Ecology provided additional comments changing the closure strategy for several units.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Use a standardized approach to quickly evaluate and categorize comments for resolution.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct routine meetings to address agency comments and to remain current on the influences from agencies.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in December. RL informed Ecology that additional document revisions would not be completed at this time. The impacts associated with the realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project.</p>	Risk Recovery Action(s)	FC Date	%	Use a standardized approach to quickly evaluate and categorize comments for resolution.	Ongoing	N/A	Conduct routine meetings to address agency comments and to remain current on the influences from agencies.	Ongoing	N/A
Risk Recovery Action(s)	FC Date	%											
Use a standardized approach to quickly evaluate and categorize comments for resolution.	Ongoing	N/A											
Conduct routine meetings to address agency comments and to remain current on the influences from agencies.	Ongoing	N/A											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0013/WBS-013													
WSD-CSA-015: "Delays in PDSA/FHA Approval by DOE"	<p>A delay in DOE approval of the PDSA/FHA delays start of CSA construction.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very likely (>90%)</p> <p>Worst Case Impact: \$0K, 96 days</p>			<p>Risk Event: CHPRC received DOE-HQ comments on the CSA PDSA that require additional analysis. Due to the time it has taken to resolve RL comments, the delay of PDSA approval was impacting the start of CSA material procurement and construction.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.</td> <td>2/13/20</td> <td>80</td> </tr> </tbody> </table> <p>Risk Assessment Action: Due to outstanding comments on the CSA PDSA, RL was unable to approve this document by the scheduled date of September 12, 2019. The RL federal project director and the CHPRC project manager agreed that submitting an early procurement request was appropriate and would minimize negative impact to the W-135 project baseline. Approval of the early procurement request occurred via 1905014/20-PFD-0003 on November 26, 2019. In addition, the RL and CHPRC W-135 Team are aggressively working to resolve outstanding CSA PDSA comments. The forecast date from last month for resolution of DOE-HQ comments slipped one week to February 13, 2020. Resolution of DOE-HQ comments is anticipated to lead to RL issuing a safety evaluation report (SER) approving the CSA PDSA currently forecast for April 2020.</p>	Risk Recovery Action(s)	FC Date	%	Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.	Complete	100	Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	2/13/20	80
Risk Recovery Action(s)	FC Date	%											
Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.	Complete	100											
Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	2/13/20	80											
WSD-CSS-009: "PDSA Comments Result in Schedule Delays"	<p>Comments on the PDSA received from RL are not able to be resolved within the allotted time frame provided in the baseline schedule, resulting in schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very likely (>90%)</p> <p>Worst Case Impacts: \$1.7M, 192 days</p>			<p>Risk Event: CHPRC received DOE-HQ comments on the CSA PDSA that require additional analysis of the CSS final design. Depending on the analysis results, the CSS final design may need to be modified. Additionally, delay of the PDSA approval could impact CSS procurement/fabrication.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.</td> <td>2/13/20</td> <td>80</td> </tr> </tbody> </table> <p>Risk Assessment Action: Due to outstanding comments on the CSA PDSA, RL was unable to approve this document by the scheduled date of September 12, 2019. The RL federal project director and the CHPRC PM agreed that submitting an early procurement request was appropriate and would minimize negative impact to the W-135 project baseline. Approval of the early procurement request occurred via 1905014/20-PFD-0003 on November 26, 2019. In addition, the RL and CHPRC W-135 team are aggressively working to resolve outstanding CSA PDSA comments. The forecast date from last month for resolution of DOE-HQ comments slipped one week to February 13, 2020. Resolution of DOE-HQ comments is anticipated to lead to RL issuing an SER approving the CSA PDSA currently forecast for April 2020.</p>	Risk Recovery Action(s)	FC Date	%	Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.	Complete	100	Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	2/13/20	80
Risk Recovery Action(s)	FC Date	%											
Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.	Complete	100											
Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	2/13/20	80											
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)													
WSD-097: "Major Equipment Failure – T Plant"	<p>T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$3M, 96 days</p>			<p>Risk Trigger Metric: During planned facility operation activities, a suspected system component is discovered that requires attention or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC contract.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Implement aggressive CM/PM program.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. The project has commenced mitigating strategies (i.e., aggressive surveillance and maintenance activities) to help reduce this risk. The canyon crane is currently operational, and spare parts have been procured for most critical spares.</p>	Mitigation Action(s)	FC Date	%	Implement aggressive CM/PM program.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%											
Implement aggressive CM/PM program.	Ongoing	N/A											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0013/WBS-013																
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																
WSD-CSS-006: "Fabrication of the Equipment from the Contractor"	<p>Fabrication of critical items for the long-term storage of the Cs and Sr capsules does not go exactly as planned, resulting in design changes and rework.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$5M, 64 days</p>	●	↔	<p>Risk Trigger Metric: Fabrication of required equipment and items does not go according to schedule, requiring re-design or additional components that will affect the project's cost and schedule baseline. Fabrication is not currently anticipated until fiscal month January.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>The scope of each task will be reviewed prior to initiation to ensure that the contractor is aligned for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for in-person interface meetings.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. This risk was identified as a key risk in FY2020. Procurement of transfer (including universal capsule sleeves) and ancillary equipment is forecast to commence in January 2020 following RL approval of consent packages.</p>	Mitigation Action(s)	FC Date	%	The scope of each task will be reviewed prior to initiation to ensure that the contractor is aligned for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for in-person interface meetings.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%														
The scope of each task will be reviewed prior to initiation to ensure that the contractor is aligned for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for in-person interface meetings.	Ongoing	N/A														
FY2020 Key Risks																
WSD-086: "W&FM Industrial Accident or Contamination"	<p>An industrial accident or contamination event requires corrective actions.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$3M, 0 days</p>	●	↔	<p>Risk Trigger Metric: An industrial accident or contamination event requires corrective actions, resulting in cost impacts.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Adhere to CHPRC procedures, safety programs, and training programs are designed to minimize the potential of worker injury.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process 10 large waste boxes.</td> <td>7/21/20</td> <td>40</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. This risk was identified as a key project risk for FY2020. The project continued to follow CHPRC procedures and safety programs to minimize any industrial accidents or contamination events. Four large waste boxes have been processed in FY2020, reducing the risk of a contamination event.</p>	Mitigation Action(s)	FC Date	%	Adhere to CHPRC procedures, safety programs, and training programs are designed to minimize the potential of worker injury.	Ongoing	N/A	Process 10 large waste boxes.	7/21/20	40			
Mitigation Action(s)	FC Date	%														
Adhere to CHPRC procedures, safety programs, and training programs are designed to minimize the potential of worker injury.	Ongoing	N/A														
Process 10 large waste boxes.	7/21/20	40														
WSD-125, "Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues"	<p>A pause in waste processing results in an unexpected container degradation within the SWOC (excluding TRU retrieval activities) and requires additional resources to respond.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$5M, 0 days</p>	●	↔	<p>Risk Trigger Metric: Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. This risk was identified as a key project risk for FY2020. Surveillances continued to be performed for the project to identify container and container cover abnormalities. 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
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														
WSD-136: "CWC/Waste Receiving and Processing (WRAP) Components Fail"	<p>CWC facilities and components may reach their end of life. These items will need to be replaced and/or repaired outside of planned funding profiles, resulting in cost impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$2M, 0 days</p>	●	↔	<p>Risk Trigger Metric: Maintenance activities at CWC increase due to aging facilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct floor repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conducting doorframe replacements and electrical equipment repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Design roof replacement & preparation process pad.</td> <td>09/30/20</td> <td>8</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. This risk was identified as a key project risk for FY2020. The WRAP roof was analyzed for structural integrity following water intrusion. There was insufficient basis for the roof's integrity, which will lead to an eventual roof replacement planned for FY2020-21, pending weather conditions. The master documented safety analysis container stacking requirements are complete. Maintenance work at CWC will be scheduled based on facility work priorities.</p>	Mitigation Action(s)	FC Date	%	Conduct floor repairs as necessary.	Ongoing	N/A	Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A	Design roof replacement & preparation process pad.	09/30/20	8
Mitigation Action(s)	FC Date	%														
Conduct floor repairs as necessary.	Ongoing	N/A														
Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A														
Design roof replacement & preparation process pad.	09/30/20	8														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0013/WBS-013													
WSD-140: “As-Found-Unknown Conditions - W&FMP Facilities”	<p>Unknowns, as found or emergent conditions impact the operability of one or more W&FMP facilities, requiring recovery actions that result in in-scope unplanned work.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very likely (>90%) Worst Case Impacts: \$2M, 0 days</p>	●	↔	<p>Risk Trigger Metric: Unknowns, as found or emergent conditions impact the operability of one or more W&FMP facilities, requiring recovery actions that result in in-scope unplanned work.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. This risk was identified as a key project risk for FY2020. This risk is an accepted risk, as the project cannot mitigate for unknown conditions.</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-144: “Changes to Ecology Strategy”	<p>Ecology issues a permit that is significantly different than planned scope, resulting in both cost and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$10M, 192 days</p>	●	↔	<p>Risk Trigger Metric: Ecology issues a permit that does not align with CHPRC’s plans. DOE does not appeal the permit, causing CHPRC to incorporate all permit requirements.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continuous communication and routine meetings to address agency comments.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Periodic meetings with DOE to discuss the impacts of Ecology decisions.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. This risk was identified as a key project risk for FY2020. W&FMP personnel continue to meet routinely with Ecology to resolve comments on permit addenda and preclude issuance of a draft permit different in scope than anticipated.</p>	Mitigation Action(s)	FC Date	%	Continuous communication and routine meetings to address agency comments.	Ongoing	N/A	Periodic meetings with DOE to discuss the impacts of Ecology decisions.	Ongoing	N/A
Mitigation Action(s)	FC Date	%											
Continuous communication and routine meetings to address agency comments.	Ongoing	N/A											
Periodic meetings with DOE to discuss the impacts of Ecology decisions.	Ongoing	N/A											
WSD-CSA-006: “Delays Associated with Temporary Authorization”	<p>Delays are experienced while awaiting Ecology approval of the temporary authorization (TA) for CSA construction, thereby impacting schedule.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$0, 96 days</p>	●	↔	<p>Risk Trigger Metric: Ecology is not successful at issuing the RCRA Part B Permit or the TA prior to the March 1, 2020, construction start date.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continued communication with Ecology to facilitate the early approval of the TA.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. This risk has been identified as a key risk for FY2020. The CSA RCRA Part B Permit public comment period closed on December 20, 2019. Six comments were received, and RL anticipates permit issuance by February 28, 2020. If there are any delays, RL and Ecology will process a TA (already drafted) to ensure that CSA construction is not delayed.</p>	Mitigation Action(s)	FC Date	%	Continued communication with Ecology to facilitate the early approval of the TA.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%											
Continued communication with Ecology to facilitate the early approval of the TA.	Ongoing	N/A											
WSD-CSA-013: “CSA Site Location Found to Have Extensive Contamination”	<p>The CSA location is found to have contaminated soil or volumes of unfavorable (e.g., loose) soils.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$100K, 48 days</p>	●	↔	<p>Risk Trigger Metric: Significant volumes of contaminated or otherwise unsuitable soils are discovered during CSA construction that cause delays and costs, resulting in the required excavation of additional soil and potentially causing the contamination of leased equipment. CSA construction is forecast to commence in March 2020.</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 December. This risk has been identified as a key project risk for FY2020. This risk has been accepted, as the project has taken great precaution to plan the location of the CSA away from any potential contamination. In the unlikely event that contamination is detected within the CSA site location, project costs and a schedule delay will be accepted, and shipping the contaminated soil to ERDF for disposal will proceed.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A			
Mitigation Action(s)	FC Date	%											
None identified at this time.	N/A	N/A											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0013/WBS-013																
WSD-W135-31: “Canyon Crane Non-Functional/ Not Serviceable”	<p>The WESF crane is put back into limited usage for the W-130 Project; however, the crane is found to be unserviceable or fails during the W-135 operational activities.</p> <p>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>Install rail brackets for canyon crane</td> <td>03/31/20</td> <td>10</td> </tr> <tr> <td>Perform preventative/corrective maintenance procedures on the crane to facilitate reliability</td> <td>08/31/20</td> <td>0</td> </tr> <tr> <td>Procure critical spares</td> <td>9/30/21</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. This risk has been identified as a key risk for FY2020. Facility personnel will replace rail brackets and complete crane PMs in FY2020. Critical spares will be evaluated and procured prior to the end of FY2021.</p>	Mitigation Action(s)	FC Date	%	Install rail brackets for canyon crane	03/31/20	10	Perform preventative/corrective maintenance procedures on the crane to facilitate reliability	08/31/20	0	Procure critical spares	9/30/21	0
Mitigation Action(s)	FC Date	%														
Install rail brackets for canyon crane	03/31/20	10														
Perform preventative/corrective maintenance procedures on the crane to facilitate reliability	08/31/20	0														
Procure critical spares	9/30/21	0														
WSD-IDF-11: “Discovery of Unplanned Site Conditions”	<p>Unexpected site conditions are encountered during soil excavation activities, resulting in recovery actions.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Low (10% to 24%)</p> <p>Worst Case Impacts: \$240K, 16 days</p>	●	↔	<p>Risk Trigger Metric: During excavation activities within the established Waste Information Data System (WIDS) site the project encounters unplanned contamination, debris, legacy waste (drums) or utilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. This risk has been identified as a key project risk for FY2020. Although this risk is accepted, detailed reviews of existing drawings, site walkdowns and continuous site radiological surveys throughout excavation efforts have already been executed. There is a low probability of unplanned contamination and/or culturally sensitive issues, and project cost and schedule delays are accepted.</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														
Unassigned Risks (Pending ownership of identified risks/opportunities)																
No unassigned risks identified in December .																

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	17.7	14.5	14.3	(3.2)	-18.2%	0.2	1.2%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$3.2M/-18.2%)

The CM negative schedule variance is due to the project agreeing to a later than planned start date with the CSA contractor at the time of contract award. This agreed to delay will allow the CSA contractor to mobilize after the worst of the winter weather. Avoiding a start during winter months will minimize winter delays/stand downs changes from the CSA contractor. In addition, not receiving approval on the consent package for CSS fabrication consistent with the planned schedule contributed to the variance.

Also contributing to the CM negative schedule variance is IDF construction work planned with a three-month duration from October to December. During the subcontract award period, the contractor advised that the work would take five months. In November, earthwork production rates were confirmed to require a longer duration than originally planned. The negative schedule variance is a result of the subcontractor requiring more time than planned to complete initial earthwork of leveling and grading.

CM Cost Performance (+\$0.2M/+1.2%)

The CM cost variance is within threshold.

Contract-to-Date (CTD)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,521.2	1,512.4	1,428.4	(8.8)	-0.6%	84.0	5.6%	1,678.2	1,589.7	161.3	88.5

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$8.8M/-0.6%)

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$84.0/+5.6%)

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

- Organizational flattening and streamlining.
- Right-sizing capabilities for planned scope.
- Optimizing resources with reorganization and consolidation of engineering capabilities across W&FMP.
- Combined administrative/records functions across WESF and CSB.
- Removing waste from building(s) and reducing the need for inspections/surveillances.

- Reducing the size and number of radioactive areas/radioactive material and associated surveillances/routines and records.
- Tagging out unneeded equipment and reducing the frequency and number of PM activities
- Increasing shared resources across all of SWOC.
- Reducing dedicated resources for the Corrective Action System (CAS) and using project-wide support.
- Optimizing maintenance scheduling and execution reducing operations fieldwork supervision.
- Increasing emphasis on managing planned absence coverage within existing resources.
- Simplifying and optimizing acquisition and procurement management within W&FMP.
- Eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and the Solid Waste Inventory Tracking System (SWITS).

Variance at Completion (+\$88.5M/+5.3%)

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

- Organizational flattening and streamlining.
- Right-sizing capabilities for planned scope.
- Optimizing resources with reorganization and consolidation of engineering capabilities across W&FMP.
- Combined administrative/records functions across WESF and CSB.
- Removing waste from building(s) and reducing the need for inspections/surveillances.
- Reducing the size and number of radioactive areas/radiation area monitors and associated surveillances/routines and records.
- Tagging out unneeded equipment and reducing the frequency and number of PM activities
- Increasing shared resources across all of the SWOC.
- Reducing dedicated resources for CAS and using project-wide support.
- Optimizing maintenance scheduling and execution reducing operations fieldwork supervision.
- Increasing emphasis on managing planned absence coverage within existing resources.
- Simplifying and optimizing acquisition and procurement management within W&FMP.
- Eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and SWITS.

Contract Performance Report Formats are provided in Appendix A

FUNDS vs. SPEND FORECAST (\$M)

RL-0013 Solid Waste Stabilization and Disposition	FY2020		Variance
	Projected Funding	Spending Forecast	
Waste Stabilization and Disposition	198.8	198.3	0.5
Management of Cesium and Strontium Capsules (Line Item)	14.3	0.7	13.6
RL-0013 – Total	213.1	199.0	14.1

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The current FY2020 projected funding level of \$213.1 million is based on the final FY2020 project management baseline annual update submitted to RL in September, with updates through fiscal month December. Line Item funding is based on FY2019 carryover and FY2020 new funding targets. The spending forecast of \$199.0 million reflects a decrease of approximately \$4.6 million from November, primarily due to a reallocation of fee to RL-0041, partially offset by an increase to labor based on utilization, and FY2020 scope that had slipped into FY2021.

Critical Path Analysis

Critical path analysis will be provided upon request.

MILESTONE STATUS

The following table is a one-year look ahead of PBSRL-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	9/30/2018			Ecology has not agreed to the change form
M-091-03N	TPA M-091-03N Submit Revision of TRUM Waste and Mixed Low-level Waste Preventative Maintenance Procedure to Ecology	6/30/2020		6/30/2020	On schedule
M-091-44T	Submit Change Request to Establish Schedule for Achieving Offsite Shipment of All TRUM Waste	9/30/2020		9/30/2020	On schedule
M-091-49A	Submit a Change Request to Establish a Schedule for Achieving the Retrieval of RSW	9/30/2020		9/30/2020	On schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
J.12/C.2.2, C.2.3	PBS-RL-0011, <i>Plutonium Finishing Plant Closure Project</i> PBS-RL-0013, <i>Solid and Liquid Waste Treatment and Disposal</i>	Offsite transportation of radioactive material: RL provides equipment and government drivers to transport TRU materials outbound/inbound between the Hanford Site and northwest locations. RL is the authorized shipper, acts as signatory on the shipping papers, and ensures compliance with DOE Manual 460.2-1, <i>Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A</i> . RL arranges for Commercial Motor Vehicle Safety Alliance Level VI vehicle inspections and verifies that the government drivers meet the applicable U.S. Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or treatment, storage, and disposal requirements.	Ongoing
J.12/C.2.3.6	PBS-RL-0013, <i>Transuranic Waste Certification</i>	WIPP provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable, and the number of shipments is controlled by DOE-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
CSA – RL: Review/Approve PDSA (1 st FY)	5/16/2019(A)	4/20/2020
RL Review IDF Final Hazard Categorization	7/19/2019(A)	12/9/2019(A)
RL Review WESF Documented Safety Analysis/Technical Safety Requirement and Issue SER	12/17/2019(A)	4/20/2020
RL final IDF FHC Review and SER Preparation	3/18/2020	04/01/2020
RL Review of Project W-135, WESF Modifications, CD-2/CD-3 Documentation	4/17/2020	8/14/2020

Section D

Soil and Groundwater Remediation Project (RL-0030)

CH2MHILL
Plateau Remediation Company
a Jacobs company



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

M. A. Wright
Vice President for
Project Technical
Services

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

PROJECT SUMMARY

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

Treatment Facility	Million Gallons Treated		Chrome (kg)		Carbon Tet (kg)		Tech-99 (pCi)		Uranium (kg)	
	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD
DX P&T	32.3	89.0	1.4	5.4						
HX P&T	24.3	69.3	3.4	9.8						
KR-4 P&T	13.1	35.1	0.1	0.2						
KW P&T	13.2	38.7	1.3	5.2						
KX P&T	39.6	117.8	1.9	6.7						
200 West P&T	110.5	300.9	0.4	2.4	161.0	457.0	1.55×10 ¹¹	4.32×10 ¹¹	10.2	30.1
Combined	233.1	650.8	8.5	29.7	161.0	457.0	1.55×10¹¹	4.32×10¹¹	10.2	30.1
FY2020 Gold Metric	--	2,200.0	--	80.0	--	1,800.0	--	N/A	--	90.0

Well Drilling Completion by Area*	Fiscal Year (FY) 2020 Planned	Current Calendar Month	FY2020 Cumulative
100-KR-4	4	0	0
100-HR-3	10	0	0
200-DV-1	2	0	0
200-ZP-1	9	0	0
M-24 Milestone	5	0	0
Total FY2020 Wells	30	0	0
Site Wide Boreholes	3	0	0
	FY2019 Carryover	Current Calendar Month	Cumulative
200-BP-5	2	0	0
200-ZP-1	1	0	1
Total FY2019 Carryover Wells	3	0	1

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

EMS Objectives and Target Status

Objective Action Plan #	Objective	Due Date	Status
20-SGRP-OBJ-1-PLAN-1	With the suspension of biological treatment, carbon tetrachloride concentrations will be monitored in the air emissions for measuring granulated activated carbon loading and meeting regulatory limits.	7/30/2020	25%
20-SGRP-OBJ-2-PLAN-1	The number and types of spills at from the Soil and Groundwater Remediation Project (S&GRP) will be tracked, the workforce will be briefed on spill prevention, and if needed, a plan for reducing spills will be created.	9/30/2020	13%
20-SGRP-OBJ-3-PLAN-1	S&GRP operates six P&T facilities that remove contaminants from groundwater at the Hanford Site. The goal is to treat and remediate 2.2 billion total gallons of groundwater.	9/30/2020	25%
20-SGRP-OBJ-4-PLAN-1	Utilization of the new Centralized Groundwater CERCLA Waste Storage Area will lead to simplification of waste management and reduction in greenhouse gas emissions from operations vehicles.	9/30/2020	23%

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	3	N/A
First Aid Cases	0	10	N/A
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

River Corridor

100-BC-5 Operable Unit (OU)

- The public comment period for the Proposed Plan was completed on December 9, 2019.

100-HR-3 OU

- Issued TPA-CN-1100 to DOE/RL-2013-35-ADD12, *100-HR-3 Groundwater Operable Unit Well Installation Sampling and Analysis Plan, Addendum 12: Wells 199-D11-1, 699-98-50, 699-95-48B, 699-96-42B, 199-H4-94, and 199-H3-14*, Revision 0, on December 19, 2019.

100-KR-4 OU

- Continued operations of the 100-K West soil flushing infiltration gallery. As of December 22, 2019, about 14.8 million gallons of water have been delivered to the infiltration gallery.

100-NR-2 OU

- Delivered a briefing to the U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) regarding the technical content and regulatory approaches for completing the remedial investigation/feasibility study report. This presentation was very successful, and the agencies complimented the U.S. Department of Energy (DOE), Richland Operations Office (RL) on the delivery and usefulness in expediting their reviews. Ecology indicated that they would be requesting a one-time 60-day review extension.

Central Plateau

200-BP-5 and 200-PO-1 OUs

- Transmitted DOE/RL-2018-30, *200-BP-5 and 200-PO-1 Groundwater Operable Units Feasibility Study for Interim Action*, Revision 0, to RL on December 18, 2019.
- Collected representative water sample from basalt core hole for well 699-47-53B (C9751) on December 10, 2019. Met with RL on December 19, 2019, to discuss the analytical results and proposed monitoring well design.

200-DV-1 OU

- Five *Hanford Federal Facility and Consent Order* (Tri-Party Agreement) change notices (CNs), -0878, -0879, -0880, -0881, -0882, were approved by RL, EPA, and Ecology on December 16 and December 17, 2019. These CNs allow the installation of eight extraction wells and four monitoring wells in the perched water zone within the B Tank Farms.

200-ZP-1 OU

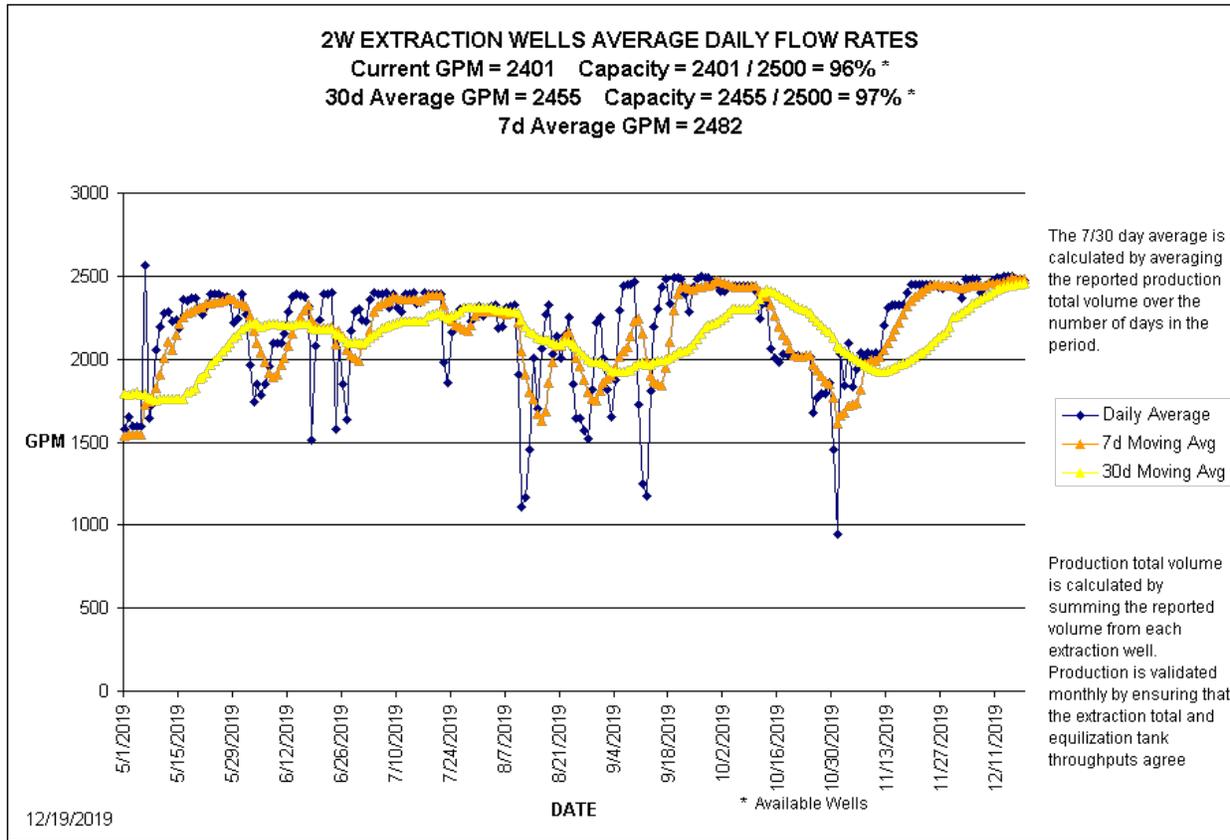
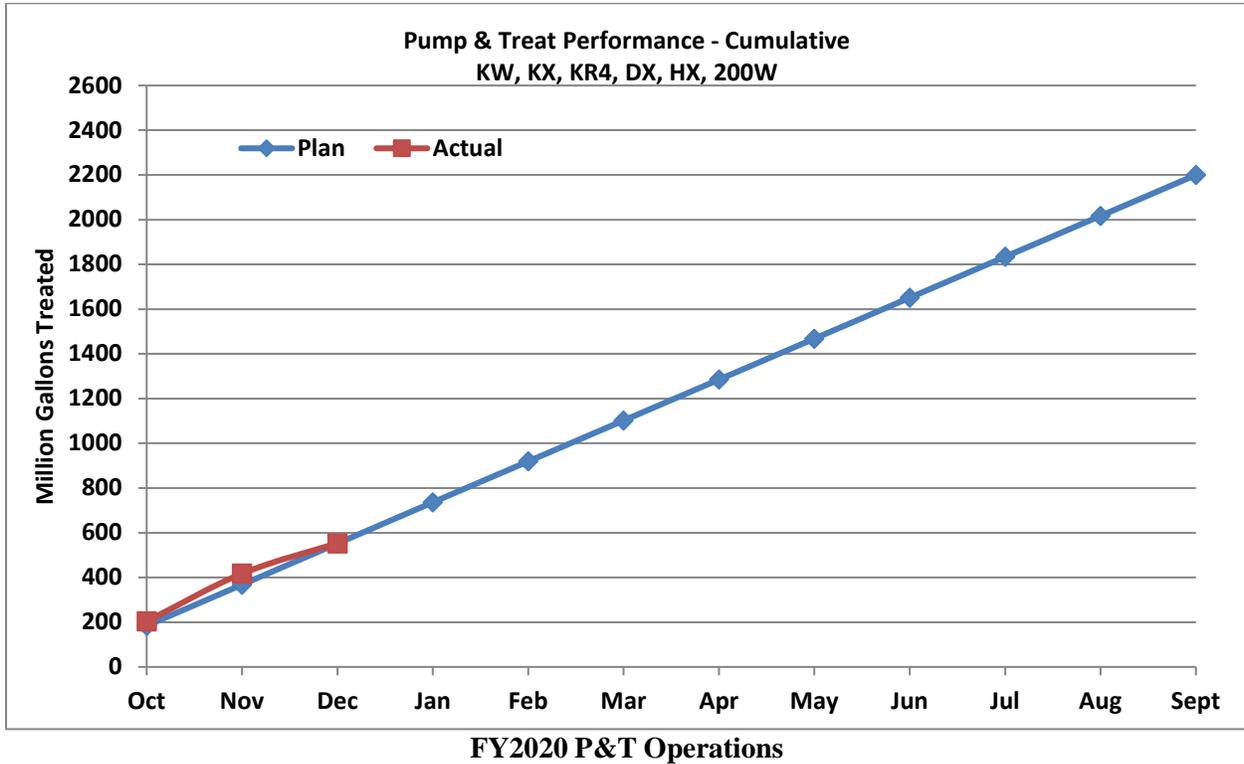
- Completed the 200-ZP-1 OU extraction well recovery plan for installation of five new extraction wells in FY2020. A contract for the construction of first two extraction wells (D0095 and D0132) was awarded on December 16, 2019. The request for proposal for the remaining three extraction wells (D0131, D0134, and D0137) was issued with proposals due January 7, 2020.
- EPA concurred with TPA-CN-0876 on November 25, 2019. This change notice was prepared to add the 11 FY2020-21 optimization study extraction wells to the existing 200-ZP-1 drilling SAP (DOE/RL-2010-72, *Sampling and Analysis Plan for Remediation Wells in the 200-ZP-1 Operable Unit*, Revision 2).
- Completed RL and EPA comment resolution on December 13, 2019, for the 200-ZP-1 OU Ringold A data quality objectives (DQO)/SAP.

Groundwater P&T Facilities**200 West P&T**

Operated the 200 West P&T at an average of 2,455 gallons per minute (gpm).

100 Area P&Ts

- Operated the DX P&T at 702 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 289 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 296 gpm, below the facility capacity of 330 gpm. Continued operation of the soil infiltration gallery.
- Operated the KX P&T at 890 gpm, below the facility capacity of 900 gpm.
- Operated the HX P&T at 549 gpm, below the facility capacity of 900 gpm.



200 West P&T Operations

MAJOR ISSUES

Issue

Work to complete the 100-HR-3 Remedial Design/Remedial Action Work Plan (RD/RAWP) was suspended effective December 18, 2019, because of concerns from RL legal that SAPs are considered secondary documents per the Tri-Party Agreement and cannot be incorporated into the RD/RAWP. This issue originated from a request from Ecology and EPA on June 26, 2019, that implementing documents (e.g., SAP, waste management plan) should be considered part of the RD/RAWP.

Corrective Action

RL is working internally to resolve this issue.

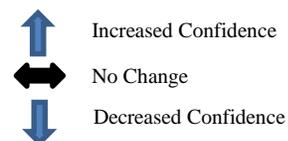
Status

Comment resolution has been extended to March 31, 2020, delaying completion of the RD/RAWP.

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 spotlight chart: Five new risks were identified in December following the FY2020 first quarter risk reviews: <ul style="list-style-type: none"> • <i>SGW-171: Increase in Routine Sampling & Analysis Requirements</i> • <i>SGW-216A-01: 216-A-29 Closure Plan Atypical Comments</i> • <i>SGW-216B-01: 216-B-3 Closure Plan Atypical Comments</i> • <i>SGW-216B-02: 216-B-63 Closure Plan Atypical Comments</i> • <i>SGW-216S-01: 216-S-10 Closure Plan Atypical Comments</i> 										
Realized Risks (Risks that are currently impacting project cost/schedule)										
No Realized Risks identified in December .										
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No Critical Risks identified in December .										
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
No High Risks identified in December .										
FY2020 Key Risks										
SGW-ZP1-03: Air Stripper Phase 1 Installation Design Maturity	Air Stripper Phase 1 installation final design is more complex than planned, resulting in increased project cost. Risk Handling Strategy: Accept Probability: Medium (26% to 74%) Worst Case Impacts: \$3,500K, 0 days	●	↔	Risk Event: Phase 1 installation design matures and the project experiences in-scope, unplanned work resulting in significant cost growth in FY2020. <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: No significant changes in December. Phase 1 installation design is currently in development. Mitigation actions will be reviewed as the design becomes more definitive.	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Mitigation Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
SGW-170: Lack of Qualified Drilling Contractors	Availability of qualified drilling bidders to perform the FY2020 drilling scope becomes hindered, resulting in cost and schedule impacts. Risk Handling Strategy: Accept Probability: Medium (26% to 74%) Worst Case Impacts: \$3,019.4K, 0 days	●	↔	Risk Event: Due to many drilling contractors exiting the nuclear environmental remediation business, qualified contractors are difficult to find, resulting in higher subcontracting cost. <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No significant changes in December. Proposals are being reviewed to determine whether a more comprehensive approach can be taken to reduce bids; however, mitigation actions may not exist for this risk.	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								
SGW-171: Increase in Routine Sampling & Analysis Requirements	Sampling and characterization requirements increase above planning assumptions due to changes from DQO/SAP sessions and/or other requested changes to analyses, resulting in cost impacts. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$1,792.0K, 0 days	●	↔	Risk Event: During review of the completed SAPs for multiple well locations, it is determined that an increase in the number of samples or complexity of sample type is above the baseline planning. <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: Although a Sampling Change Board has been formed to review and validate the sampling requirements for optimization, some of the SAPs were not completed during development of the FY2020 baseline budget. For that reason, budgets may not reflect required sampling, and in-scope, unplanned work may not be mitigated.	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								
Unassigned Risks (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in December.										

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	10.7	9.1	9.1	(1.6)	-14.7%	(0.0)	-0.4%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$1.6M/-14.7%)

Primary drivers of the current period negative schedule variance include the following:

- The Cumulative Impact Evaluation unqualified model simulations experienced unanticipated issues that required resolution, delaying the initiation of FY2020 work. Those issues resulted in performance of in-scope, unplanned activities, including correction of issues in the Composite Analysis inventory data package, resolution of issues with the recharge evolution tool and performance of additional reviews of model representativeness. Those issues have been resolved but resulted in significant delay in performance of FY2020 work scope.
- The vendor design submittal package for the 200-ZP-1 air stripper tower was not received as planned, delaying the associated performance.

CM Cost Performance (-0.0M/-0.4%)

The current period cost variance is within reporting threshold.

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

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,659.5	1,653.3	1,605.5	(6.2)	-0.4%	47.9	2.9%	1,764.1	1,708.4	102.9	55.7

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$6.2M/-0.4%)

The CTD negative schedule variance is within reporting thresholds.

CTD Cost Performance (+\$47.9M/+2.9%)

The CTD positive cost variance is within reporting thresholds.

Variance at Completion (+\$55.7M/+3.2%)

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	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	134.7	130.3	4.4

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

Projected FY2020 funding increased about \$2.1 million in December to \$134.7 million. The spending forecast of \$130.3 million reflects a reduction of approximately \$0.7 million, primarily driven by adjustments to subcontracts in Technical Integration resulting from a thorough audit/reconciliation of forecast subcontract costs.

Critical Path Analysis

Critical path analysis will be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-93C	Initiate Characterization Field Work for 200-SW-2 Operable Unit Landfills	9/30/2018		To be determined (TBD)	In dispute resolution
M-015-98	Complete Remedial Investigation of U Plant Related Waste Sites located in 200-WA-1	6/30/2019		TBD	In dispute resolution
M-085-70	Submit to Ecology a Remedial Investigation/Feasibility Study Work Package for 200-CB-1	9/30/2019		TBD	In dispute resolution
M-015-99	Complete Remedial Investigation of Plutonium Finishing Plant (PFP) Related Waste Sites Located in 200-WA-1	12/31/2019		TBD	In dispute resolution
M-024-58M	Initiate Discussions of Well Commitments	6/01/2020		6/01/2020	On schedule
M-024-71-T01	Conclude Discussions of Well Commitments Initiated under M-024-58	8/01/2020		7/30/2020	On schedule
M-085-80	Submit Remedial Investigation/Feasibility Study Work Plan for 200-CP-1 to Ecology	9/30/2020		TBD	At risk

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS*

Description	CHPRC Delivery Date	Expected RL Due Date
RL Transmit DOE/RL-2017-58, 200-DV-1 Treatability Test Evaluation Report, Revision 0 to Ecology	10/01/2019(A)	12/12/2019(A)
RL Transmit 200-UP-1 Performance Monitoring Plan, Draft A Revision 1 to Regulators for Review	06/07/2019(A)	01/31/2020
RL Review 100-KR-4 RI, Draft Revision 0	12/02/2019(A)	01/09/2019
RL Submit 100-NR Biovent Characterization Final Cultural Resource Review to the State Historic Preservation Officer/Tribes	12/23/2019	12/26/2019
RL Transmit 200-UP-1 RD/RAWP, Draft A Revision 1 to Regulators for Review	01/17/2020	01/31/2020
RL Transmit 200-ZP-1 O&M Plan, Draft A to EPA for Review	01/21/2020	02/04/2020
RL Transmit Central Plateau Tracer Study Sample Analysis Plan, Draft Revision 0 to Regulators for Review	02/04/2020	02/04/2020
RL Transmit 100-KR-4 RI, Draft Revision 0 to EPA for Review	02/06/2020	02/20/2020
RL Transmit 100-HR-3 RD/RAWP Draft Revision 0 to Regulators for Review	02/10/2020	02/10/2020
RL Review 200-BP-5 WMA C Drilling SAP, Draft	02/13/2020	03/15/2020
RL Review of KW Soil Flushing Treatability Test Report, Decisional Draft	02/26/2020	03/26/2020
RL Transmit RCRA Annual Report to Ecology	02/27/2020	02/28/2020
RL Certify and Submit to Ecology 216-S-10 Pond and Ditch Addendum	03/10/2020	03/23/2020

*This table identifies key DOE actions/decisions only.

Section E

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

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In December, crews abated more than 2,400 feet of steamline asbestos insulation in the 200 East Area along 7th Avenue. At the 224-B Facility, characterization of the first floor, biological hazard cleanup and temporary lighting installation on the non-contaminated side of the facility were completed. At the Plutonium Uranium Extraction Plant (PUREX) North, walkdowns were completed verifying mechanical and electrical isolations within the complex. At the Reduction and Oxidation (REDOX) Facility, the subcontract to provide a substation to transition the facility to temporary power was awarded. The Radiation Area Remedial Action (RARA) team repaired 18 waste site washout locations and armored waste sites 216-A-19 and 216-A-20 near the Hanford Waste Vitrification Plant.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
20-EMS-CPRM-OBJ-P1	Improve compliance, Environmental Management System (EMS) awareness and employee involvement	Present or facilitate a discussion of EMS topics to personnel on a minimum of four different occasions in fiscal year (FY) 2020, and recruit personnel (other than environmental) to participate in at least two compliance review/programmatic walkdowns.	9/30/2020	15%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	0	2	N/A
First Aid Cases	0	18	N/A
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Central Plateau Risk Management (CPRM) Surveillance and Maintenance

- RARA radiological control technicians (RCTs) performed annual radioactive material area surveys at T Plant.
- RARA RCTs performed annual surveys at B Plant/C Plant controlled area surveying the boundary adjacent to UPR-200-E-83.
- Collected two characterization samples of the 293-A Catch Tank.

- Completed waste sites 200-E-44 (PUREX railroad cut unplanned release), 216-A-29 (PUREX chemical sewer ditch) and 216-U-11 (ditch) washout repairs.
- Completed Vitrification Plant risk reduction waste site armoring. Armor cap installed on sites 216-A-19 (trench), 216-A-20 (trench) and 216-A-34 (ditch).

REDOX Canyon Risk Mitigation

- Reviewed and awarded contract for the doublewide trailer purchase to be used for personnel to egress from REDOX.
- Reviewed and awarded contract for the substation required to make REDOX cold-and-dark.
- Authorized procurement of long lead items and fabrication of the temporary exhaust system at REDOX.
- Completed site use evaluation for the placement of the concrete slab for the temporary exhaust system and placement of a doublewide trailer.
- Installed heat tape on sodium hydroxide totes to protect from freezing temperatures and prevent damaging valves.
- Completed procedure revision to address response to unidentified liquids within REDOX.
- Completed management review of and approval for self/peer checks process.

224-B Demolition Preparation

- Completed the characterization, sampling and non-destructive assay work package and released for work.
- Completed first floor characterization (below eight feet).
- Obtained 10 additional beryllium samples.
- Completed biological cleanup and housekeeping on the non-contaminated side.
- Completed the cold-and-dark mechanical and electrical index to isolate 224-B.
- Received and reviewed proposals and awarded the subcontracts for trailer purchases and installations of the doublewide personnel and restroom/shower trailers.
- Grubbed and removed debris from future trailer installation site.

PUREX North

- Performed beryllium sampling at 214-A to support down-posting the facility from a beryllium contaminated area. Samples received were below trigger levels, so no additional entry planning is required.
- Discovered substance on the floor beneath chemical lines and pumps during a walkdown in 211-A. Radiological and IH surveys performed were less than detectable. The area is posted as “No Entry” until characterization is performed.
- Performed ground scans of PUREX North footprint to support isolations and underground injection control closures.

Steam Line Removal

- Completed steam line pipe support demolition and debris waste processing (2,126 linear feet) for Leg 22 along 7th Street in 200 East.
- Abated 1,410 linear feet of asbestos steam line insulation from Leg 20 west of Baltimore Street in 200 East.
- Abated 1,734 linear feet of asbestos steam line insulation (out of 2,000 total linear feet) from Leg 23 along 7th Street in 200 East.

MAJOR ISSUES

Issue

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

Corrective Action

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

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

Status

Continued efforts on environmental documentation and completed the draft Engineering Evaluation/Cost Analysis (EE/CA) document. Additionally, RL has notified Ecology that white powders will be cleaned up within 45 days of approving the action memorandum (AM) rather than tying the activity to a fiscal year. The issue will no longer be tracked in future reports as a major issue.

Issue

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

Corrective Action

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

needs in the areas where risk mitigation activities are being performed. The list of actions are updated weekly and posted in a location that is easily accessible to all REDOX personnel.

Status

With engagement from REDOX personnel, REDOX management identified a path of improving the infrastructure at REDOX, which includes moving the step-off pad outside the facility. Procurement activities are underway to improve the step-off pad. REDOX management and personnel have completed work package reviews and procedure reviews to address the future work scope. Lighting issues have been identified and addressed on the exterior of REDOX. Procurements for the new step-off pad trailer have been awarded, and installation of the trailer will likely occur in February. REDOX personnel have engaged the workforce in designing and finalizing the layout of the new step-off pad trailer. Consumable items (i.e., garbage cans, surge protectors, uninterrupted power supplies for radiological monitoring equipment, etc.) were ordered. Meetings with carpenters and ironworkers have occurred to begin the procurements needed to support the final setup of the step-off pad trailer. The formal procedure that addresses the response to the discovery of unidentified liquids within REDOX was completed.

Issue

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

Corrective Action

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

Status

PUREX catch tank 216-A-TK-2 was pumped in November, which resulted in removing 957 gallons of contaminated water. Liquid accumulation levels will continue to be monitored while a path forward is determined to resolve water intrusion. The issue will no longer be tracked in future reports as a major issue.

Issue

On December 12, 2019, Ecology sent the RL letter 19-NWP-200, providing responses to corrective actions required by Administrative Order Docket No. 15343 for white powder observed at or near tour paths 3, 4, and 7 in the PUREX Plant. The letter indicates that Corrective Action 1 (designate white powder) and Corrective Action 2 (provide removal plan DOE/RL-2019-43 for Ecology review) have been completed satisfactorily; however, Corrective Action 3 (recover white powder) has not been met. Ecology indicates that nothing less than cleanup of "all" PUREX white powders in the Aqueous Makeup, P&O Gallery, and White Room will be acceptable. This is in sharp contrast to the approach determined by CHPRC and RL, which focused on cleanup of white powder accumulations in close proximity to the corresponding tour paths.

Corrective Action

Develop schedule and cost estimate for removal of all white powder.

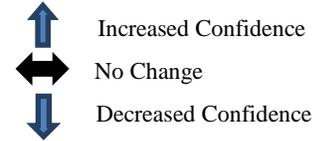
Status

CHPRC has prepared and provided the estimate to RL and is coordinating with RL on response to letter 19-NWP-200. The issue will no longer be tracked in future reports as a major issue.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0040/WBS-040																			
Explanation of major changes to the project monthly stoplight chart: There are no major changes to the stoplight chart in December .																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
REDOX-07: “Building Accessibility due to Water Intrusion”	Extensive leaks are experienced in the galleries due to the current state of the annex areas and silo roof, resulting in schedule delays to the project. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 32 days	●		<p>Risk Event: Leaking roofs have allowed water to accumulate in limited access areas of the facility. Due to electrical concerns, REDOX personnel have been unable to access the west end of the North Sample Gallery.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Evaluate means to identify and sample liquids discovered after inclement weather.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in December. The project workers continue to repair minor roof defects. The new leak discovered in August continues to be evaluated to identify a path forward. Work crews are developing an appropriate response via a formal procedure for any discovery of liquids in REDOX after inclement weather. A formal procedure for any discovery of liquids in REDOX was finalized in December.</p>	Risk Recovery Action(s)	FC Date	%	Evaluate means to identify and sample liquids discovered after inclement weather.	Complete	100									
Risk Recovery Action(s)	FC Date	%																	
Evaluate means to identify and sample liquids discovered after inclement weather.	Complete	100																	
REDOX-09: “Concerned Citizen”	Delays caused by public concern (i.e., stakeholders, other Hanford Site workers and concerned citizens) impact the project schedule and technical approach, resulting in recovery actions and causing unplanned, in-scope work. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 16 days	●		<p>Risk Event: A concerned citizen called a stop work, which caused delays and unplanned work necessary to address the required action.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure step-off pad trailer</td> <td>January 2020</td> <td>50</td> </tr> <tr> <td>Develop site layout plan for infrastructure upgrades</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Create and implement a phased approach to address identified concerns</td> <td>June 2020</td> <td>35</td> </tr> <tr> <td>Upgrade temporary power/lighting and localized ventilation</td> <td>June 2020</td> <td>0</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in December. This risk was realized in October 2019. A detailed corrective action list was created with REDOX personnel input. A phased approach schedule was developed and implemented to address infrastructure upgrades necessary to support future work demands. Actions items have been assigned to the appropriate responsible manager, and REDOX management is interfacing with personnel for weekly updates on corrective actions. Procurement activities are underway at REDOX to procure a new step-off pad trailer, which is expected to be delivered in January and installed in February.</p>	Risk Recovery Action(s)	FC Date	%	Procure step-off pad trailer	January 2020	50	Develop site layout plan for infrastructure upgrades	Complete	100	Create and implement a phased approach to address identified concerns	June 2020	35	Upgrade temporary power/lighting and localized ventilation	June 2020	0
Risk Recovery Action(s)	FC Date	%																	
Procure step-off pad trailer	January 2020	50																	
Develop site layout plan for infrastructure upgrades	Complete	100																	
Create and implement a phased approach to address identified concerns	June 2020	35																	
Upgrade temporary power/lighting and localized ventilation	June 2020	0																	
REDOX-16: “Facility Integrity”	Problems with aging building systems and components (such as roofing and overall structure) result in inoperability or require unscheduled maintenance or outages that impact planned decontamination and decommissioning activities, resulting in schedule delays and cost impacts. Risk Handling Strategy: Transfer Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 0 days	●		<p>Risk Event: Leaking roof results in unsafe working conditions for personnel.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform cold-and-dark activities to shut off building power.</td> <td>August 2020</td> <td>40</td> </tr> <tr> <td>Repair minor roof defects.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: Integrity failures could lead to water issues within radiological contaminated areas, causing a hazard to personnel. Going cold-and-dark will minimize the risk for electrical shock due to water. Electrical cold-and-dark activities have slowed, with electrical engineers and electricians unable to access specific locations of REDOX to continue building the electrical isolation index. The substation request for proposal has been re-issued after initial proposals were insufficient. Bids were received, and the substation was awarded in late fiscal December. The project workers continue to perform cold-and-dark activities to shut off building power. Minor repairs to leaking parts of the roof can significantly reduce water intrusion, and the project workers will continue to repair minor roof defects.</p>	Risk Recovery Action(s)	FC Date	%	Perform cold-and-dark activities to shut off building power.	August 2020	40	Repair minor roof defects.	Ongoing	N/A						
Risk Recovery Action(s)	FC Date	%																	
Perform cold-and-dark activities to shut off building power.	August 2020	40																	
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 in operation (cranes, forklifts used for waste loadout and steam lines and steam line stanchion removal activities) and building age and structural integrity, a collapse of a REDOX ventilation system sand filter is experienced, resulting in cost and schedule impacts to the project. Risk Handling Strategy: Control Probability: Very low (<10%) Worst Case Impacts: \$260K, 48 days			Risk Triggers: Due to the close proximity of equipment in operation (cranes, forklifts used for waste loadout and steam line stanchion removal activities), building age and structural integrity, a collapse of a REDOX ventilation system sand filter is experienced. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish sand filter access boundary.</td> <td>August 2020</td> <td>50</td> </tr> <tr> <td>Implement communication plan between other Hanford contractors (OHCs) and other CHPRC projects.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in December . Current work scope has not yet impacted this potential risk. Based on the contractor schedule, new temporary exhausters for REDOX are not expected to arrive until May 2020. In turn, this delay pushed the forecast dates for mitigation actions to establish the sand filter access boundary. Based on this information, the current plan would move any excavation work near the sand filters to summer 2020.	Mitigation Action(s)	FC Date	%	Establish sand filter access boundary.	August 2020	50	Implement communication plan between other Hanford contractors (OHCs) and other CHPRC projects.	Ongoing	N/A
Mitigation Action(s)	FC Date	%											
Establish sand filter access boundary.	August 2020	50											
Implement communication plan between other Hanford contractors (OHCs) and other CHPRC projects.	Ongoing	N/A											
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)													
No high-risk threat value risks identified in December .													
FY2020 Key Risks													
BOS-003: "Facility Integrity"	Problems with aging building, systems, or components (e.g., roofing and structures, etc.) result in inoperability or recovery actions, causing unplanned, in-scope work (e.g., unscheduled maintenance and outages). Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$5.5M, 0 days			Risk Triggers: The project experiences problems with aging building systems and components (e.g., cribs, roofing and structures, etc.) during routine surveillance and maintenance activities. Scheduled maintenance activities must then be performed in addition to unplanned recovery actions. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform lifecycle evaluations of critical structures, systems, and components.</td> <td>4/1/2020</td> <td>85</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in December . This risk was identified as a key project risk for FY2020. Structure analysis of 231-Z is under contract negotiation. The date of final completion has been extended to accommodate contract negotiation and the anticipated duration to complete the requested scope of work. Routine surveillance and maintenance activities continue to be performed to mitigate risk.	Mitigation Action(s)	FC Date	%	Perform lifecycle evaluations of critical structures, systems, and components.	4/1/2020	85			
Mitigation Action(s)	FC Date	%											
Perform lifecycle evaluations of critical structures, systems, and components.	4/1/2020	85											
Unsigned Risks (Pending ownership of identified risks/opportunities)													
No unsigned risks identified in December .													

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	5.4	4.2	5.5	(1.2)	-22.6%	(1.2)	-29.5%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance: (-\$1.2M/-22.6%)

The current month unfavorable schedule variance is mostly associated with the CHPRC management directed work stoppage at REDOX to address unplanned infrastructure upgrades at REDOX to improve worker safety. Planned work scope within REDOX will not commence until the phased infrastructure upgrades are complete. These issues have caused significant variances with planned scope associated with wall removals in the North Sample Gallery, asbestos abatement in the Silo and activities associated with characterization and removal of the product removal cage.

In addition, the variance is attributed to a delay in baseline activities associated with supporting the stabilization of 216-Z-2 and 241-Z-361. The baseline included resources to support the development and finalization of work packages to install the conveyance systems, award of the grout contractor and have the fabrication contractor to attend training for grouting the aging structures. However, the preceding activities to submit the final engineering design and determination on the regulatory path by RL was delayed. The final engineering design was delayed due to lacking Central Plateau resources (drafters), and the regulatory document pathway remains under RL review.

After RL determined a path forward, a time critical removal action under the *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* was initiated. Furthermore, it was determined that the project requires only an AM to proceed. To maintain schedule, the environmental team is working to complete all required documentation by March 11, 2020.

CM Cost Performance: (-\$1.2M/-29.5%)

The current month unfavorable cost variance is attributed to the CHPRC management-directed work stoppage at REDOX to address unplanned infrastructure upgrades at REDOX to improve worker safety. Personnel have been charging REDOX while performing the phased infrastructure upgrades without the ability to claim performance. Additionally, subcontractor costs associated with unplanned trailer installations at PUREX North contributed to the unfavorable current month cost variance. It was determined that the currently planned PUREX North scope required two additional doublewide trailers to improve efficiencies for fieldwork crews, as they are currently located at 100K. Finally, equipment lease costs from Mission Support Alliance (MSA) were a significant contributor to the variance. MSA was not billed by their subcontractor in November and did not accrue costs for the leases. The subcontractor billed for two months' worth of leases in December, causing the cost variance in the current month.

Contract-To-Date (CTD) (\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	578.5	571.5	554.2	(7.0)	-1.2%	17.3	3.0%	625.8	611.7	57.5	14.1

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance: (-\$7.0M/-1.2%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$17.3M/+3.0%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$14.1M/2.3%)

The VAC is within reporting thresholds.

Contract performance report formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0040 Nuclear Facility D&D	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	93.3	67.2	26.0

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

FY2020 expected funding of \$93.3 million includes a \$26.0 million increase this month driven by passage of the FY2020 appropriation. This increase in funding is intended to support additional D4 work scope currently under discussion but is not included in the current spending forecast. The spending forecast is based on the final FY2020 performance measurement baseline annual update submitted to RL on September 11, 2019, with updates through December.

Critical Path Analysis

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
Regulator Review 224-B (B Plant) Removal Action Work Plan (RAWP) (2017-34)	8/16/2017(A)	01/15/2020
Regulator Review Tier 2 PUREX Sampling Analysis Plan (2016-46)	06/10/2019(A)	02/20/2020
RL and Ecology Review PUREX N Closure Plan (2015-72)	07/18/2019(A)	02/20/2020
Regulator Review Tier 2 PUREX RAWP (2016-47)	07/23/2019(A)	01/23/2020
Regulator Review B Plant EE/CA (2017-34)	10/02/2019(A)	01/21/2020
RL Review PUREX Action Memorandum (2016-53)	12/22/2019 (A)	01/15/2020

Section F

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

CH2MHILL
Plateau Remediation Company
a Jacobs company



R. M. Geimer
Vice President for
K Basin Operations

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

M. A. Wright
Vice President for
Project Technical Services

PROJECT SUMMARY

K Basin Operations (KBO):

Crews at 105KW Basin continued clearing the northern part of west bay to create an open footprint for the future installation of the sparging station and vertical pipe casings (VPC) that will be used to segregate high dose basin debris and perform dosing and basin debris consolidation in east and center bays. After completing deactivation of the basin water recirculation and cooling system, CH2M HILL Plateau Remediation Company (CHPRC) submitted a completion letter to U.S. Department of Energy (DOE), Richland Operations Office (RL) documenting the completion of *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) milestone M-016-178, *Initiate Deactivation of 105-KW Fuel Storage Basin*. Tri-Party Agreement milestone M-093-28, *Submit Change Package for Proposed Interim Milestones for 105-KE/KW Reactor Interim Sage Storage*, was submitted to RL for approval. In addition, the subcontract to fabricate the high dose and north loadout pit (NLOP) VPC sections was awarded.

River Risk Management Project (RRMP):

At the 324 Building Disposition Project, a resumption team was formed, including, CHPRC and Jacobs Engineering Group Inc., (Jacobs) subject matter experts (SME), following a worker contamination incident at the 324 Building Facility on November 14, 2019. A CHPRC management stop work was implemented on the 300-296 Waste Site Remediation Project's radiological work within the facility. Resumption team members continue to look at opportunities to minimize contamination risks and optimize radiological controls and worker safety. The remaining four north-shoring piles were drilled and 11 vertical piles were grouted, which completed the installation of the 21 piles required for soil stabilization prior to initiating remediation of the 300-296 waste site beneath the 324 Building. Request for Proposals (RFPs) were released for the Modified Airlock Rail Track and Concrete Shielded Container, and a proposal for the design and fabrication of the Remote Excavator Arm (REA) Universal Cutting Tool was received. Training on B Cell filter frame installation was completed, Radiological Assay Equipment training continued and training on the waste box grouting process was initiated.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
20-EMS-KBO-OB1-P1	Evaluation of upcoming 100K work activities, which involve water discharge to the ground at 100K.	Evaluate upcoming work from the Hanford Fire Department, 100K D&D, and soil remediation activities at the 100K Area to ensure the water discharge to ground requirements found in DOE/RL-97-67, <i>Pollution Prevention and Best Management Practices Plan for State Waste Discharge Permits ST 4508, ST 4509, and ST 4510</i> , and 100K-STD-OP-52370, <i>Discharges to Ground</i> , are followed.	9/30/2020	25%
20-EMS-KBO-OB2-P1	Improve compliance/pollution and spill prevention.	Evaluate the status of spill prevention, use of secondary containment, universal waste and other recycling compliance and waste reduction opportunities for compliance with CHPRC procedures.	9/30/2020	25%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	2	No Injuries
Total Recordable Injuries	0	1	No Injuries
First Aid Cases	2	20	12/18/2019: Employee injured right hand when boot caught in protruding screw on a stairs, resulting in a fall. Employee evaluated at HPM Corporation (HPMC) and released to work with no restrictions. (25446) 12/04/2019: Employee caught the left foot on the edge of a step, causing the foot to roll. Employee evaluated at HPMC and released to work with no restrictions. (25434)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

100K Basin Operations

- 100K Closure Project:
 - 100K Demolition completed pumping oily water and commenced demolition of the 166KE Fuel Storage Bunker.
 - 100K West Basin Deactivation
 - Submitted the completion letter for Tri-Party Agreement milestone M-016-178 after completing deactivation of the basin water recirculation and cooling system.
 - Submitted Tri-Party Agreement milestone M-093-28, *Submit Change Package for Proposed Interim Milestones for 105-KE/KW Reactor Interim Sage Storage*, to RL for approval
 - Continued clearing the northern part of the west bay, to create a footprint to install the sparging station and vertical pipe casings that will be utilized to segregate high-dose debris.
 - 100K Remaining Wastes Sites remediation subcontractor personnel continued training and medical evaluations in order to begin working in January 2020.

RRMP, 324 Building Disposition Project

- Miscellaneous:
 - Received RL approval of the 324 Building safety basis annual update and initiated implementation of the update.
 - Repaired air compressor #2 and placed into service.
 - Completed 90-day stack radiation monitor functional test.
 - Completed 180-day elevator inspection.
 - Completed monthly crane preventive maintenance.
 - Completed monthly ground-fault circuit interrupter and emergency light inspections.
 - Initiated weather enclosure installation on north side of the 324 Building.
- Facility preparations:
 - Completed truck lock floor leveling.
 - Completed annual 324 Building monorail inspection.
- Structural modifications:
 - Completed drilling and grouting the remaining pile locations for the north temporary shoring site in support of future soil stabilization installation.
 - Loaded soil drums from north shoring excavations into roll-on/roll-off (RO/RO) cans for transport to Environmental Restoration Disposal Facility (ERDF) for disposal.
 - Demobilized drilling equipment out of temporary shoring site.
- Cell cleanout:
 - Received shielded lids and frames supporting 324 Building waste loadout.
 - Shipped three RO/RO cans to ERDF.
- Mockup:
 - Performed monthly preventive maintenance on mockup crane.
 - Completed mockup of the grout delivery system, lid hose management, hoist and rigging activities for the 955 containers in support of waste box process training.
 - Completed airlock training session.
 - Continued proficiency training on installed equipment.

Project Technical Support

- Training and Procedures:
 - Developed new procedure 324-PRO-OP-54436, *Static Pressure Controller Operations*. This procedure provides instructions for controlling differential pressure for the 324 Building Radiochemical Engineering Complex (REC) cells and service gallery.
 - Teamed with facility and program subject matter experts to develop a strategy for advanced radiological controls training. This training will address the knowledge and proficiency needed for personnel who have completed Radiological Worker II training but are inexperienced with the radiological conditions at the Facility. This training strategy will support the upcoming resumption activities for the 324 Facility.
- Readiness and Preparedness performed a full-up drill at 324 Facility to support initial qualifications of two Facility Emergency Response Organization members and re-proficiency for four members. All members were granted qualification/proficiency.
- Operations Program supported the HRB for the Garnett Filter work package in support of 100K filter media retrieval system installation.
- Project Delivery
 - MO2319 reset contract awarded to Ojeda Business Ventures (OBV). Work package development completed.
 - 100K Waste Site Remediation and Backfill
 - Continued field mobilization activities, site set up and equipment staging (60% complete).
 - Completed contractor submittals. Training scheduled to complete January 6, 2020, with field execution activities schedule to commence thereafter.

MAJOR ISSUES

Issue

Task Cask Assembly-1 (TCA-1) is currently staged outside of the 105KW Facility awaiting disposition. TCA-1 was previously used to support transfer operations between 105KE and 105KW and is internally contaminated. Based on historical data, the cask contains residual amounts of basin water and sludge material. TCA-1 requires further characterization to verify the source material, radiation levels and location of contamination in order to determine a disposal pathway.

Corrective Action

Characterization of the TCA will require removal of the lid to obtain visual and radiological surveys. Due to anticipated levels of contamination and radiation, this work is presumed to pose a high radiological risk requiring mitigation through use of containments, temporary shielding and ventilation, and mockup training to complete the task. Engineering assessments along with advanced worker involvement will be necessary to plan the disposition of the TCA. Radiological engineering modeling indicates that if a dose rate measurement taken 10 inches above the bottom of the inner vessel exceeds six Rem/hour, then the sludge heel will have to be removed and processed separately, most likely being directed to the NLOP VPC (if not grouted yet) or pumped into a separate approved container for disposition. If this condition does not exist, then the residual water and material can be solidified and the TCA transferred to ERDF for grouting and disposal.

Status

Results from a non-destructive assay (NDA) performed on a shielded ion exchange module staged west of 105KW in December-January will be evaluated as a test case to determine if NDA of TCA-1 is feasible for identifying specific radionuclide peaks in a shielded container. This may help pre-determine if the residual material will need to be removed from the TCA before opening the outer lid. Other detailed

planning and characterization activities, as described above, have been pushed out of fiscal year (FY) 2020 to focus on higher priority activities within the KW Basin tied to the dewatering milestone.

Issue

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

Corrective Action

A team of subject matter experts (SMEs) from across CHPRC and Jacobs will review the strategies and controls in place and focus on identifying recommendations for improving radiological practices and controls in the building by taking a holistic look at the full spectrum of operations.

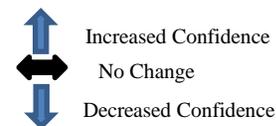
Status

Resumption team members have been actively working with project personnel and SMEs in identifying revised control strategies to reduce significantly the potential of future radiological contamination events. Existing processes and equipment are being evaluated to assist with developing recovery actions before resuming work in radiologically contaminated areas at the 324 Building. Recommendations and/or corrective actions are planned to be provided in the upcoming period.

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-0041/WBS-041																									
Explanation of major changes to the project monthly stoplight chart: Due to continued extensive comment resolutions, further delays have pushed the completion and submittal of the final structural modification design. Until the design is formally submitted, risk <i>RCC-300-296-30</i> will remain as a realized risk.																									
Realized Risks (Risks that are currently impacting project cost/schedule)																									
RCC-300-296-30, "300-296 Design Changes Result in Increased Subcontractor Change Order(s)/ Claims"	Due to the uncertainty and evolution of developments, design changes may be required upon completion of all design phases. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$3,318K, 136 days	●	↔	Risk Event: The verification of the final structural modification design has been delayed due to realization of other risks (see Recovery Assessment, below) while performing soil verification and pilot holing, requiring additional design effort from the design subcontractor. <table border="1" style="width: 100%;"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contractor prepare and submit structure modification design -30 percent to 60 percent (VE2810).</td> <td>8/15/18</td> <td>100</td> </tr> <tr> <td>Perform micropile demonstration and verification to support structural modification design (VS1220A).</td> <td>1/24/19</td> <td>100</td> </tr> <tr> <td>Structural modifications design micropile comment resolution (VS1220C).</td> <td>5/13/19</td> <td>100</td> </tr> <tr> <td>Perform pilot holing for structural modifications (VS5010).</td> <td>9/7/19</td> <td>100</td> </tr> <tr> <td>Perform Pit 6 soil verification testing/geotech (VS1220B).</td> <td>8/21/19</td> <td>100</td> </tr> <tr> <td>Contractor prepare and submit structural modification design (VN1220).</td> <td>2/13/20</td> <td>96</td> </tr> </tbody> </table> Recovery Assessment: Delays for completing the final structural design have been incurred due to the realization of risks RCC-300-296-31, "300-296 Elevated Contamination Encountered While Performing Structural Modifications," and RCC-300-296-01, "Latent Conditions Impact Facility Modifications." The realization of these risks halted fieldwork activities that were supporting completion of the final design. Corresponding actions that addressed radiological control measures for the pilot hole work scope were completed to support the final design. Following extensive comment resolution, the forecast completion of design has slipped from the December 30, 2019, date in November and is forecasted to complete February 13, 2020 .	Recovery Action(s)	FC Date	%	Contractor prepare and submit structure modification design -30 percent to 60 percent (VE2810).	8/15/18	100	Perform micropile demonstration and verification to support structural modification design (VS1220A).	1/24/19	100	Structural modifications design micropile comment resolution (VS1220C).	5/13/19	100	Perform pilot holing for structural modifications (VS5010).	9/7/19	100	Perform Pit 6 soil verification testing/geotech (VS1220B).	8/21/19	100	Contractor prepare and submit structural modification design (VN1220).	2/13/20	96
Recovery Action(s)	FC Date	%																							
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Contractor prepare and submit structural modification design (VN1220).	2/13/20	96																							
RCC-300-296-07, "300-296 Failure of a Radiochemical Engineering Cells (REC) Cranes (B Cell, A Cell, A/D & Airlock, and/or CHA Cranes)"	Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$1,561K, 208 days	●	↔	Risk Event: In August, the REC A/D Crane failed during operations. <table border="1" style="width: 100%;"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Determine B Cell replacement crane options</td> <td>3/19/19</td> <td>100</td> </tr> <tr> <td>Award contract – B Cell 10T crane – 324 Building</td> <td>6/20/19</td> <td>100</td> </tr> <tr> <td>Perform follow-up A/D Crane investigation</td> <td>TBD</td> <td>0</td> </tr> <tr> <td>Procure/Fabricate A/D Crane parts</td> <td>TBD</td> <td>0</td> </tr> <tr> <td>Perform A/D Crane repair</td> <td>TBD</td> <td>0</td> </tr> </tbody> </table> Recovery Assessment: A/D Crane survey and partial investigation completed in November. It is anticipated that decontamination of the A/D Crane will be necessary prior to performing repairs. Procurement and fabrication of decontamination equipment has been initiated to decrease further impacts to the project. Procurement of spare parts has been delayed due to additional verification of components and measurements that cannot be acquired at this time due to realization of risk RCC-300-296-36, "Contamination Experienced During REC Cell Operations." The FC date for completing crane investigation, procuring spare parts and performing crane repairs is subject to change, pending definition of revised practices and controls to minimize the potential of future radiological contamination.	Recovery Action(s)	FC Date	%	Determine B Cell replacement crane options	3/19/19	100	Award contract – B Cell 10T crane – 324 Building	6/20/19	100	Perform follow-up A/D Crane investigation	TBD	0	Procure/Fabricate A/D Crane parts	TBD	0	Perform A/D Crane repair	TBD	0			
Recovery Action(s)	FC Date	%																							
Determine B Cell replacement crane options	3/19/19	100																							
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Perform A/D Crane repair	TBD	0																							

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0041/WBS-041																			
RCC-300-296-36, "Contamination Experienced During Radiochemical Engineering Cells Operations"	During REC cell cleanout (e.g., soil/debris removal, waste handling, and facility modifications), the CHA, truck lock or other support area becomes contaminated or background dose is elevated to a level that operations cannot continue as currently planned. Significant cost and schedule impacts are incurred. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$225K, 70 days			<p>Risk Event: On November 14, 2019, low-level contamination was detected on an individual after exiting radiological step off pad.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform CHA floor scabbling and apply epoxy floor coating</td> <td>7/17/19</td> <td>100</td> </tr> <tr> <td>Perform project resumption activities from 11/14 event</td> <td>3/9/20</td> <td>5</td> </tr> <tr> <td>Floor scabbling, when necessary</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Floor coating applications, where necessary</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Assessment: CHPRC has continued with analysis of events and is developing the corrective actions necessary. Resuming work scope in radiologically controlled areas within the building is pending an acceptable control strategy moving forward. Recommendations and/or corrective actions are planned to be provided in the upcoming period.</p>	Recovery Action(s)	FC Date	%	Perform CHA floor scabbling and apply epoxy floor coating	7/17/19	100	Perform project resumption activities from 11/14 event	3/9/20	5	Floor scabbling, when necessary	Ongoing	N/A	Floor coating applications, where necessary	Ongoing	N/A
Recovery Action(s)	FC Date	%																	
Perform CHA floor scabbling and apply epoxy floor coating	7/17/19	100																	
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Floor scabbling, when necessary	Ongoing	N/A																	
Floor coating applications, where necessary	Ongoing	N/A																	
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)																			
No critical risks identified in December .																			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																			
RCC-300-296-31, "300-296 Elevated Contamination Encountered While Performing Structural Modifications"	To validate the assumptions supporting the 324 Building structural modification design, pilot holes will be drilled into the soil beneath B Cell to collect necessary data. If data result in contamination levels that are much higher or deeper or the material encountered is different than anticipated, an alternative approach will require the development and/or fabrication of equipment for contamination mitigation and control. These impacts will limit progress on fieldwork activities. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$3,318K, 256 days			<p>Risk Event: Unexpected contamination found while performing structural modification activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>This risk is accepted with no planned mitigation actions identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. As low as reasonably achievable (ALARA) review evaluations for process improvements were completed in May. Increased personal protective equipment and additional control measures were successfully implemented. However, these controls have greatly reduced production rates than planned. This risk is currently accepted with no mitigation actions identified.</p>	Mitigation Action(s)	FC Date	%	This risk is accepted with no planned mitigation actions identified at this time.	N/A	N/A									
Mitigation Action(s)	FC Date	%																	
This risk is accepted with no planned mitigation actions identified at this time.	N/A	N/A																	
FY2020 Key Risks																			
RCC-300-296-01, "300-296 Latent Conditions Impact Facility Modification"	Latent conditions, poor visibility in REC Cells or drawing omissions, inconsistencies or errors impact facility modifications (e.g., mechanical, electrical industrial hygiene/radiological control hazards), resulting in unplanned work and subsequently, cost and schedule impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$294.5K, 128 days			<p>Risk Trigger Metric: Based on a similar event experienced on March 28, 2019, unexpected beta-gamma contamination was detected while performing clearance surveys at the 324 Building step-off pad. Sampling determined it to be beta contamination (suspected strontium-90) without a corresponding gamma component, resulting in project impacts.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. Follow-up contamination surveys were performed throughout the front side areas of the 324 Building using strontium controls (developed for room 18) with no contamination detected. Based on the historical discovery of an elevated latent contamination level (CHPRC-1801178), this risk will be monitored continuously as routine preventive maintenance activities are in place to reduce the likelihood of occurrence.</p>	Mitigation Action(s)	FC Date	%	Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities.	Ongoing	N/A									
Mitigation Action(s)	FC Date	%																	
Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities.	Ongoing	N/A																	
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: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$460K, 96 days			<p>Risk Trigger Metric: Cell shield door fails, resulting in a shutdown of cleanout activities until repairs can be completed, similar to the event that occurred in September 2019.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>No discrete mitigation actions have been identified. However, preventive maintenance activities are being conducted to assure reliability of REC shield doors.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. To maintain REC shield door operability, engineering evaluations were conducted, resulting in the implementation of monthly performance measures and the procurement of spare parts. These mitigation efforts will reduce the likelihood of cost and schedule consequences, as applicable.</p>	Mitigation Action(s)	FC Date	%	No discrete mitigation actions have been identified. However, preventive maintenance activities are being conducted to assure reliability of REC shield doors.	Ongoing	N/A									
Mitigation Action(s)	FC Date	%																	
No discrete mitigation actions have been identified. However, preventive maintenance activities are being conducted to assure reliability of REC shield doors.	Ongoing	N/A																	

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0041/WBS-041																
RCC-300-296-15, "300-296 Cell Sealing, Micropile Installation, Interference Removal, Core Drilling and Soil Stabilization Takes Longer Than Planned"	<p>Unexpected field conditions are encountered during interference removal, sealing of cell penetrations, and/or core drilling work scope. The unexpected field conditions subsequently cause in-scope unplanned work and result in schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$3,317.6K, 96 days</p>	●	↔	<p>Risk Trigger Metric: The project experiences unexpected field conditions outside their control, impacting cell sealing, micropile installation, interference removal, core drilling and soil stabilization more difficult than planned.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Mobilize and train second soil stabilization crew</td> <td>12/19/19</td> <td>100</td> </tr> <tr> <td>Perform pilot hole drilling to aid as a mitigation action for micropile installation.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: Mitigation efforts have reduced the probability of risk occurrence from likely to medium. However, due to the uniqueness involved with work scope, there is potential for unexpected delays and additional pilot hole drilling efforts. Mobilizing and training of a second soil stabilization crew was completed on December 19, 2019.</p>	Mitigation Action(s)	FC Date	%	Mobilize and train second soil stabilization crew	12/19/19	100	Perform pilot hole drilling to aid as a mitigation action for micropile installation.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%														
Mobilize and train second soil stabilization crew	12/19/19	100														
Perform pilot hole drilling to aid as a mitigation action for micropile installation.	Ongoing	N/A														
RCC-300-296-06, "300-296 Remote Equipment Failure During Operations"	<p>Failures of the following procured equipment, including the floor saw, master slave manipulators (MSMs) used in REC Cells, REAs, through supports, cell mams, transfer mechanism, and cameras and lights.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$1,336K, 90 days</p>	●	↔	<p>Risk Trigger Metric: Failure of remote equipment will result in schedule delays due to equipment replacement and repairs as a result of radiation damage to other equipment installed in the REC Cells. These factors may shorten the operational life of equipment and result in replacing damaged equipment or components.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure MSM manipulators and storage carts</td> <td>12/30/19</td> <td>90</td> </tr> <tr> <td>Procure universal cutting tool</td> <td>11/4/20</td> <td>5</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. Potential impacts continue to be monitored and assessed for mitigation as project evolutions continue. Estimate to complete is updated monthly to reflect potential impacts of risk being realized.</p>	Mitigation Action(s)	FC Date	%	Procure MSM manipulators and storage carts	12/30/19	90	Procure universal cutting tool	11/4/20	5			
Mitigation Action(s)	FC Date	%														
Procure MSM manipulators and storage carts	12/30/19	90														
Procure universal cutting tool	11/4/20	5														
RCC-300-296-33, "Increased Rad Exposure to Workers"	<p>High dose in the airlock causes excessive radiation exposure to personnel, resulting in in-scope unplanned work impacts of cost and/or schedule.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$240K, 36 days</p>	●	↔	<p>Risk Trigger Metric: During REC entries, background and present dose could cause workers to reach allowable dose limits sooner than anticipated, resulting in cost and schedule impacts.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continue use of increased shielding and ALARA controls</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procurement of specialized containers - GC/44" Bins</td> <td>4/27/20</td> <td>5</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in December. Mitigation efforts have reduced the probability of risk occurrence to low. Procurement of specialized waste containers, shield lids and decontamination efforts has significantly minimized dose potential; however, the uniqueness of work scope provides the potential for unexpected delays and/or cost impacts.</p>	Mitigation Action(s)	FC Date	%	Continue use of increased shielding and ALARA controls	Ongoing	N/A	Procurement of specialized containers - GC/44" Bins	4/27/20	5			
Mitigation Action(s)	FC Date	%														
Continue use of increased shielding and ALARA controls	Ongoing	N/A														
Procurement of specialized containers - GC/44" Bins	4/27/20	5														
RCC-300-296-03, "300-296 Mockup Testing and Qualification of Remote Equipment/ Process Identifies Major Modification Requirements"	<p>Issues such as equipment interferences, differing as-found conditions than planned, equipment reliability, etc. arise prior to or during mockup testing, leading to re-design of equipment and resulting in cost and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$658.5K, 64 days</p>	●	↔	<p>Risk Trigger Metric: During vendor factory acceptance test and/or mockup, testing, issues and conditions were identified with mockup equipment, resulting in additional re-design, materials, and/or fabrication efforts greater than planned. Remote equipment procurements that have resulted in cost and/or schedule impacts include the REA system components (through supports and dummy post assemblies), transfer mechanism (electrical components) and floor saw (gear mechanism).</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install radiological assay system and perform construction acceptance test at mockup</td> <td>3/14/2019</td> <td>100</td> </tr> <tr> <td>Install floor saw and support system at mockup (VN1020)</td> <td>4/23/2019</td> <td>100</td> </tr> <tr> <td>Conduct proficiency training at the mockup (VN1700)</td> <td>10/7/2020</td> <td>78</td> </tr> </tbody> </table> <p>Mitigation Assessment: Integration with remotely operated equipment through testing and training at the mockup will continue with preparations for 324 Building equipment. Proficiency training has been put on hold until a final resumption of activities plan has been agreed upon and ready for implementation.</p>	Mitigation Action(s)	FC Date	%	Install radiological assay system and perform construction acceptance test at mockup	3/14/2019	100	Install floor saw and support system at mockup (VN1020)	4/23/2019	100	Conduct proficiency training at the mockup (VN1700)	10/7/2020	78
Mitigation Action(s)	FC Date	%														
Install radiological assay system and perform construction acceptance test at mockup	3/14/2019	100														
Install floor saw and support system at mockup (VN1020)	4/23/2019	100														
Conduct proficiency training at the mockup (VN1700)	10/7/2020	78														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0041/WBS-041													
100K-SR-05, "Unexpected Site Conditions"	<p>Unexpected site conditions are encountered during soil excavation activities, resulting in recovery actions, causing unplanned, and project in-scope work and schedule delays.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$760K, 32 days</p>	●	↔	<p>Risk Trigger Metric: During soil excavation activities, different site conditions including underground utilities (i.e., wiring, fiber cable, pipes, asbestos, etc.), unknown construction material and greater than expected quantities of contamination could be encountered, resulting in increased volume of remediated soil. In addition, the overburden soil planned for backfill contains contaminants, resulting in the need to create a new clean-fill pit.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time (risk is accepted)</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: Accept</p>	Mitigation Action(s)	FC Date	%	None identified at this time (risk is accepted)	N/A	N/A			
Mitigation Action(s)	FC Date	%											
None identified at this time (risk is accepted)	N/A	N/A											
100K-SFGF-02, "105 KW SF & GF – Subcontractor Design Changes During Fab/Construction"	<p>During fabrication and installation, problems with design are encountered resulting in design changes, resulting in cost and schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$400K, 32 days</p>	●	↔	<p>Risk Trigger Metric: During installation of Engineered Container Retrieval and Transfer System tie-in equipment in support of VPC installation and Garnet Filter Media Removal System (GFMR), design issues were identified that could not be determined during mock up testing at the Maintenance and Storage Facility, resulting in design changes. This scenario would impact the firm fixed price construction contractor.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Integrated system testing/operator training in support of KW Basin garnet filter media removal.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>System constructability review and field walk downs will be implemented to reduce the risk.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: Integrated system testing and operator training is complete for the GFMR system. All currently identified mitigation actions have been completed. This risk will continue to be monitored for additional mitigation or changes to the risk posture.</p>	Mitigation Action(s)	FC Date	%	Integrated system testing/operator training in support of KW Basin garnet filter media removal.	Complete	100	System constructability review and field walk downs will be implemented to reduce the risk.	Complete	100
Mitigation Action(s)	FC Date	%											
Integrated system testing/operator training in support of KW Basin garnet filter media removal.	Complete	100											
System constructability review and field walk downs will be implemented to reduce the risk.	Complete	100											
Unassigned Risks (Pending ownership of identified risks/opportunities)													
No unassigned risks identified in December.													

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

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	11.9	9.4	11.9	(2.5)	-21.0%	(2.5)	-27.0%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$2.5M/-21.0%)

The CM negative schedule variance for 100K is due to impacts from delays dispositioning the oily water from the 166KE/AKE fuel oil tank. Removal of tank contents has required alternative disposition methods due to consistency of oily water found in the tanks, impacting the start of demolition. Planning, testing and mockups to support 105KW Debris Waste Disposition have been more complex than planned. Initiation of Garnet Filter equipment installation was delayed due to replanning the installation work package to address Hazard Review Board (HRB) comments. In addition, further time was required to mobilize, train, and perform medical screenings of subcontractor personnel, delaying the start of excavation activities.

324 Building Disposition Project experienced an unfavorable variance due to a contamination event that occurred on November 14, 2019. CHPRC management suspended work beyond minimum safe activities

pending implementation of revised strategies and controls to reduce the potential of future contaminations.

CM Cost Performance (-\$2.5M/-27.0%)

The unfavorable variance for 324 Building Disposition Project was primarily related to a contamination event that occurred on November 14, 2019 which resulted in the previously noted CHPRC management directed suspension of work. As a result, costs were experienced in the period without the ability to take performance as crews performed additional unplanned training to support proficient use of mockup equipment in response to resumption team recommendations.

Planning, testing, and mockups to support 105KW Debris Waste Disposition have been more complex than planned. GFMRS incurred higher than planned costs associated with mobilization and training costs for the installation subcontractor for GFMRS and vertical pipe casings. CHPRC planning assumed the subcontractor would provide partially trained staff and did not. In addition, unplanned costs were incurred to rework the installation work package to resolve comments from the HRB.

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

WBS 041/ RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	722.2	704.9	687.1	(17.4)	-2.4%	17.7	2.5%	822.5	799.2	112.0	23.3

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$17.3M/-2.4%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance (+\$17.7M/+2.5%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$23.3M/+2.8%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0041 Nuclear Facility D&D – River Corridor	FY2020		Variance
	Projected Funding	Spending Forecast	
RL-0041 Spending Forecast	150.9	148.8	2.1
Numbers are rounded to the nearest \$0.1 million.			

Funds/Variance Analysis

FY2020 expected funding was increased for a revised expected funding level of \$150.9 million. The increase was primarily driven by passage of the FY2020 appropriation. The spending forecast increased \$6.8 million from November, primarily due to a reallocation of fee from PBS RL-0013, partially offset by a decrease for delays to the start of deactivation activities and work scope pushing out to FY2021.

Critical Path Analysis

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Forecast Date	Status/ Comment
M-016-178	Initiate Deactivation of 105-KW Fuel Storage Basin	12/31/2019	12/12/2019(A)	Complete
M-093-28	Submit Change Package for Proposed Interim Milestones for 105-KE/KW Reactor Interim Safe Storage	12/31/2019	12/19/2019(A)	Complete

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review Draft Emergency Planning Hazards Assessment (EPHA)	5/17/2019(A)	12/18/2019(A)
RL Issue Safety Evaluation Report for 324 Building Documented Safety Analysis/Technical Safety Requirement	9/10/2019(A)	11/26/2019(A)
DOE Independent Design Review – Issue for Construction Structural Modification	12/31/2019	1/20/2020
RL Approval EPHA Final	1/10/2020	1/24/2020

Section G

Fast Flux Test Facility Closure (RL-0042)

CH2MHILL
Plateau Remediation Company
a Jacobs company



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

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The Fast Flux Test Facility (FFTF) is being held in a low-cost surveillance and maintenance condition. Crews completed non-destructive assay of 19 drums containing sodium-contaminated waste from FFTF deactivation in preparation for treatment.

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

- Work crews completed field activities required for non-destructive assay characterization of 19 sodium drums at the interim storage area in the 400 Area in preparation for treatment at Perma-Fix Northwest.
- 402 Building roof repairs have concluded after final walkdown and acceptance testing were completed.

MAJOR ISSUES

Issue

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

Corrective Action

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

Status

Developing functional requirements for an engineering evaluation is currently underway. Additional efforts to address the aging diesel engine fire pump P-28 is pending further planning and direction from the U.S. Department of Energy, Richland Operations Office (RL) once the evaluation has been completed.

RISK MANAGEMENT STATUS

None currently identified.

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	0.3	0.3	0.5	0.0	0.0%	(0.2)	-77.9%

Numbers are rounded to the nearest \$0.1 million.

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

The CM schedule variance is within reporting thresholds.

CM Cost Performance: (-\$0.2M/-77.9%)

The CM cost variance is within reporting thresholds.

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

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	29.4	29.4	24.7	0.0	0.0%	4.7	15.8%	33.0	28.4	3.7	4.6

Numbers are rounded to the nearest \$0.1 million.

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

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$4.7M/+15.8%)

The CTD favorable cost variance is due to reduction in surveillance and maintenance requirements at the FFTF as the facility was deactivated. In addition, the efficient use of resources to support deactivation activities within the project's scope of work contributed to this favorable cost variance.

Variance at Completion: (+\$4.6M/+13.9%)

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS VS. SPEND FORECAST (\$M)

RL-0042 FFTF Closure	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	4.8	4.6	0.2

Numbers are rounded to the nearest \$0.1 million.

Funds Analysis

Fiscal year (FY) 2020 projected funding of \$4.8 million includes support for electrical component failures and configuration challenges, interest by regulators requiring additional inspections and a recent failure of the water system/water piping. The spending forecast is \$4.6 million based on the final FY2020 project management baseline annual update submitted to RL on September 11, 2019, with updates through December to reflect incorporation of Contracting Officer Representative direction for 400 Area's ISA drum treatment at Perma-Fix Northwest. The variance of \$0.2 million between FY2020 projected funding and spending forecast is a reflection of unauthorized scope for compliance upgrades that are pending additional planning detail and direction from RL.

Critical Path Analysis

Critical path analysis is not applicable to this project. The 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

a Jacobs company



December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

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

1. CONTRACTOR		2. CONTRACT				3. PROGRAM				4. REPORT PERIOD						
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract				a. NAME Plateau Remediation Contract				a. FROM (YYYYMMDD) 2019 / 11 / 18						
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18				b. TO (YYYYMMDD) 2019 / 12 / 22						
c. TYPE CPAF		d. SHARE RATIO														
5. CONTRACT DATA																
a. QUANTITY 1	b. NEGOTIATED COST 6,318,614	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 556,551	d. TARGET PROFIT/FEE 278,070	e. TARGET PRICE 6,596,684	f. ESTIMATED PRICE 7,030,608	g. CONTRACT CEILING 6,596,684	h. ESTIMATED CONTRACT CEILING 7,030,608	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		6,704,174				c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)							
b. WORST CASE		6,794,462														
c. MOST LIKELY		6,752,538	6,877,610	125,072												
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					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)			
RL-0011 Nuclear Mat Stab & Disp PFP	6,408	7,495	5,472	1,087	2,023	1,134,593	1,123,680	1,218,422	-10,914	-94,742	0	0	0	1,143,564	1,236,945	-93,381
RL-0012 SNF Stabilization & Disp	90	90	1	0	89	759,593	759,593	729,859	0	29,733	0	0	0	759,593	729,862	29,731
RL-0013 Solid Waste Stab & Disp	17,749	14,518	14,338	-3,231	180	1,521,184	1,512,418	1,428,374	-8,765	84,044	0	0	0	1,678,201	1,589,711	88,490
RL-0030 Soil & Water Rem-Grndwtr/Vadose	10,663	9,097	9,134	-1,566	-37	1,659,532	1,653,341	1,605,461	-6,191	47,880	0	0	0	1,764,085	1,708,363	55,722
RL-0040 Nuc Fac D&D - Remainder Hanfrd	5,448	4,215	5,459	-1,233	-1,243	578,478	571,518	554,200	-6,961	17,318	0	0	0	625,801	611,693	14,108
RL-0041 Nuc Fac D&D - RC Closure Proj	11,901	9,396	11,936	-2,505	-2,540	722,239	704,866	687,146	-17,373	17,720	0	0	0	822,500	799,153	23,347
RL-0042 Nuc Fac D&D - FTF Proj	264	264	469	0	-205	29,392	29,392	24,738	0	4,655	0	0	0	33,025	28,447	4,578
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET	0															
e. SUBTOTAL	52,523	45,076	46,809	-7,448	-1,734	6,405,012	6,354,808	6,248,199	-50,204	106,608	0	0	0	6,826,769	6,704,174	122,595
f. MANAGEMENT RESERVE	48,364															
g. TOTAL	52,523	45,076	46,809	-7,448	-1,734	6,405,012	6,354,808	6,248,199	-50,204	106,608	0	0	0	6,875,133	6,704,174	170,959
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																
a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE													-50,204 106,608 6,875,133 6,704,174 170,959			

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

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2019 / 11 / 18	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 12 / 22	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)						
34 - Env Program & Strategic Plng	1,783	1,040	1,030	-743	10	103,387	100,745	94,275	-2,641	6,470	0	0	0	116,176	107,794	8,382
35 - Business Services	0	0	0	0	0	476,879	476,879	453,595	0	23,284	0	0	0	476,879	453,595	23,284
36 - Prime Contract & Proj Integr	0	0	0	0	0	1,111	1,111	492	0	618	0	0	0	1,111	492	618
37 - Resource Mgmt & Strategic Intg	120	120	100	0	20	8,896	8,896	5,837	0	3,058	0	0	0	9,926	6,871	3,055
3B - PFP Closure Project	6,408	7,495	5,472	1,087	2,023	1,045,954	1,035,040	1,137,357	-10,914	-102,317	0	0	0	1,054,925	1,155,880	-100,956
3C - Waste & Fuels Management Project	13,247	10,629	10,994	-2,619	-366	1,340,326	1,333,130	1,253,045	-7,197	80,084	0	0	0	1,458,090	1,376,503	81,587
3D - Soil & Groundwater Remediation	8,850	8,027	8,079	-823	-52	1,454,369	1,450,819	1,403,450	-3,550	47,369	0	0	0	1,545,875	1,492,575	53,300
3G - K Basin Oper & Plateau Remediation Project	6,259	4,423	5,421	-1,837	-999	1,122,987	1,116,459	1,061,188	-6,528	55,271	0	0	0	1,173,843	1,115,804	58,039
3H - River Risk Management Project	10,174	8,894	9,808	-1,280	-914	331,988	319,575	339,723	-12,413	-20,148	0	0	0	420,132	434,478	-14,346
3K - Central Plateau Risk Reduction	5,682	4,449	5,905	-1,233	-1,456	519,116	512,155	499,236	-6,961	12,919	0	0	0	569,813	560,180	9,633
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)	52,523	45,076	46,809	-7,448	-1,734	6,405,012	6,354,808	6,248,199	-50,204	106,608	0	0	0	6,826,769	6,704,174	122,595
f. MANAGEMENT RESERVE														48,364		
g. TOTAL	52,523	45,076	46,809	-7,448	-1,734	6,405,012	6,354,808	6,248,199	-50,204	106,608	0	0	0	6,875,133		

CONTRACT PERFORMANCE REPORT																	Form Approved	
FORMAT 3 - BASELINE																	OMB No. 0704-0188	
DOLLARS IN THOUSANDS																		
1. CONTRACTOR CH2M HILL Plateau Remediation Company				2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2019/11/18 b. TO: 2019/12/22						
5. CONTRACT DATA				a. ORIGINAL NEGOTIATED COST \$4,312,366		b. NEGOTIATED CONTRACT CHANGE \$2,006,247		c. CURRENT NEGOTIATED COST (A + B) \$6,318,614		d. ESTIMATED COST AUTH UNPRICED WORK \$556,551		e. CONTRACT BUDGET BASE (C + D) \$6,875,165		f. TOTAL ALLOCATED BUDGET \$6,875,133		g. DIFFERENCE (E - F) \$31		
h. CONTRACT START DATE 6/19/2008				i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2020		k. CONT COMPLETION DATE 9/30/2020				l. EST COMPLETION DATE 9/30/2020						
6. PERFORMANCE DATA																		
BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)																		
SIX MONTH FORECAST																		
ITEM (1)																		
BCWS CUM TO DATE (2)																		
BCWS FOR REPORT PERIOD (3)																		
+1 Jan-20 (4)																		
+2 Feb-20 (5)																		
+3 Mar-20 (6)																		
+4 Apr-20 (7)																		
+5 May-20 (8)																		
+6 Jun-20 (9)																		
FY09-13 (10)																		
FY14 (11)																		
FY15 (12)																		
FY16 (13)																		
FY17 (14)																		
FY18 (15)																		
FY19 (16)																		
FY20 (17)																		
UNDISTRIB BUDGET (18)																		
TOTAL BUDGET (19)																		
a. PM BASELINE (BEGIN OF PERIOD)																		
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																		
BCR-013-20-004R0 - Removal of T-Plant PLEX Crane Camera Upgrade & Stack Flow Mo																		
BCR-013-20-005R0 - Replan WRAP Roof Design to Planning Package																		
BCR-013-20-007R0 - Replan FY2020 Retrievably-Stored Waste to a Planning Package																		
BCR-030-20-002R0 - Incorporate Re-planning per the 200-ZP-1 Optimization Study																		
BCR-030-20-004R0 - Remove Duplicate 200-EA-1 Planning																		
BCR-030-20-005R0 - Revise EVT for 100-HR-3 & 100-KR-4 Well Realignment Construction Management																		
BCR-030-20-006R0 - Update the GW Data Evaluation and Reporting WBS Dictionary a																		
BCR-042-20-001R0 - Replan RL-0042 Compliance Upgrades to Planning Package																		
BCRA-PRC-20-004R0 - HPIC Updates December FY2020																		
c. PM BASELINE (END OF PERIOD)																		
7. MANAGEMENT RESERVE																		
8. TOTAL																		

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2019 / 11 / 18	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 12 / 22	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA																
WBS.Resp Org Group ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)	
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS							
			+1 JAN 2020 (4)	+2 FEB 2020 (5)	+3 MAR 2020 (6)	+4 APR 2020 (7)	+5 MAY 2020 (8)	+6 JUN 2020 (9)	JUL 2020 (10)	AUG 2020 (11)	SEP 2020 (12)	OCT 2020 (13)	ATCOMPLETE (14)			
300 - Office of the President	9	944	7	7	7	6	6	6	6	6	6	6	6	0	0	1004
303 - Internal Audit	4	609	4	4	5	5	5	5	5	5	5	5	5	0	0	654
304 - General Counsel	4	560	4	4	4	4	4	4	4	4	4	4	4	0	0	593
31 - Communications	7	1234	6	6	6	8	9	9	9	9	9	9	9	0	0	1305
32 - Safety Health Security & Quality	59	8640	62	60	60	60	60	60	60	60	60	60	60	0	0	9179
34 - Env Program & Strategic Plng	42	5928	46	43	45	45	46	47	44	44	46	41	41	1	0	6331
35 - Business Services	59	8238	55	57	57	63	64	65	65	65	65	64	64	0	0	8794
36 - Prime Contract & Proj Integr	40	4491	36	36	37	38	39	39	39	39	39	39	39	0	0	4833
37 - Resource Mgmt & Strategic Intg	40	3433	38	39	41	42	42	42	43	43	43	43	43	0	0	3805
38 - Project Technical Services	40	6527	39	39	40	40	40	40	40	40	40	40	40	0	0	6887
3B - PFP Closure Project	191	54242	185	183	168	140	11	11	0	0	0	0	0	0	0	54930
3C - Waste & Fuels Management Project	396	59370	409	400	394	401	408	414	397	400	394	394	9	13	63008	
3D - Soil & Groundwater Remediation	263	43450	251	265	272	285	272	265	263	245	226	226	8	14	45817	
3G - K Basin Oper & Plateau Remediation Project	209	37353	201	208	219	219	213	224	222	205	198	198	15	54	39333	
3H - River Risk Management Project	226	9518	229	232	232	224	228	225	219	218	218	218	26	142	11712	
3K - Central Plateau Risk Reduction	238	20626	231	235	242	240	239	236	240	241	238	238	28	279	23075	
g. TOTAL DIRECT	1826	265164	1803	1820	1828	1819	1685	1682	1657	1626	1585	1585	88	502	281260	

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

CLASSIFICATION (When Filled In)									
CONTRACT PERFORMANCE REPORT FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES								FORM APPROVED OMB No. 0704-0188	
1. CONTRACTOR			2. CONTRACT			3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company			a. NAME Plateau Remediation Contract			a. NAME Plateau Remediation Contract		a. FROM (YYYY/MM/DD) 2019/11/18	
b. LOCATION (Address and ZIP Code) Richland, WA 99354			b. NUMBER DE-AC06-08RL14788			b. PHASE Base		b. TO (YYYY/MM/DD) 2019/12/22	
			c. TYPE CPAF	d. SHARE RATIO		c. EVMS ACCEPTANCE 2009/09/18 NO YES X			
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI
Current:	52,523	45,076	46,809	(7,448)	-14.2%	(1,734)	-3.8%	0.86	0.96
Cumulative:	6,405,012	6,354,808	6,248,199	(50,204)	-0.8%	106,608	1.7%	0.99	1.02
	BAC	EAC	VAC in \$	VAC in %	TCPI				
At Complete:	6,826,769	6,704,174	122,595	1.8%	1.04				
Explanation of Variance/Description of Problem:									
Current Period Schedule and Cost Variance: The current month (CM) cost variance is within thresholds.									
The current month (CM) negative schedule variance comes from several areas. For W&FM's MCSC project, the transfer system fabrication and ancillary fabrication is delayed while awaiting receipt of the consent package from RL. Additionally, the mobilization and training of the Capsule Storage Area (CSA) construction subcontract is intentionally delayed due to significant positive float and the opportunity to avoid winter weather. At S&GRP, the negative schedule variance is the result of unanticipated issues requiring resolution associated with the composite analysis and the late air stripper submittal. At RRMP, the November 14, 2019, contamination event resulted in a continued management-directed stand-down for work in radiologically contaminated areas at the 324 Building Facility. Additionally, the IDF earthworks subcontract is for five (instead of three) months. At CPRM, delays continue due to the management-directed work stand-down at REDOX due to concerned stakeholders. At KBO, the unexpected contents of the oil tanks delayed demolition, and the garnet filter media removal system work package was reworked to pass the hazard review board.									
Cumulative Schedule Variance: The variance is within reporting thresholds.									
Cumulative Cost Variance: The variance is within reporting thresholds.									
Impact:									
Current Period Schedule: The current month schedule variance is not expected to impact the overall contract schedule.									
Current Period Cost: Cost impacts are being estimated and will be incorporated in the project estimate to complete (ETC).									
Cumulative Schedule: N/A									
Cumulative Cost: N/A									
Corrective Action:									
Current Period Schedule: No corrective actions have been identified.									
Current Period Cost: No corrective actions necessary.									
Cumulative Schedule: N/A									
Cumulative Cost: N/A									
Monthly Summary (to include technical causes of VARs, Impacts, and Corrective Action(s):									
CHPRC continues to track completion of the contract within budget. Currently, a variance at completion of \$122.6 million is projected, with an additional \$48.4 million of management reserve (MR), for a total positive variance of \$171 million. For December, the project was 14.2 percent behind schedule and 3.8 percent over planned cost. Contract to date, the project was 0.8 percent behind schedule and 1.7 percent under planned cost.									
There was no change between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of December. The \$31K delta is a result of rounding over time for implementation of multiple change order definitizations.									
Twelve BCRs were implemented in the current period. They included:									
<ul style="list-style-type: none"> • BCR-013-20-003R0, Correction to RL-0013 NDA Box Campaign Schedule Activity Description • BCR-013-20-004R0, Removal of T-Plant PLEX Crane Camera Upgrade & Stack Flow Monitoring System Design • BCR-013-20-005R0, Replan WRAP Roof Design to Planning Package • BCR-013-20-007R0, Replan FY2020 Retrievably-Stored Waste to a Planning Package • BCR-013-20-008R0, RL-0013 Correction of Three Milestone EVM Type • BCR-030-20-002R0, Incorporate Re-planning per the 200-ZP-1 Optimization Study • BCR-030-20-004R0, Remove Duplicate 200-EA-1 Planning • BCR-030-20-005R0, Revise EVT for 100-HR-3 & 100-KR-4 Well Realignment Construction Management 									

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

- BCR-030-20-006R0, Correct GW Data Evaluation PMP Planning
- BCR-042-20-001R0, Replan RL-0042 Compliance Upgrades to Planning Package
- BCR-PRC-20-003R0, FY2020 Realignment of Management Reserve - OA
- BCRA-PRC-20-005R0, HPIC Updates December 2019

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

Variance in Performance BAC and EAC: The variance at complete (VAC) between the BAC and EAC this month is a +\$122.6 million, +1.8% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

CPS - In Process		
	Total Authorized Unpriced Work	\$556,551
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	Grand Total Adjustments	\$556,551

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	2020	\$0

There was no change to UB in December.

Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
BCR-PRC-20-003R0	<i>FY2020 Realignment of Management Reserve - OA</i>	RL-0011 RL-0012 RL-0013 RL-0030 RL-0040 RL-0041 RL-0042	2020	\$0

There was no change in MR during December.

Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2020	\$0

There was no change to fee in December.

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

Prepared by: Project Control Staff	Date: 1/20/2020	Approved by:	Date:
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Appendix B

Project Services and Support (WBS 000)

CH2MHILL
Plateau Remediation Company



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

M. A. Wright
Vice President for
Project Technical
Services

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

D. J. Henderson
Director of
Communications

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

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

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

PROGRAM SUMMARY

Project Services and Support functional activities continue to provide support and technical services to all CH2M HILL Plateau Remediation Company (CHPRC) projects as well as central management of crosscutting services. This section is reported quarterly.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
20-EMS-ADMIN-OBJ1-P1	Reduce energy intensity.	Increase facility occupancy rates to greater than 86 percent by compressing occupancy and vacating underutilized facilities. Occupancy compression to be maintained through disposition of buildings or square footage reduction.	9/30/2020	0%
20-EMS-PTS-OBJ1-P1	Spill prevention/waste minimization/pollution prevention.	Document quarterly surveillances on a work site assessment (WSA).	9/30/2020	25%
20-EMS-PTS-OBJ2-P1	Evaluate upcoming Project Technical Services (PTS) work activities that will involve water discharge to the ground in 200 East, specifically when water is used for dust suppression during PTS project activity.	Document discussion summary in email to PTS Project Manager. Report quarterly.	9/30/2020	25%
20-EMS-PTS-OBJ3-P1	Monthly Chemical Management Inspection/pollution and spill prevention.	Ensure chemical products are accurately tracked, maintained, and excessed/disposed. Perform quarterly assessments on chemical inventory locations.	9/30/2020	25%

TARGET ZERO PERFORMANCE

	Current Quarter	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	0	5	N/A
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

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

- Occupational Safety and Industrial Hygiene accomplishments:
 - o Performed Senior Supervisory Watch at the Plutonium Finishing Plant (PFP) Closure Project.
 - o Received correspondence from the U.S. Department of Energy (DOE), Richland Operations Office (RL), Office of Inspector General (OIG) Preliminary Draft – Response, Correspondence No. 1904595A, and provided comment on the OIG audit on “Respiratory Equipment Maintenance at the Hanford Site.”
 - o Performed a technical authority review of the 324 Building Project Industrial Hygiene Exposure Assessment for heat stress controls for micropile grouting activities.
 - o Performed a technical authority review of the Reduction and Oxidation (REDOX) Final Beryllium Characterization Report.
 - o Performed functional subject matter expert (SME) review of the Integrated Disposal Facility Infrastructure Leachate Tank Covers Statement of Work (SOW).
 - o Provided project requested technical authority oversight of fieldwork activities at the Central Plateau Risk Management (CPRM) Project.
 - o Completed Industrial Hygiene Program Improvement Independent Assessment, SHS&Q-2020-IA-24513.
 - o Kicked-off the CHPRC Winter Safety Campaign, #chprc-winter-safety-2019.
 - o Completed revision to PRC-PRO-SH-121, Heat Stress Control, to incorporate lessons learned from the previous heat stress season.
 - o Updated Responsible Silica Competent Person computer-based training (CBT) content.
 - o Completed evaluation of the CHPRC Worker Safety and Health Program Implementation, SHS&Q-2020-WSA-21260.
 - o Updated annual Asbestos Negative Exposure Assessments to assist project work scope.
 - o Developed and published PRC-MP-SH-54469, Industrial Hygiene Program Management Plan.
 - o Completed assessment on the Evaluation of Machine Guarding in Maintenance Shops, SHS&Q-2020-WSA-25410.

- Radiological Control accomplishments:
 - o Completed WSA related to 10 Code of Federal Regulations (CFR) 835, Subpart F, and Safety Management Program lines of inquiry 7-1-2 through 7-1-4 as well as radiological work planning at all CHPRC projects.
 - o Completed mock oral boards for Radiological Control Technician trainees.
 - o Presented company second quarter as low as reasonably achievable (ALARA) meeting.
 - o Performed field surveys with Bladewerx Alpha Survey Meter.
 - o Conducted monthly RL 'Stoplight' meeting to discuss condition reports written during the past month.
 - o Conducted monthly radiological control managers' presentations to RL.
 - o Convened radiological oversight and assistance committee visits.
 - o Provided program and project support to contamination control issues at the 324 Building, including participation in discovering solutions to contamination control issues and observations and resumption team activities.
 - o Initiated benchmarking request through the Energy Facility Contractors Group to assist with the 324 Building issues.
 - o Participated in Hanford Radiological Control Forum working group for verification surveys. Finalized sitewide position paper.
 - o Revised technical basis document for workplace air monitoring (CDMP-0011).
 - o Approved new technical evaluations for PFP, RRMP, and CPRM.
 - o Completed Smear, Air, Lapel Tool testing.
 - o Performed new alpha/beta CAM testing and evaluation.
 - o Completed installation and implementation of new Thermo iPCM at the K Basin Operations (KBO) Project.
 - o Provided radiological engineering support for the Central Radiological Count Facility.
 - o Hosted bioassay informational meeting at PFP, an opportunity for workers to gain a better understanding of the process used at Hanford.
- Nuclear Operations Support & Compliance accomplishments:
 - o Correspondence transmitted to RL:
 - Letter, CHPRC-1904126, "Transmittal of the *Retrieval Special Packaging Authorization*, HNF-63008, Revision 0," dated October 1, 2019.
 - Letter, CHPRC-1904413, "Transmittal of the 2019 Annual Update of the 200 Area Interim Storage Area Safety Basis and the Unreviewed Safety Question Determinations Summary for the 200 Area Interim Storage Area," dated October 22, 2019.
 - Letter, CHPRC-1903203.1, "Transmittal of the Comment Incorporated *2019 Annual Update to the Documented Safety Analysis for the 216-Z-9 Waste Storage Crib Facility*, HNF-58818, Revision 3; and the *Technical Safety Requirements for the 216-Z-9 Waste Storage Crib Facility*, HNF-59125, Revision 3," dated October 22, 2019.
 - Letter, CHPRC-1903924.1, "Transmittal of the *Comment Incorporated Unreviewed Safety Question Process*, PRC-PRO-NS-062, Revision 4, Change 1," dated October 23, 2019.
 - Letter, CHPRC-1904420, "Transmittal of the Fiscal Year 2020 Annual Update of the 324 Building Safety Basis and the Unreviewed Safety Question Determinations Summary," dated October 23, 2019.
 - Letter, CHPRC-1904747, "Transmittal of the *Management of Cesium and Strontium Capsules Project (W-135) Safety Design Strategy*, CHPRC-02236, Revision 2," to RL for Review and Approval, dated November 19, 2019.
 - Letter, CHPRC-1905187, "Transmittal of the *Waste Encapsulation and Storage Facility Documented Safety Analysis*, HNF-8758, Revision 13, and the *Waste Encapsulation and Storage Facility Technical Safety Requirements*, HNF-8759, Revision 13, to Incorporate the Management of the Cesium and Strontium Capsules Project (W-135) Modifications and Capsule Transfer Activities," dated December 16, 2019.

- Letter, CHPRC-1903219.1, “Transmittal of the *105KW Facility Documented Safety Analysis*, PRC-STP-00946, Revision 2; and the *105KW Facility Technical Safety Requirements*, PRC-STP-00992, Revision 2,” dated December 16, 2019.
- Letter, CHPRC-1901207A R2, “Transmittal of the *Comment Incorporated RADIDOSE Dispersion Modeling Protocol*, CHPRC-04204, Revision 0, for Approval,” dated December 17, 2019.
- Letter, CHPRC-1805112.1, “Transmittal of the *Hanford Sitewide Transportation Safety Document*, DOE/RL-2001-36, Revision 3,” dated December 18, 2019.
- o Correspondence received from RL:
 - Surveillance DOE-ASMT-2020-2612, Functional Area Performance Evaluation of Nuclear Safety (August 2019).
 - Letter, 20-NSD-0001_RL, dated November 4, 2019, Approval of the Retrieval Special Packaging Authorization (R-SPA), HNF-63008, Revision 0.
 - Surveillance DOE-ASMT-2020-2613, Functional Area Performance Evaluation of Nuclear Safety (September 2019).
 - Surveillance DOE-ASMT-2020-2609, Functional Area Performance Evaluation of Transportation Safety (August 2019).
 - Letter, 19-NSD-0047_RL, “Transmittal of the *Preliminary Documented Safety Analysis (PDSA) for the Capsule Storage Area (CSA)*, CHPRC-03744, Revision 0”, for RL Review and Approval, dated November 20, 2019.
 - Letter, 19-NSD-0044_RL, “Approval of the *Annual Update to the 324 Building Basis for Interim Operation*, CHPRC-02979, Revision 4; Addendum to the *324 Building Basis for Interim Operation for Stabilization*, CHPRC-02983, Revision 3; *Remote Soil Excavation Addendum to the 324 Building Basis Interim Operation*, CHPRC-03197, Revision 1; and *324 Building Technical Safety Requirements*, CHPRC-02980, Revision 3,” dated November 25, 2019.
 - Letter, 20-NSD-0004_RL, “Approval of HNF-58818, *Documented Safety Analysis for the 216-Z-9 Waste Storage Crib Facility*, Rev. 3 and HNF-59125, *216-Z-9 Waste Storage Crib Facility Technical Safety Requirements*,” Revision 3, dated December 2, 2019.
 - Letter, 20-NSD-0008_RL, 2019, “Transmittal of the *T-Plant Documented Safety Analysis*, HNF-63063, Revision 0; the *T Plant Technical Safety Requirements*, HNF-63064, Revision 0; and the Unreviewed Safety Question Determinations Summary,” dated December 13.
 - Surveillance DOE-ASMT-2020-1709, Functional Area Performance Evaluation of Nuclear Safety (October 2019).
 - Letter, 20-NSD-0005_RL, “Approval of PRC-PRO-NS-062, *Unreviewed Safety Question Process*, Revision 4, Change 1”, dated December 20, 2019.
- Contractor Assurance Regulatory Reporting accomplishments:
 - o 813 Condition Reports (CRs) were screened:
 - One significant issue identified.
 - Nine adverse issue identified.
 - 390 Track Until Fixed issues identified.
 - 195 Trend Only items identified.
 - 267 Opportunities for Improvement (OFI) items identified.
 - 11 Screened Out.
 - o 804 CRs administratively closed.
 - o 1,098 CR actions administratively closed.
 - o Provided Course Number 600082, *CHPRC Responsible Manager Training, Issues Management*, to CHPRC personnel.
 - o Provided full time support to PFP Issues Management and Occurrence Reporting activities.
 - o Provided Occurrence Reporting support to the RRMP.

- o Provided support to RRMP on Apparent Cause Evaluation for EM-RL--CPRC-324FAC-2019-0006, *Contamination Identified on Employee's Modesty Clothing*.
- o Submitted Occurrence Reporting & Processing System final report reflecting causal evaluation results for EM-RL--CPRC-PFP-2019-0001, *A Worker Received a Mild Concussion After Being Struck in the Nose/Forehead by a Spool of Muletape*; EM-RL--CPRC-324FAC-2019-0005, *An Uncontrolled Electrical Hazard Existed When an Electrical Rheostat was Damaged*, and EM-RL--CPRC-324FAC-2019-0006, *Contamination Identified on Employee's Modesty Clothing*.
- o Completed a conference call with the Defense Nuclear Facilities Safety Board (DNFSB) specific to Technical Safety Requirement (TSR) implementation.
- o Provided 60 documents in response to DNFSB requests for information.
- o Coordinated review and comment resolution of the Weekly Hanford Site Resident Inspector Reports.
- o Coordinated orientation visit for DNFSB member Jason Flora.
- o Provided a Condition Reporting and Resolution System (CRRS) overview session for the Fire Protection (FP) organization.
- o Eight internal lessons learned were submitted in OPEXShare:
 - 2019-WFMP-0007, *An Assumption is Not a Sure Bet - Forklift Tines Bent After Insufficient Hazard Evaluation*
 - 2019-KBO-0008, *NEMA vs UL Breaker Interrupting Ratings - Understand Equipment Ratings before Determining Adequacy for Use*
 - 2019-CPRM-0002, *Unabsorbed Liquids in Totes Discovered at Disposal Facility*
 - 2019-KBO-0009, *Deburring Wheel Catches Component Causing Injury*
 - 2019-PTS-0001, *Unloading a Material Handler with Unsecured Sliding Components Resulted in Injuries*
 - 2019-W&FMP-0008, *Consequences of DOE-0359 May Be New To Workers Coming From Commercial Workforces*
 - 2019-RRMP-0003, *Multiple Factors Can Contribute to Contamination Passing Through or Bypassing PPE to Personnel*
 - 2019-SGRP-0004, *Hazardous Energy Must Be Controlled Following the Approved Process – Inspect Generators Brought Onsite by Contractors Prior to Use.*
- o One external Just-In-Time Report was submitted in OPEXShare: 2019-SGRP-0003, *Unusual Generator Configuration Presented Electrical Hazard*.
- o OPEXShare User Briefings were given to Waste and Fuels Management Project (W&FMP) personnel in the W-135 Engineering and Solid Waste Operations Complex engineering organizations.
- o Provided support in generation of core information in support of CHPRC project and program transition books.
- o Published the monthly Contractor Assurance System Summary Reports.
- Performance Oversight, Assessment, and Quality Assurance accomplishments:
 - o Completed in-field activities for 10 CFR 835 triennial assessment of Subpart H, Radiological Records. The assessment was conducted from September through December. The final assessment report will be issued January 2020.
 - o Provided specific mentoring and feedback to assessors and responsible managers that conducted management assessments. Feedback was provided to help improve the quality, clarity, and readability of future reports. Provided specific assessment mentoring to KBO, CPRM, Soil and Groundwater Remediation Project (S&GRP), RRMP, W&FMP, Prime Contract and Project Integration (PC&PI), Business Services, Resource Management & Strategic Integration (RM&SI), and SHS&Q organizations.
 - o Completed SHS&Q-2019-SURV-23990, *FY 2020 Required Assessment Planning*, which verifies that the contractually required assessments for FY 2020 have been scheduled in the Integrated Evaluation Plan (IEP).

- o Completed SHS&Q-2019-MA-24279, *Management Assessment Report Phase 2 – Safe Operations*.
- o Completed SHS&Q-2019-IA-24513, *IH Program Improvements Independent Assessment*.
- FP accomplishments:
 - o Completed Waste Encapsulation and Storage Facility (WESF) Fire Hazards Analysis update.
 - o Completed 28 planned tests of the Central Waste Complex water supply loop to determine the condition of the system and issued a summary report.
 - o Responded to an RL request regarding facility fire system deactivation.
 - o Provided input on a 400 Area Waste Management Unit permit in support of the Fast Flux Test Facility (FFTF) fire alarm system deactivation.
 - o Completed quarterly TSR combustible loading surveillance of the 324 Building.
 - o Completed TSR FP assessments of several T Plant locations, Canister Storage Building, and REDOX.
 - o Completed Facility Fire Protection Assessment for 2754W, the 6269 Building, and the B Plant complex.
 - o Completed Maintenance and Storage Facility (MASF) permit walk down.
 - o Completed the Integrated Disposal Facility (IDF) sprinkler design review.
 - o Developed training material on FP requirements for program and project personnel.
 - o Developed framework for transitional facility Fire Hazard Analysis.
 - o Performed numerous work package reviews and issued Hanford Fire Marshal permits in support of planned activities.
 - o Two additional CHPRC FP engineers successfully passed their oral boards and have been appointed as Deputy Fire Marshals for the Hanford Site.
- SHS&Q Conduct of Work Mentor Activities:
 - o Provided feedback regarding positive behaviors and actions as well as opportunities for improvement in work planning and performance to project management.
 - o Provided chief operating officer, SHS&Q vice president and lead conduct of work mentor feedback of mentoring observations.
 - o Completed RAD Worker II training in support of the project to enable unescorted access to the various work fronts.

Environmental Program and Strategic Planning (EP&SP)

- **Environmental Protection**
 - o Provided SME input for REDOX design stack area calculations in support of a proposal to increase effluent flow rates and potentially modify stack flow rate measurement processes.
 - o Started discussions with CPRM and RL on the use and approvals needed for use of a 224B temporary exhauster.
 - o Supported S&GRP Environmental submittal of a Class 2 permit modification to update Attachment 8 to the Training and Inspection Plan for groundwater monitoring wells.
 - o Participated in the IDF environmental review of Permit Condition III.11.B.5.e.iv concerning the use of a flow meter to compare the amount of leachate pumped versus the amount of leachate collected to verify proper function of leachate collection and sump pumps with each use.
 - o Reviewed Perma-Fix Northwest response to the Washington State Department of Ecology (Ecology's) disagreements on the proposed FFTF treatability studies for the 19 drums of sodium waste via a "GeoMelt" process.
 - o Provided support to the following inspection activities:
 - Ecology (five inspections)
 - The Washington State Department of Health (three inspections)
 - The city of Richland (one inspection)

- **Environmental Compliance and Quality Assurance**
 - o Assessment status
 - Completed surveillance of Radioactive Waste Management on October 9, 2019, that resulted in no findings and six OFIs.
 - Completed surveillance of PUREX and waste information data system sites surveillances, on October 14, 2019, that resulted in one finding and five OFIs.
 - Completed surveillance of environmental review of work controlling documents on December 16, 2019, that resulted in six findings and 13 OFIs.

- **Demonstrate active leadership and progress toward obtaining new Resource Conservation and Recovery Act (RCRA) Permit for the Hanford Site**
 - o Facilitated and participated in the following meetings:
 - Weekly permit project management team meetings.
 - Weekly permit meeting for Hanford contractors.
 - Weekly schedule strategy discussions with Ecology.
 - Biweekly schedule status meetings with RL, DOE Office of River Protection (ORP), Ecology, and contractors.
 - Monthly Tier 2 meeting with RL, ORP, and Ecology senior management.
 - o Maintained the Hanford Site RCRA permit schedule to reflect progress against the plan.
 - Provided a detailed monthly schedule report and analysis for progress on the permit to Ecology, RL, ORP, and the contractors.
 - Provided tracking and status of open issues that are preventing progression of the permit.
 - o Provided fulltime regulatory expertise and project management support.

- **Quality and timeliness of key documents submitted**
 - o From October through December 2019, 71 environmental documents supporting various CHPRC projects were completed through EP&SP Publication Services, established to provide a systematic process for performing technical editing and formatting of environmental documents.

Business Services

- **Supply Chain/Acquisitions:**
 - o The RL Procurement Division conducted a file review regarding the use and determination of North American Industrial Classification System codes in the Asset Suite system and proper size standard determinations. CHPRC developed a corrective action plan for submittal to RL. All corrective actions are planned for completion by February 2020.
 - o Completed submission of the acquisition consent packages for modification to the scope of the CHPRC subcontract to fabricate equipment for the W-135 Management of Cesium and Strontium Capsules Project. The modifications were necessary due to CHPRC-initiated design enhancements made to transfer equipment because of the performance of mockup testing and training at the MASF. Two separate consent packages were transmitted to RL on November 18, 2019, for their review and approval.
 - o Issued request for Expression of Interest seeking to identify prospective companies that may be interested in stabilizing structures 216-Z-2 (crib), 216-Z-9 (crib), and 241-Z-361 9 (tank) that have recently been determined to be at risk of collapse or failure by a structural assessment. Responses are due January 9, 2020.
 - o Held procurement discussions with the 324 Building Disposition Project for conducting acquisition planning for demolition tools that would be used for size reduction and removal of waste retrieval tools during remediation operations. Two unique tools were discussed: a water jet-type cutting tool and an abrasive-type cutting tool. Both tools would have a magnetic device to lift and loadout parts from its operations location.

- o Held procurement discussions with the S&GRP to plan the acquisition strategy for construction services to install a powered air stripper and ion exchange column that will be used to increase the capacity of the 200 West Pump and Treat Facility.
- o Completed the development of a new technical evaluation form to produce more standard technical evaluations of competitive proposals.
- o Processed the extension of the mentor-protégé agreement between CHPRC and Polestar Technical Services.
- o Revised Request for Proposal templates with updated small business set-aside language that aligns with current regulations.
- o Developed an acquisition strategy and defined criteria for industrial hygiene technicians that support CHPRC Davis-Bacon/construction projects.
- o Received a rebate for purchase awards made under the Supply Chain Management Center (SCMC) Electrical Supplies agreement. CHPRC's total rebate was approximately \$3K.
- o Issued a letter to Stericycle to address impacts from an Ecology's violation at Stericycle's facility to determine whether work would be able to continue at the location.
- o Issued a sources sought/expression of interest for roofing the Waste Receiving and Processing Facility. The roof is beyond its 25-year life cycle.
- o Commenced with developing a contract specialist training program with the SCMC. The SCMC has been chartered with developing a basic procurement training program for prime contractor procurement personnel. The program will be formatted similar to the Defense Acquisition University format used by the federal government. The SCMC is developing training standards and CHPRC is providing input to those standards.
- o Assisted the SCMC with the identification of qualified independent auditing firms that they may consider for the performance of accounting system adequacy reviews.
- o CHPRC surpassed the revenue objectives of the agreement with Babcock Services, Inc.
- o Issued a letter of support to American Electric Inc. (AEI) for its submission of a Voluntary Protection Program application to RL for consideration. AEI is a small business subcontractor used by CHPRC for electrical construction work.
- o Conducted training for contract specialists on the use of the eSourcing tool that permits electronic bidding for procurement actions. The SCMC is implementing a new cloud-based system.
- o Issued Amendment Number 3, Request for Best and Final Offer (BAFO) for the Building Trades Support, including clarification for consumable materials handling and its impact on pricing. BAFOs are due January 6, 2020.
- o Completed the pre-award audit of a proposal for providing unique welding equipment in support of the W-135 Project.
- o **Procurement:**
 - o During the first quarter of fiscal year (FY) 2020, awarded/amended 610 contracts with a total value of \$11.1 million. Additionally, awarded 713 new material purchase orders (PO) valued at \$12.8 million to support ongoing project objectives.
 - o At the end of 135 months of the CHPRC project, procurement volume has been significant: \$3.0 billion in contract activity has been recorded with approximately 56.6 percent, or \$1.7 billion, in awards to small businesses. These awards include 8,825 contract releases, 30,561 POs, and 341,453 PCard transactions.

- o Major contract awards:

Contract/Release	Award Date	Awarded To	Title	Contract Type	Value (\$M)
48767-11	10/2/2019	Cascade Drilling, LP	The installation of two dual purpose wells - 100-KR-4 FY20	FFP	\$ 0.26
55747-14	10/7/2019	Apollo Sheet Metal Inc. dba Apollo Mechanical Contractors	Install GFMRS, SFMRS, and VPCS at 105-KW Basin (GC & Option 2)	FFP	\$ 1.77
55705-8	10/15/2019	Intermech, Inc.	Project W-135 Capsule Storage Area (CSA) Construction	FFP	\$ 5.55
54177-92	10/30/2019	Intera Inc.	200-PO-1 Modeling and Document Support	T&M	\$ 0.35
71806	11/6/2019	DGR Grant Construction Inc.	IDF Infrastructure Upgrades-Balance of Plant	FFP	\$ 4.71
64033-4	12/4/2019	Yellow Jacket Drilling Services, Inc.	Installation Of 8 Mon. Wells And 2 Ext. Wells in 100-HR3-3 FY20	FFU	\$ 9.05
48772-22	12/16/2019	Stillwater, LLC	Drilling Two Extraction Wells in 200-ZP-1 OU, FY20	FFU	\$ 7.98

- o **Facilities & Property Management:**

- o Kicked off the FY2020 Inventory Campaign. CHPRC has 3,750 personal property items to locate. It is currently 62 percent complete.

- o **Finance:**

- o Continuing with the series of RL finance/contracting officer meetings to discuss and align topics identified in the CHPRC Incurred Cost Audit Corrective Action Plan for FY2009-2015 and RL Finance Surveillances.
- o October through December month ends were completed with no cost suspensions.
- o Submitted the FY2019 fourth quarter reconciliation of RL's Accounts Payable – Accrued Liabilities account (#2110).
- o Continued providing support for the FY2017 Audit. Preliminary report indicates zero questioned costs.
- o Continued providing support for the FY2018 and FY2019 quarter 1 and quarter 2 invoice assessments.
- o Provided support for Accrual Assessment initiated by RL Finance.

- o **Information Management:**

- o Processed 108,187 electronic records during the first quarter of FY2020 into the Integrated Document Management System.

Prime Contract and Project Integration (PC&PI)

- **Project Management/Compliance Assessments (PM/CA):**

- o Sponsored a presentation of the CHPRC two-day class, course #600217, *Earned Value Management System Training*, to approximately 30 members of the CHPRC team on November 19 and 20, 2019. An independent Earned Value Management (EVM) SME was brought in to teach the class to provide the course attendees the benefit of a DOE non-Hanford and non-DOE experience in the implementation of EVM. This presentation was a part of CHPRC's ongoing efforts to train and qualify CHPRC team members in the implementation of EVM as a tool to aid in achieving project success.
- o Tested and certified two members of the CHPRC team as meeting the requirements of CHPRC course # 600226, *Earned Value Management Qualification Card*, for managers.

- o Worked with CHPRC executive leadership and W&FMP to establish a CHPRC Project Review Board (PRB). The board is tasked with assessing the readiness of the W-135 Project for the CHPRC submittal for DOE approval of DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, Critical Decision (CD)-2, *Approve Performance Baseline*, and CD-3, *Approve Start of Construction/Execution*. This effort included issuing a revision to PRC-CHRT-PM-40249, *Project Review Board Charter*, to allow the W-135 Project PRB to use the new DOE Critical Decision Approval Tool (CDAT), as directed by RL. The prior revision of PRC-CHRT-PM-40249 only addressed the use of the Project Definition Rating Index (PDRI) tool. Both the PDRI and the CDAT were developed by DOE to assist with assessment of the project's readiness for achieving each of the four DOE Order 413.3B CD levels. DOE developed the CDAT to replace the DOE PDRI. As DOE has not updated DOE O 413.3B to reflect the CDAT, PRC-CHRT-PM-40249 was revised to permit use of the PDRI or CDAT as requested by RL. The PRB assessment is planned to be performed in February 2020.
- o Participated in a CHPRC capital determination Process Improvement Team tasked with improving the accuracy of CHPRC capital funding determinations in response to RL feedback. At the kickoff meeting, the team agreed that the lack of internal CHPRC capital determination procedures and guides and the need for more rigor in addressing funding types in the annual CHPRC Performance Measurement Baseline (PMB) update were major contributors to RL's concerns. To address the gaps, PM/CA developed the following draft documentation and handed them to CHPRC Finance for consideration:
 - Line Item and General Plant Project (GPP) and Capital Equipment Not Related to Construction (CENTRC) and Operating Expense (OE) Project activities charging summaries by type of funding (expense or capital) based on where they are in the lifecycle.
 - An abbreviated basic criteria for CHPRC capital determinations intended to facilitate increasing knowledge in the field on capital determination requirements.
 - A draft of a proposed formal CHPRC capital determination request form (CHPRC currently does not use a formal form to document requests for capital determinations) to be owned by CHPRC Finance. It is intended to improve the documentation of capital determination requests, require engagement by the responsible Control Account Manager/project manager, and to document basic information needed to make an accurate capital determination.
 - A draft of a proposed new CHPRC capital determination procedure to be owned by CHPRC Finance and a proposed revision to section 2.7 *Capital Requirements*, of PRC-MP-FM-52693, *Financial Management Plan*, to acknowledge the proposed new procedure. The intent is to provide an easily understood document that demonstrates capital determination requirements and places the form in an easy-to-access location that would be useful to the project and Finance.
- o Facilitated the development of the PC&PI FY2020 integrated assessment plan and completion of open actions in CRRS assigned to PC&PI. PC&PI's plan reflects the performance of 12 self-assessments in FY2020, with the first self-assessments scheduled to be complete in spring 2020. As of the end of December 2019, PC&PI had three open CRRS actions with none of them delinquent.
- o Continued to support CHPRC PMB change control by supporting the project's development of Baseline Change Requests (BCRs), providing review and input on proposed BCRs, and serving on the CHPRC Change Control Board when required.
- o Continued to serve as the PC&PI Transition Planning Lead. This included being responsible for coordination of PC&PI specific data and providing CHPRC crosscutting PMB planning and performance information for the draft CHPRC Transition Briefing Book.

- **Prime Contract Compliance (PCC):**
 - October through December, PCC received and processed 14 contract modifications (701-703, 705-706, 708, 715, 721-722, and 724-728) from RL.
 - The Correspondence Review Team received and determined the distribution and assignment for 161 incoming letters/documents. PCC reviewed 98 outgoing correspondence packages.
 - Submitted CHPRC-1904130 – “Performance Measure Completion Request for Contracting Officer Acceptance and Payment per PRC Clause B.8(C) – RL-041, Fiscal Year 2019, PM-41-1-19.”
 - Submitted CHPRC-1904079AR3 – “Fiscal Year 2020 Annual Performance Measurement Baseline and Work Authorization Conditions.”
 - Submitted CHPRC-1904767 – “Notification of Completion of Hanford Federal Facility Agreement and Consent Order Milestone M-016-176, Complete Sludge Removal from 105KW Fuel Storage Basin.”
 - Submitted CHPRC-1905237 – “Notification of Completion of Hanford Federal Facility Agreement and Consent Order, Milestone M-016-178, Initiate Deactivation of 105KW Fuel Storage Basin.”
 - Submitted CHPRC-19085232 – “Notification of Completion of Hanford Federal Facility Agreement and Consent Order, Milestone M-062-57A, Submit Permit Mod to Add Secondary Waste Disposal at IDF.”
- **Project Integration:**
 - Project Support, Systems Integration & Schedule Integration
 - Implemented BCRs to incorporate authorized FY2020 planning into the PMB.
 - Finalized FY2019 annual project management baseline review comment record disposition comments and submitted to RL.
 - Provided CHPRC FY2019 planned subcontracting information to CHPRC Procurement to support the small business plan update and annual submittal to RL.
 - 000 Project EVM Support and Reporting:
 - Issued three months of CHPRC Monthly Performance Reports to RL.
 - Submitted the September, October, and November Gold Metrics to RL.
 - Completed safety hour reporting each month.
 - Compiled integrated project team and monthly project review packages for September, October, and November.
- **Project Support Services:**
 - Risk Management:
 - Updated and finalized potential risks for FY2020 work scope. CHPRC-1904079AR2 – Contract Number DE-AC06-08RL14788 – “CHPRC Fiscal Year 2020 Annual Risk Analysis Results” documented that effort and was submitted to RL.
 - Closed out FY2019 risk database and risk registers. Implemented FY2020 risk database.
 - Conducted testing on new risk register database for potential future use.
 - Performed risk analysis for the upcoming W-135 Project, WESF, DOE O 413.3B Line Item upcoming submittal for DOE approval of Critical Decisions 2 and 3.
 - Conducted monthly assessments of the status of key project risks and risk impacts associated with BCRs.
 - Estimating and Program Support (E&PS)
 - Revised PRC-GD-PC-40434, “Estimating Guide,” to address corrective actions required to close out PC&PI-2016-MA-16746 – “Estimating System and Process Evaluation”.
 - Reviewed and updated 13 E&PS desktop instructions and templates.

- Conducted E&PS group training exercise regarding desktop instructions for creating supporting documentation and developed a group training exercise for the desktop instruction for performing peer reviews.
- Reviewed all October, November, and December BCRs prior to implementation.
- Provided support to convert the FY2020 cost estimating input sheet basis of estimate and work breakdown structure (WBS) documents to new standardized formats.
- Provided support for the following rough orders of magnitude:
 - RL-0040 PW-1/3/6 (Group 1 and Group 2), 200-PW-3 Operable Unit (Cesium sites), and 200-CW-5 (Z ditches).
 - RL-0040 Argon Call Out System.
 - RL-0041 100-K-99 Additional Sampling Estimate.
- Provided RL-0041 Fair Cost Estimate support for:
 - Off-site demonstration testing to mix/blend simulated 105KW Basin debris and filler materials inside vertical pipe casings using Auguring.
- Provided estimating support for the following FY2020 Inter-Entity Work Orders:
 - PNNL 321039 Modification 6 - ERDF Support.
 - PNNL 264005 Modification 8 - Direct Project Support and Technical Support, Transportation, Treatment and Disposal Services FY2020.
 - PNNL- Development of PNNL Special Packaging Authorization Documents Modification: Triennial Hanford Sitewide Transportation Safety Document Assessment.
 - Oak Ridge RF2072 Modification 3 - Support to Oak Ridge for Environmental Management Disposal Facility (EMDF) DOE Order 435 Documentation Review.
 - Puget Sound Naval Shipyard RF2083 - Level of Effort Support for Calendar Year 2020.
 - Provided support to Zeno Power Systems for Sr-90 Capsule Shielding Validation.

Resource Management and Strategic Integration (RM&SI)

- **Human Resources (HR):**

- o Implemented new online Family Medical Leave Act (FMLA)/Washington State Paid Family and Medical Leave (PFML) Leave of Absence Notification on Employee Self Service.
- o Provided demographic data for CHPRC, including head count total, break down by age range, highest education level, common occupational classification system code, gender and ethnic group for Procurement Support Division (RL POC).
- o Conducted Washington State Paid Family and Medical Leave (PFML) all-manager briefings.
- o Created new Time Information System code to replace “FLP” for use when an employee is on FMLA or PFML and wants to receive a supplemental benefit during the leave.
- o Updated and published PRC-PRO-HR-54419, RM&SI Requirements Management.
- o Revised and published PRO-HR-041, Company Service Regulations, to not adjust the continuity of service date for employees that use an approved FMLA leave.
- o PFMLA premium withholdings announcement went out to represented employees and managers
- o Completed 2019 performance reviews.

- **Staffing and Development:**

- o Processed 55 new hires.
- o Revised the new hire orientation presentation to streamline content and provide better scripting to ensure consistent delivery.
- o Moved orientation location to the fourth floor of the Federal Building, Room 420, to better accommodate new hire orientations.
- o Updated communications to new hires to include more information and more contacts so that they are better prepared when starting with CHPRC.

- o Created a more useful new hire folder that provides easy access to important site, company, and project information.
 - o Created a Hiring Manager Toolbox that provides necessary tools to help managers successfully move through the hiring process.
 - o Transitioned offer workup to recruiters using offer development tool.
 - o Developed and implemented a new résumé and interview evaluation process, effective January 1, 2020. Updated procedure PRC-PRO-HR-021, “Staffing”, to align with the new process.
 - o Attended seven career fairs: Washington State University-Tri-Cities, Tri-Cities Diversity Summit, Building Bridges and Breaking Down Barriers, Connect Tri-Cities, Columbia Basin Veterans Stand Down and Expo, Congressman Newhouse Veterans Resource/Career Fair, and High School Expo Week.
 - o Conducted New Manager Overview training on December 10-11, 2019.
 - o Conducted Resume Workshop on October 16, 2019, and September 11, 2019.
 - o Conducted Communicating for Leadership Success on October 9, 2019.
 - o Conducted Art of Interviewing on October 23, 2019, and November 19, 2019.
 - o Updated co-op rate structure and implemented associated pay actions.
 - o Completed Position-to-Market analysis and Compensation Increase Plan and submitted to RL.
 - o Conducted internal/external competitive compensation analysis and associated pay actions.
 - o Developed recommendations and conducted analyses in support of Office of Federal Contract and Compliance Program audit.
 - o Secured third-party contract for Equal Employment Opportunity and compensation regression analysis
 - o Conducted Fair Labor Standards Act threshold review.
 - o Hired development specialist, staffing co-op, and compensation analyst.
- **Labor Relations (LR):**
 - o The following is a list of grievances in the arbitration process and the status:
 - Arbitrations closed:
 - o PRC-019-009 – Continuity of Service Date.
 - Scheduled arbitrations:
 - PRC-017-042 – union grieving company’s closure of the Plastic Shop at PFP. Status: Arbitration continuation scheduled for to be determined (TBD).
 - PRC-018-001 – union claiming jurisdiction of demobilization activities on Davis-Bacon work site. Status: Arbitration was rescheduled for February 5, 2020; company has requested that union put similar grievances (PRC-018-024 and PRC-018-039) in abeyance pending outcome of this arbitration.
 - PRC-018-021 – applying fixative. Status: Arbitration scheduled for June 24, 2020.
 - PRC-019-003 – Excessive Discipline. Status: Scheduled April 15, 2020.
 - PRC-019-004 – Excessive Discipline. Status: Scheduled April 29, 2020.
 - The following grievance has been requested by Hanford Atomic Metal Trades Council to move to arbitration but pending arbitration date:
 - PRC-018-011 and PRC-018-026 – Tumbleweed Removal; TBD.
- **Interface Management:**
 - o Submitted the final CHPRC FY2020 Usage Based Services forecast to Mission Support Alliance LLC, (MSA) on December 9, 2019.
 - o Approved Service Level Agreement with Wastren; transmitted on October 3, 2019.
 - o Completed TOC-AIA-PRC-00076, Administrative Interface Agreement for TSCR Waste Information Data System Site Modifications and Project Interfaces, October 10, 2019.

- o Completed crosswalk tables to analyze CHPRC versus Hanford Mission Essential Services Contract site structures and waste site ownership discrepancies in support of Central Plateau Cleanup Contract (CPCC) pre-transition activities.
 - o Established an Inter-Contractor Work Order (ICWO-SOW) authorization with Washington River Protection Solutions, LLC (WRPS) allowing our CPRM teams at PUREX and B Plant to access the WRPS AZ Decontamination Trailer, as required, in the event of a decontamination event. The work order establishes access and reimbursement of costs related to consumables and decontamination recovery actions necessary to return the decontamination trailer to its original condition.
 - o Facilitated an ICWO-SOW arrangement with WRPS that established a work authorization for Waste Treatment and Immobilization Plant via WRPS to obtain CHPRC onboard exempt SMEs for Whiting Crane technical repair consultations.
 - o Completed three Position Papers related to J.13 structure transfer requests from W&FMP. Position papers were provided to MSA Interface Management in November as part of the intercontractor issue resolution process.
- **Strategic Management:**
 - o Updated and issued PRC-STD-PM-53101 - Productivity Measurement, Analysis and Reporting as of December 30, 2019. This enabled CR-2019-1832 number 1 to be closed on schedule on December 31, 2019.
 - o Completed CR-2019-1832 number 2 – assignment to RM&SI, and the scheduling annual management assessment within the IEP
 - o Site Central Communications Project: Meeting with other Hanford contractors and RL’s deputy manager provided clarification on product input and timing. The initial report was submitted December 19, 2019.
 - o Completed FY2020 Integrated Priority List (IPL) update with RL for Revision 1 of the AMRP to include updated planning values, priority changes, and potential CR impacts.
 - o Revised budget planning assumptions and CHPRC/CPCC WBS crosswalk based on final updates to the IPL and September project management baseline changes in support of pre-transition to the CPCC.

Project Technical Services (PTS):

- **Training and Procedures**
 - o Teamed with MSA personnel to identify and correct student tuition charges impacted by fiscal year tuition changes. Met with budget analysts and developed a way to reduce the likelihood of this issue in the future.
 - o Teamed with contract Buyer’s Technical Representatives to develop training templates, reports, and equivalencies for four new subcontractor projects.
 - o Worked with Contracts and program SME to bring a new Facility Skills Workshop course to CHPRC employees. The course will be a good resource for anyone who facilitates meetings, such as event investigations, pre-job briefings, and job hazard analyses.
 - o Developed, implemented, and assigned the new General Hazards Analysis (GHA) and Craft Hazards Analysis (CHA) CBT courses to all CHPRC and subcontractor employees’ training plans. Delivery by CBT will ensure the annually required task is completed and recorded.
 - o Completed the removal of FLASH coding from all CHPRC CBT courses. This completes a commitment to RL to remove the antiquated coding that is no longer supported by the proprietor and is increasingly the cause of incompatibilities with other computer programs.
- **Operations Program**
 - o Reviewed new props for lockout/tagout (LO/TO) training at Volpentest HAMMER Federal Training Center (HAMMER) in Richland and provided feedback to the instructor.

- o Supported the LO/TO site subcommittee to draft Tagout Authorization Form instructions.
 - o Performed factual accuracy review for environmental program assessment interface with work control program
 - o Conducted Responsible Manager Training course.
- Readiness and Preparedness
 - o The Emergency Preparedness (EP) program supported the implementation of four full-up drills and six table top drills across the project. Supported the implementation of the Hanford Emergency Operations Center Functional Exercise.
 - o Closed out the FY2019 drill plan. Issued project drill plans for FY2020 reflecting a total of 84 planned drills across the project.
 - o The Executive Safety Review Board (ESRB) was presented with a semi-annual health status of the EP program, where the program remained as yellow overall with noted improvements on multiple fronts.
 - o Completed Assessment (PTS-2020-WSA-18589) on Emergency Preparedness Training Documentation and Materials Review resulting in the update to 42 Training Activity Sheets to ensure alignment with requirements and reflect staffing changes.
 - o Submitted final closure package to RL for corrective action plan from the 105KW exercise in 2018.

Communications

- Supported RL in organizing and hosting a Hanford Site visit featuring Energy Secretary Perry, local elected leaders, and members of the media to commemorate 100 K sludge shipment completion.
- Communications supported RL in proactive and reactive media stories:
 - o EM Newsletter (October, 29, 2019) – Waste repackaging goal met
 - o EM Newsletter (November 5, 2019) – Lower-risk demolition at the Plutonium Finishing Plant complete
 - o EM Newsletter (November 26, 2019) – FY2019 Hanford groundwater treatment highlights
 - o EM Newsletter (December 10, 2019) – ERDF drivers mark 1 million safe miles driven
- Communications supported RL Public Affairs in preparations for announcing the pause of work in radiological areas inside the 324 Building to review radiological control practices
- Communications supported RL Public Affairs in announcing the start of higher-risk demolition work at PFP

MAJOR ISSUES

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

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

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 000 Project Services and Support	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Office of the President	0.2	0.2	0.3	0.0	0.0%	(0.1)	-60.6%
Engineering	0.1	0.1	0.1	0.0	0.0%	0.0	6.6%
Internal Audit	0.1	0.1	0.1	0.0	0.0%	0.0	27.2%
General Counsel	0.1	0.1	0.1	0.0	0.0%	0.0	5.1%
Communications & Outreach	0.1	0.1	0.1	0.0	0.0%	0.0	9.4%
Safety, Health, Security, and Quality	1.3	1.3	1.3	0.0	0.0%	0.0	1.9%
Environmental Program and Strategic Planning	0.4	0.4	0.4	0.0	0.0%	0.0	8.3%
Business Services	3.0	3.0	2.9	0.0	0.0%	1.0	2.3%
Prime Contract and Project Integration	0.7	0.7	0.7	0.0	0.0%	0.0	3.9%
Resource Management and Strategic Integration	0.6	0.6	0.6	0.0	0.0%	1.0	9.6%
Project Technical Services	0.7	0.7	0.7	0.0	0.0%	(0.0)	-0.8%
Indirect WBS 000 Total	7.4	7.4	7.3	0.0	0.0%	0.1	1.9%

Numbers are rounded to the nearest \$0.1 million.

Indirect WBS 000

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

The variance is within reporting thresholds.

CM Cost Performance: (\$0.1M/1.9%)

The variance is within reporting thresholds.

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

WBS 000 Project Services and Support	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)
Office of the President	0.5	0.5	0.8	0.0	0.0%	(0.3)	-54.0%	2.3
Engineering	0.3	0.3	0.5	0.0	0.0%	(0.2)	-51.2%	1.5
Internal Audit	0.2	0.2	0.2	0.0	0.0%	0.0	18.4%	1.0
General Counsel	0.3	0.3	0.5	0.0	0.0%	(0.3)	-91.4%	1.2
Communications & Outreach	0.3	0.3	0.3	0.0	0.0%	0.0	6.1%	1.2
Safety, Health, Security and Quality	3.4	3.4	3.7	0.0	0.0%	(0.3)	-9.8%	14.9
Environmental Program and Strategic Planning	1.1	1.1	1.0	0.0	0.0%	0.1	9.7%	4.8
Business Services	7.7	7.7	8.2	0.0	0.0%	(0.6)	-7.2%	33.2
Prime Contract and Project Integration	1.8	1.8	1.7	0.0	0.0%	0.1	7.8%	8.4
Resource Management and Strategic Integration	1.6	1.6	1.5	0.0	0.0%	0.1	8.2%	7.1
Project Technical Services	1.8	1.8	1.6	0.0	0.0%	0.2	9.2%	8.1
Indirect WBS 000 Total	18.9	18.9	19.9	0.0	0.0%	(1.0)	-5.2%	83.8

Numbers are rounded to the nearest \$0.1 million.

Indirect WBS 000

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

The variance is within reporting thresholds.

FYTD Cost Performance: (-1.0M/-5.2%)

The FYTD negative cost variance is primarily driven by additional general facility maintenance costs. This includes corrective maintenance, heating, ventilation, and air conditioning replacements, fleet costs, and extended trailer leases. Additionally, litigation costs from prior issues became allowable under the contract.

FY2020 G&A Analysis (\$M)

WBS 000 Project Services and Support	FY 2020		
	FY 2020 BCWS	FY 2020 Forecast	FY 2020 Variance (O)/U
General & Administrative (G&A)	83.8	84.0	(0.3)
Office of the President	2.3	2.7	(0.4)
Engineering	1.5	1.4	0.1
Internal Audit	1.0	0.9	0.0
General Counsel	1.2	1.4	(0.2)
Communications	1.2	1.2	0.1
Safety, Health, Security and Quality	14.9	16.3	(1.4)
Env. Program & Strategic Planning	4.8	4.7	0.1
Business Services	33.2	33.2	(0.0)
Prime Contract and Project Integration	8.4	7.5	1.0
Resource Mgmt & Strategic Intg	7.1	6.9	0.3
Project Technical Services	8.1	8.0	0.1

FY 2020	
G&A Distribution	(79.5)
G&A Liquidation (Over)/Under	4.5

Liquidation Analysis

For FY2020, application of the general and administrative (G&A) rate has under liquidated total to date G&A costs by \$3.0 million. The FY2020 year-end projected under liquidation is \$4.5 million.

Consistent with CHPRC prospective Cost Accounting Disclosure Statement, under liquidations would be distributed to users at a minimum, when the combined projected year-end under liquidation is equal to or greater than \$4 million. Over liquidations would be distributed to users at a minimum, when the combined projected year-end over liquidation is equal to or greater than \$6 million. Variances may be liquidated to users at lower thresholds if variances are determined to be significant to cost control. All remaining variances will be distributed at fiscal year-end. CHPRC has been authorized to distribute G&A at 16.5 percent. Finance is evaluating the trend for year-end liquidation to consider the impact of a distribution.

Appendix C

Capital Asset Projects

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In December, the Plutonium Finishing Plant’s (PFP) Closure Project team safely completed removal and size reduction of the final glovebox from the 234-5Z Building. The project will work with the U.S. Department of Energy (DOE), Richland Operations Office (RL) on documenting completion of critical decision (CD) 4, *Approve Project Completion*.

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>
COMPLETE Glovebox/Hood Removed	-	1	174	174
COMPLETE KPP Rooms/Areas Ready for Demo	-	0	72	72

KEY ACCOMPLISHMENTS

RL-0011_C1 Accomplishments:

- Removed glovebox HA-46 and packaged it for disposal. Removal of HA-46 completes CAP RL-0011.C1 scope

MAJOR ISSUES

None currently identified.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk Change

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

- Increased Confidence
- No Change
- Decreased Confidence

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 stoplight chart: No major changes to the stoplight chart in December .				
Realized Risks (Risks that are currently impacting project cost/schedule)				
No realized risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in December .				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)				
No critical risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in December .				
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)				
No high-risk threats identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in December .				
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in December .				

CRITICAL PATH ANALYSIS

The remaining PFP critical path schedule related to the RL-0011.C1 – PFP Deactivation and Decommission Project consists of finalizing documentation for a CD-4 declaration for the PFP CAP 1 Project.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	Due Date*	Forecast Date†	Status/ Comment
CAP.1	Removal of 174 gloveboxes from 234-5Z	July 2020	03/16/2020	The current CAP 1 project forecast completion date is March 16, 2020, to allow completion of documentation and approval from RL.

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

†Forecast date reflects CD-4 due date without RL contingency.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Nothing to report at this time.

DOE ACTIONS/DECISIONS

Working with RL to complete CD-4 closure actions.

Appendix C.1

RL-0011.C1 – PFP D&D

(Removal of 174 Gloveboxes from 234-5Z)

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC07-08RL14788
Deliverable C.3.1.3.1 - 1

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

DOLLARS IN

Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2019 / 11 / 18	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 12 / 22	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X 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 344,858	g. CONTRACT CEILING 340,865	h. ESTIMATED CONTRACT CEILING 344,858	i. DATE OF OTB/OTS (YYYYMMDD)

6. ESTIMATED COST AT COMPLETION			7. AUTHORIZED CONTRACTOR REPRESENTATIVE		
	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)	a. NAME (Last, First, Middle Initial) Underwood, Teresa	b. TITLE Prime Contract Compliance Manager
a. BEST CASE	332,587			c. SIGNATURE	
b. WORST CASE	334,980			d. DATE SIGNED (YYYYMMDD)	
c. MOST LIKELY	334,980	330,987	-3,993		

CAPN.PBS Control Account.PARS 2 WBS (2) ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)						
RL-0011 Nuclear Mat Stab & Disp PFP																
RL_0011_C1.02 Maintain Safe & Compliant PFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RL_0011_C1.05 Disposition PFP Facility	0	19	8	19	11	235,514	235,514	259,800	0	-24,285	0	0	0	235,514	259,800	-24,285
RL_0011_C1.06 Project Management & Support	0	0	0	0	0	11,990	11,990	12,477	0	-487	0	0	0	11,990	12,477	-487
RL_0011_C1.90 Usage Based Services Distributions -PBS RL-11	0	0	0	0	0	7,221	7,221	7,731	0	-510	0	0	0	7,221	7,731	-510
RL_0011_C1.98 Ramp-up and transition	0	0	0	0	0	19,399	19,399	19,253	0	147	0	0	0	19,399	19,253	147
RL_0011_C1.99 PBS RL-11 UBS, G-n-A, Direct Distrib	0	0	0	0	0	41,028	41,028	33,328	0	7,700	0	0	0	41,028	33,328	7,700
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET	0															
e. SUBTOTAL	0	19	8	19	11	315,152	315,152	332,587	0	-17,435	0	0	0	315,152	332,587	-17,435
f. MANAGEMENT RESERVE	2,393															
g. TOTAL	0	19	8	19	11	315,152	315,152	332,587	0	-17,435	0	0	0	317,545	332,587	-15,042
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																
a. VARIANCE ADJUSTMENT	0															
b. TOTAL CONTRACT VARIANCE	0															

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

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM			4. REPORT PERIOD		
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)			a. FROM (YYYYMMDD) 2019 / 11 / 18		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019 / 12 / 22		
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18					

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)						
35 - Business Services	0	0	0	0	0	60,427	60,427	52,580	0	7,847	0	0	0	60,427	52,580	7,847
3B - PFP Closure Project	0	19	8	19	11	254,725	254,725	280,007	0	-25,282	0	0	0	254,725	280,007	-25,282
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	19	8	19	11	315,152	315,152	332,587	0	-17,435	0	0	0	315,152	332,587	-17,435
f. MANAGEMENT RESERVE														2,393		
g. TOTAL	0	19	8	19	11	315,152	315,152	332,587	0	-17,435	0	0	0	317,545		

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT													Form Approved						
FORMAT 3 - BASELINE													OMB No. 0704-0188						
DOLLARS IN THOUSANDS																			
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA				2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM RL_0011_C1 - PFP D&D (ARRA/Base) a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009					4. REPORT PERIOD a. FROM: 2019/11/18 b. TO: 2019/12/22						
5. CONTRACT DATA																			
a. ORIGINAL NEGOTIATED COST \$330,987				b. NEGOTIATED CONTRACT CHANGE \$0		c. CURRENT NEGOTIATED COST (A + B) \$330,987		d. ESTIMATED COST AUTH UNPRICED WORK \$0		e. CONTRACT BUDGET BASE (C + D) \$330,987			f. TOTAL ALLOCATED BUDGET \$317,545			g. DIFFERENCE (E - F) \$13,442			
h. CONTRACT START DATE 6/19/2008				i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2020		k. CONT COMPLETION DATE 9/30/2020			l. EST COMPLETION DATE 9/30/2020								
6. PERFORMANCE DATA																			
BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)																			
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)	FY20 (17)	UNDISTRIB BUDGET (18)		
			+1 Jan-20 (4)	+2 Feb-20 (5)	+3 Mar-20 (6)	+4 Apr-20 (7)	+5 May-20 (8)	+6 Jun-20 (9)											
a. PM BASELINE (BEGIN OF PERIOD)	315,152	0	0	0	0	0	0	0	302,288	4,109	7,749	890	116	0	0	0	0		
b. BASELINE CHANGES AUTH DURING REPORT PERIOD None at this time																	0		
c. PM BASELINE (END OF PERIOD)	315,152	0	0	0	0	0	0	0	302,288	4,109	7,749	890	116	0	0	0	0		
7. MANAGEMENT RESERVE																			
8. TOTAL																			

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

**FORM APPROVED
OMB No. 0704-0188**

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2019 / 11 / 18	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 12 / 22	
		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		ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)											AT COMPLETION (15)
ORGANIZATIONAL CATEGORY (1)				SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS					
				+1 DEC 2020 (4)	+2 JAN 2020 (5)	+3 FEB 2020 (6)	+4 MAR 2020 (7)	+5 APR 2020 (8)	+6 MAY 2020 (9)	JUN 2020 (10)	JUL 2020 (11)	AUG 2020 (12)	SEP 2020 (13)	ATCOMPLETE (14)	
35 - Business Services		0	17	0	0	0	0	0	0	0	0	0	0	0	17
3B - PFP Closure Project		1	15442	0	0	0	0	0	0	0	0	0	0	0	15442
g. TOTAL DIRECT		1	15459	0	0	0	0	0	0	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

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In December, the Plutonium Finishing Plant's (PFP) Closure Project team safely completed removal and size reduction of drainpipes in Tunnels 4 and 5, structural demolition and debris loadout of Remote Mechanical C (RMC) line and structural demolition of Remote Mechanical A (RMA) line. Six containers of lower-risk demolition debris and 51 containers of final phase demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal.

<i>Key Metrics</i>	<i>Current Month Plan</i>	<i>Current Month Actuals</i>	<i>Cumulative Plan</i>	<i>Cumulative Actuals</i>
COMPLETE Cold and Dark/Demo Ready activities for 234-5Z	-	-	1	1
COMPLETE Cold and Dark/Demo Ready activities for 236-Z	-	-	1	1
COMPLETE Cold and Dark/Demo Ready activities for 242-Z	-	-	1	1
COMPLETE Cold and Dark/Demo Ready activities for 291-Z	-	-	1	1
Complete Cold and Dark/Demo Ready activities for the 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:

- Completed removal and size reduction of drainpipes in Tunnels 4 and 5.
- Completed structural demolition and debris loadout of RMC line.
- Completed structural demolition of RMA line.
- Repackaged and dispositioned three of four remaining legacy transuranic drums.
- Shipped six containers of low-level demolition debris and 51 containers of final phase demolition debris to ERDF.

MAJOR ISSUES

Issue

The project’s fiscal year (FY) 2020 forecast reflects spending approximately \$2.9 million more than the entire allotted carryover balance. Additional funding is required in FY2020 to complete PFP demolition. The forecast reflects that the current projected funding would not be exceeded until about April 2020.

Corrective Action

Resolve funding shortfall.

Status

CHPRC is working with the U.S. Department of Energy (DOE), Richland Operations Office (RL) to address this issue and anticipates resolving it prior to approaching April 2020 so that funding limitations will not impact project 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

	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0011/WBS-011.OA													
Explanation of major changes to the project monthly spotlight chart: There are no major changes to the spotlight chart in December .													
Realized Risks (Risks that are currently impacting project cost/schedule)													
No realized risks identified in December .													
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)													
No critical risks identified in December .													
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)													
PFP-P-002: “Unavailable Resources”	The project lacks adequate resource coverage (Radiological Control Technicians [RCTs] and Deactivation and Decommission [D&D] workers) to complete work package development and fieldwork activities. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$3M, 120 days	●	↔	Risk Trigger: Due to more stringent work controls, key resources are insufficient to complete work activities as planned. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 5px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 70%;">Mitigation Action(s)</th> <th style="width: 15%;">FC Date</th> <th style="width: 15%;">%</th> </tr> </thead> <tbody> <tr> <td>Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in December . Staffing levels are reviewed weekly to reduce the probability of this risk occurring.	Mitigation Action(s)	FC Date	%	Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%											
Review RCT and D&D headcount changes weekly 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”	PFP Hanford Atomic Metal Trades Council (HAMTC) labor resources are not available or are unqualified due to the bump and roll, LAMP or other job postings. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 96 days	●	↔	Risk Trigger: Other projects and/or contractors on the Hanford Site request bargaining unit employees. The PFP workforce is affected through loss of employees or is required to train new employees to backfill HAMTC resources affected by the bump and roll, LAMP or taking a position with a different contractor or project. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 5px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 70%;">Mitigation Action(s)</th> <th style="width: 15%;">FC Date</th> <th style="width: 15%;">%</th> </tr> </thead> <tbody> <tr> <td>Communicate with other entities to reduce impact of bump and roll process.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in December . Staffing levels are reviewed weekly to reduce the probability of this risk occurring.	Mitigation Action(s)	FC Date	%	Communicate with other entities to reduce impact of bump and roll process.	Ongoing	N/A	Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.	Ongoing	N/A
Mitigation Action(s)	FC Date	%											
Communicate with other entities to reduce impact of bump and roll process.	Ongoing	N/A											
Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.	Ongoing	N/A											

Unmitigated Risk Impacts	Assessment		Comments															
	Month	Trend																
RL-0011/WBS-011.OA																		
FY2020 Key Risks																		
<p>PFPP-P3-003: "Weather Impacts During 234-5Z Demolition"</p> <p>Incliment weather, including moderate winds, low or high temperatures, above average snowfall or thunderstorms will result in in-scope unplanned work and project schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$0, 8 days</p>	●	↔	<p>Risk Trigger: High winds and cold weather may impact the project in the fall and winter seasons. Average winds above 15 miles per hour (mph) shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and therefore shuts down fieldwork activities.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install heat trace & installation on fixative tanks</td> <td>1/16/20</td> <td>95</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. Heated fixative tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. Installation of heat trace and insulation on the fixative tanks will be completed in January. The process to blow out water lines at the end of each shift has been successful in avoiding issues.</p>	Mitigation Action(s)	FC Date	%	Install heat trace & installation on fixative tanks	1/16/20	95									
Mitigation Action(s)	FC Date	%																
Install heat trace & installation on fixative tanks	1/16/20	95																
<p>PFPP-P4-002: "Weather Impacts During 236-Z Demolition"</p> <p>Incliment weather, including moderate winds, low or high temperatures, above average snowfall or thunderstorms will result in in-scope unplanned work and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$0, 28 days</p>	●	↔	<p>Risk Trigger: High winds and cold weather may impact the project in the fall and winter seasons. Average winds above 15 mph shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and therefore shuts down fieldwork activities.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install heat trace & installation on fixative tanks</td> <td>1/16/20</td> <td>95</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. Heated tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. Installation of heat trace and insulation on the fixative tanks will be completed in January. The process to blow out water lines at the end of each shift has been successful in avoiding issues.</p>	Mitigation Action(s)	FC Date	%	Install heat trace & installation on fixative tanks	1/16/20	95									
Mitigation Action(s)	FC Date	%																
Install heat trace & installation on fixative tanks	1/16/20	95																
<p>PFPP-P-004: "Stop Work From Concerned Workers"</p> <p>Concerned workers can implement a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$0, 52 days</p>	●	↔	<p>Risk Trigger: During PFP demolition activities, an increase in stop works could result in delays.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in December. Increased communication and worker involvement to avoid confusion and concern to minimize stop works have continued; stop works may impact the project schedule going forward.</p>	Mitigation Action(s)	FC Date	%	Update communications as positions change.	Ongoing	N/A	Provide new maps with entry/exit instructions when boundaries are revised.	Ongoing	N/A	Encourage additional worker involvement.	Ongoing	N/A	Increase frequency of post-job reviews.	Ongoing	N/A
Mitigation Action(s)	FC Date	%																
Update communications as positions change.	Ongoing	N/A																
Provide new maps with entry/exit instructions when boundaries are revised.	Ongoing	N/A																
Encourage additional worker involvement.	Ongoing	N/A																
Increase frequency of post-job reviews.	Ongoing	N/A																
Unassigned Risks (Pending ownership of identified threats/opportunities)																		
No unassigned risks identified in December .																		

CRITICAL PATH ANALYSIS

The PFP critical path schedule begins with mobilization of crews to start 236-Z Canyon loadout, which is anticipated to be completed by March 9, 2020, meeting the requirements for the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Milestone M-083-00A, “Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities.” Demolition completion will be followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities, completing by May 26, 2020.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	Due Date*	Forecast Date†	Status/ Comment
RL-011.C2	Completion of demolition of all PFP facilities.	7/31/2020	05/26/2020	The project completed structural demolition of 234-5Z in December.

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

Appendix C.2

RL-0011.C2 - Demolition of PFP Facilities

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

December 2019
CHPRC-2019-12, Rev. 0
Contract DE-AC07-08RL14788
Deliverable C.3.1.3.1 - 1

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

DOLLARS IN Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT				3. PROGRAM				4. REPORT PERIOD										
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract				a. NAME RL_0011_C2 PFP Demolition Capital Asset Project				a. FROM (YYYYMMDD) 2019 / 11 / 18										
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788				b. PHASE				b. TO (YYYYMMDD) 2019 / 12 / 22										
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE		NO <input type="checkbox"/> X <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18												
5. CONTRACT DATA																				
a. QUANTITY 1	b. NEGOTIATED COST 114,414	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 24,864	d. TARGET PROFIT/FEE 5,000	e. TARGET PRICE 119,414	f. ESTIMATED PRICE 177,388	g. CONTRACT CEILING 119,414	h. ESTIMATED CONTRACT CEILING 176,496	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		171,815				c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)											
b. WORST CASE		176,403																		
c. MOST LIKELY		172,388	139,278	-33,110																
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		BUDGETED ESTIMATED VARIANCE (14) (15) (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)						
RL-0011 Nuclear Mat Stab & Disp PFP																				
RL_0011_C2.05 Disposition PFP Facility		5,089	6,294	4,455	1,205	1,839	131,385	120,617	157,253	-10,769	-36,637	0	0	0	138,704	171,815	-33,110			
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		5,089	6,294	4,455	1,205	1,839	131,385	120,617	157,253	-10,769	-36,637	0	0	0	138,704	171,815	-33,110			
f. MANAGEMENT RESERVE															573					
g. TOTAL		5,089	6,294	4,455	1,205	1,839	131,385	120,617	157,253	-10,769	-36,637	0	0	0	139,278					
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																				
a. VARIANCE ADJUSTMENT																				
b. TOTAL CONTRACT VARIANCE																		139,278	171,815	-32,537

**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_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2019 / 11 / 18		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019 / 12 / 22		
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18					

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)						
3B - PFP Closure Project	5,089	6,294	4,455	1,205	1,839	131,385	120,617	157,253	-10,769	-36,637	0	0	0	138,704	171,815	-33,110
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET																
e. SUBTOTAL (Performance Measurement Baseline)	5,089	6,294	4,455	1,205	1,839	131,385	120,617	157,253	-10,769	-36,637	0	0	0	138,704	171,815	-33,110
f. MANAGEMENT RESERVE														573		
g. TOTAL	5,089	6,294	4,455	1,205	1,839	131,385	120,617	157,253	-10,769	-36,637	0	0	0	139,278		

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE													DOLLARS IN THOUSANDS		Form Approved OMB No. 0704-0188					
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA			2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM RL_0011_C2 PFP Demolition Capital Asset Project a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009			4. REPORT PERIOD a. FROM: 2019/11/18 b. TO: 2019/12/22										
5. CONTRACT DATA																				
a. ORIGINAL NEGOTIATED COST 51,683			b. NEGOTIATED CONTRACT CHANGE \$62,730		c. CURRENT NEGOTIATED COST (A + B) \$114,414		d. ESTIMATED COST AUTH UNPRICED WORK \$24,864		e. CONTRACT BUDGET BASE (C + D) \$139,278		f. TOTAL ALLOCATED BUDGET \$139,278		g. DIFFERENCE (E - F) \$0							
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2020		k. CONT COMPLETION DATE 9/30/2020			l. EST COMPLETION DATE 9/30/2020										
6. PERFORMANCE DATA																				
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)										UNDISTRIB BUDGET (18)	TOTAL BUDGET (19)
			+1 Jan-20 (4)	+2 Feb-20 (5)	+3 Mar-20 (6)	+4 Apr-20 (7)	+5 May-20 (8)	+6 Jun-20 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)	FY20 (17)				
a. PM BASELINE (BEGIN OF PERIOD)	126,296	3,814	4,739	2,526	54	0	0	0	0	0	6,090	29,182	19,407	628	66,598	16,800	0	138,704		
b. BASELINE CHANGES AUTH DURING REPORT PERIOD None at this time																	0	0	0	
c. PM BASELINE (END OF PERIOD)	131,386	5,090	4,739	2,526	54	0	0	0	0	0	6,090	29,182	19,407	628	66,598	16,800	0	138,704		
7. MANAGEMENT RESERVE																			573	
8. TOTAL																			139,278	

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

**FORM APPROVED
OMB No. 0704-0188**

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2019 / 11 / 18	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 12 / 22	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA															
WBS.Resp Org Group ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 DEC 2020 (4)	+2 JAN 2020 (5)	+3 FEB 2020 (6)	+4 MAR 2020 (7)	+5 APR 2020 (8)	+6 MAY 2020 (9)	JUN 2020 (10)	JUL 2020 (11)	AUG 2020 (12)	SEP 2020 (13)	ATCOMPLETE (14)		
3B - PFP Closure Project	152	4525	146	143	123	101	0	0	0	0	0	0	0	0	5038
g. TOTAL DIRECT	152	4525	146	143	123	101	0	0	0	0	0	0	0	0	5038

CLASSIFICATION (When Filled In)										
CONTRACT PERFORMANCE REPORT FORMAT 5 - Explanations and Problem Analysis								FORM APPROVED OMB No. 0704-0188		
1. CONTRACTOR		2. CONTRACT		3. PROGRAM			4. REPORT PERIOD			
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2019/11/18			
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019/12/22			
		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:		5,089.5	6,294.1	4,455.4	1,204.6	23.7%	1,838.7	29.2%	1.24	1.41
Cumulative:		131,385.5	120,616.6	157,253.3	-10,768.9	-8.2%	-36,636.8	-30.4%	0.92	0.77
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		138,704.4	171,814.8	-33,110.4	-23.9%	0	1.24			
<p>Explanation of Variance/Description of Problem:</p> <p>Current Month:</p> <p>Schedule Variance: The favorable schedule variance is due to the completion of structural demolition and loadout of the 234 5Z RMC line and structural demolition of RMA line, which was scheduled to complete in March 2019 in the baseline. The work was delayed due to weather, a series approach to demolition, a conservative approach and reshuffling activities based on worker input. Current performance is offset by BCWS based on progress on Plutonium Reclamation Facility rubble disposition, which was pushed by the delays, mentioned above and is now scheduled to begin in January 2020.</p> <p>Cost Variance: The favorable cost variance is primarily due to completion of structural demolition and loadout of 234-5Z RMC line and structural demolition of RMA line using less craft resources than planned and less material. Material planning was based on material cost per day based on the December 2017 time period. Actual material cost have averaged \$15K less per day due to less fixative required.</p> <p>Cumulative to Date:</p> <p>Schedule Variance: The cumulative to date schedule variance is within thresholds.</p> <p>Cost Variance: The cumulative negative cost variance is associated with MSA resources arriving to support PFP demolition that were planned as P/Q shift support. Additionally, Readiness Assessment activities lagged due to a delay in the start of 236-Z Demolition and increased requirements to show readiness resulting in increased costs due to additional time and effort required from subcontracted and direct labor resources. The apportioned project management activities (i.e. project oversight and planning) and support activities are ongoing, while a delay in the discrete field work is resulting in minimal apportioned BCWP. Demolition mobilization activities took longer than originally assumed because of recommendations made during the readiness assessment and purchasing unplanned PBS fixative to support 236-Z demolition. In addition, significant winter weather impacts (i.e., snow, wind, freezing rain, etc.) have been recognized on the Hanford Site. Site closures, freezing temperatures and significant snowfall that required clearing of the demolition zone rather than performing physical demolition on the facilities while a constant staff provides demolition support services is a contributing factor. Unplanned Management Assessment efforts for the 234-5Z and 291-Z facilities took longer than originally assumed. Impacts associated with the Stop Work that was initiated by the HAMTC union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As the project gets further into the demolition phase of the PRF Canyon, increased utilization of Personnel Protective Equipment to align with the original plan as well as increased material procurements to align with the scope being performed (i.e., P-100 filters, Labounty Shear, additional fixative, etc.) are also contributing to this variance. An adjustment to the General & Administrative (G&A) Rate for FY2017 resulted in a reduction to the Performance Measurement Baseline (PMB) of \$463K. Finally, impacts from a contamination event that occurred on Friday, December 15, 2017, swing shift where RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis was conducted and resumption actions identified.</p> <p>This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.</p> <p>Impact:</p> <p>Schedule Impact: Completion of all demolition activities followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities forecast to occur in May 2020. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of November 30, 2017, was not met.</p> <p>Cost Impact: A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017.</p> <p>Corrective Action:</p> <p>Demolition and load out activities are progressing at an effective speed to mitigate potential safety and stop work concerns. The current forecast slab on grade date is March 9, 2020.</p> <p>Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):</p> <p>There was no change in the difference between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of December.</p> <p>The following items are addressed, as applicable:</p> <ol style="list-style-type: none"> Schedule Margin Analysis: No draw downs of schedule margin were made in the month of December. Data dictionary Changes: No change in the month of December. Forecast Schedule with No Baseline: No change in the month of December. UB Balance: No change in the month of December. Negative Actual Cost of Work Performed (ACWP): No change in the month of December. Earned Actual Cost (EAC) Analysis: Best Case = \$171,815; Most Likely = \$172,388; Worst Case = \$176,403. The Best Case EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no realization of remaining risks. The Most Likely EAC is the ACWP plus what management believes is the most likely outcome based on a knowledgeable estimate of all authorized work, known risks, unknown risks, and probable future conditions. The Worst Case EAC is the ACWP plus the ETC plus realization of all identified risks, plus the scope identified in the Trend Log. The Best/Worst and Most Likely EAC values are documented in the Format 1 Report. Negative CV > VAC: No change in the month of December. Management Reserve Transactions: No change in the month of December. Freeze Period Changes: No change in the month of December. Retroactive Changes: No change in the month of December. Earned Value Type Changes: No change in the month of December. 										
Prepared by: Jason Knowlton				Date: 1/21/2020		Approved by:		Date:		