

Monthly Performance Report

November 2019

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

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

CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

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APPROVED
By Janis D. Aardal at 1:50 pm, Dec 19, 2019

Release Approval

Date

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CH2MHILL
Plateau Remediation Company
a Jacobs company



L. Ty Blackford
President and
Chief Executive Officer

Monthly Performance Report

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

November 2019
CHPRC-2019-11, Revision 0

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EXECUTIVE SUMMARY

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

- **Waste and Fuels Management Project (W&FMP):**

The formal kickoff meeting with the capsule storage area construction subcontractor was held on November 13, 2019, with site mobilization planned for March 2020. The Waste Encapsulation Storage Facility team completed painting of the walls, ceilings and floors in the canyon. At the Central Waste Complex, the team completed the annual abnormal container management program surveillance. At the Integrated Disposal Facility (IDF), the balance of plant subcontract was awarded to install utilities, inspection structures and mobile offices.



ERDF drivers achieved 1 million safe miles driven since transition to CHPRC in August 2016.

- **Soil and Groundwater Remediation Project (S&GRP):**

Bulk carbon removal from the fluidized bed reactor, carbon separators and splitter box at the 200 West Pump and Treat was completed, enabling the facility to increase flow rates and operate at high steady-state flow rates throughout the winter, accelerating the ability to achieve treatment goals for the fiscal year. In collaboration with Washington River Protection Solutions, the project reached a tentative agreement on the well locations for the WMA-C/A/AX extraction system that will be installed in fiscal year (FY) 2021 to enable treatment of different waste streams from the 200 East Area. Identification of well sites has been challenging due to numerous ongoing projects in the limited access C-Farm area.

- **Plutonium Finishing Plant (PFP) Closure Project:** The PFP Closure Project team safely completed lower-risk demolition of the PFP Main Processing Facility, marking a significant accomplishment in the CHPRC cleanup mission. Crews began the final phase of demolition, starting with accessing Tunnel #4, removing drain piping and backfilling the tunnel. Forty-one containers of lower-risk demolition debris were shipped to the Environmental Restoration Disposal Facility for permanent disposal.
- **Central Plateau Risk Management (CPRM) Project:** Crews abated more than 2,700 feet of steam line asbestos in the 200 East and 200 West Areas, including completing all steamline scope associated with the IDF and 222-S Labs. Personnel initiated biological hazard cleanup on all three floors of 224-B, and electricians initiated installation of temporary power and lighting throughout the facility. The 60 percent design for the Reduction and Oxidation Facility (REDOX) temporary ventilation system was received and reviewed, and the layout for infrastructure installation in the REDOX North yard was finalized. Cold-and-dark preparatory work on 2701-AB was completed, including ground scans. Finally, 957 gallons of radioactively contaminated water was pumped from 216-A-TK-2 Plutonium Uranium Extraction Plant catch tank.
- **K Basins Operations (KBO):** The final design for the 105KE Safe Storage Enclosure was approved. Crews at 105KW Basin continued clearing the northern part of west bay, creating a footprint for the sparging station and vertical pipe casings that will segregate high dose debris. Deactivation activities at the 105KW Basin were initiated by starting lockout/tagout and draining activities associated with the basin water recirculation system. In cooperation with the Hanford Atomic Metal Trades Council and Building Trades, mockup training was completed at the Maintenance and Storage Facility in support of planned Garnet Filter Media Removal System (GFMRS) equipment installation and 105KW Basin operational activities. Work packages and

technical documents were prepared to support the transition from engineered container retrieval and transfer system to GFMRS operations. Training and mobilization was completed for the subcontractor that will perform the GFMRS installation, and a joint evaluation team was held to verify the readiness assessment level 2 is required for GFMR startup. The new 100-K Area soil remediation subcontractor initiated site mobilization.

- **River Risk Management Project (RRMP):** The Hanford Fire Department completed its annual inspection and testing of the 324 Building fire system. The project completed grouting cubicles on the first floor and initiated grouting cubicles on the second floor of A Cell Gallery. In addition, performed sealing of the B Cell Gallery, second floor west cubicle and east cubicle. Crews also routed the water supply from 131 B-Gallery to Room 18, installed a camera in Room 18 and drilled anchor holes and installed angle supports for steel plates on the truck lock floor. Crews constructed six north-shoring piles outside of the 324 Building to support future soil stabilization injection grouting under the east wall of B Cell, where 17 of 21 piles are installed. Structural modifications in the 324 Building basement continued with completion of the third pilot hole and drilling at the fourth location. Crews mobilized the scissor lift from C Cell to the airlock to access the A/D Crane for investigation and troubleshooting. Due to a worker contamination incident at the 324 Facility on November 14, a management-directed standdown was implemented on the 300-296 Waste Site Remediation Project radiological work within the facility. A CHPRC and Jacobs working group is being formed to look at opportunities to minimize contamination risks and optimize radiological controls.

The President's Zero Accident Council (PZAC) meeting for November was hosted by the W&FMP. The three main ideas were:

- Drive to arrive safely.
- Good planning ensures a win.
- Keep your head in the game.

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

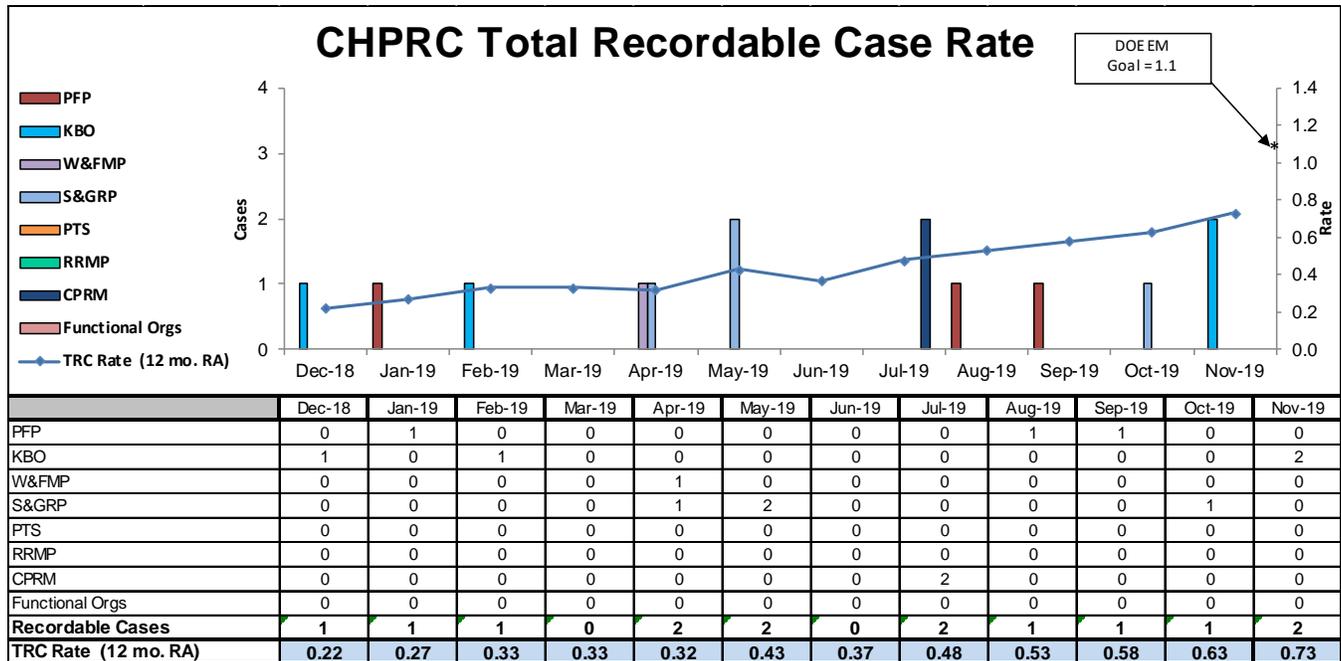
- Winter emergencies.
- America recycles.
- Holiday health and safety.
- Avoid slips and falls.

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

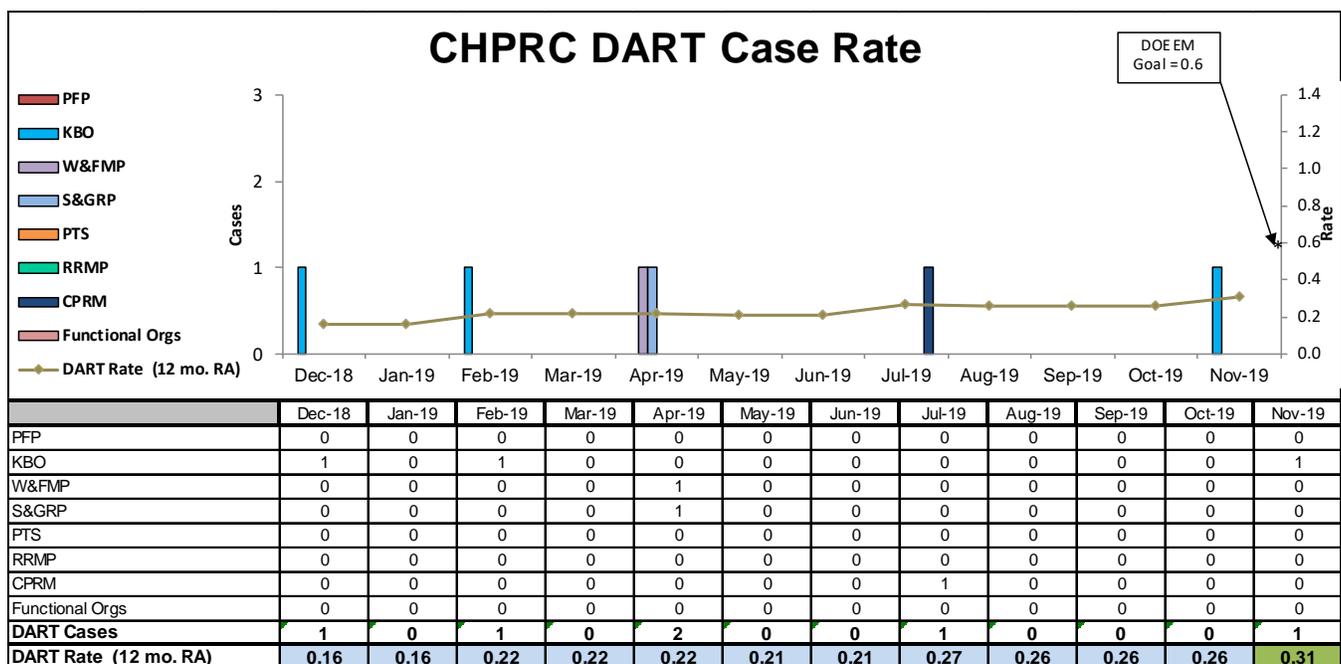
- Four Lessons Learned:
 - OPEXShare: MSA Special Safety Bulletin – Don't be a Parking Lot Zombie!.
 - OPEXShare: WRPS-WF-2019-002, "Enhance Awareness of Hazards Present during Abnormal Operating Conditions".
 - OPEXShare: INL-2019-0045, "Understand and Implement Hazard Elimination Actions Prior to Starting Work".
 - OPEXShare: PNNL-LL-2019-5652, "Response by Researcher to Breached Glovebox Prevents Significant Contamination Spread".
- Injuries.
- Weekly ethics moments.
- Vehicle events.
- GPS/telemetry in vehicles.
- Cold weather walking.
- Hardhat recycling.
- Holiday ladder safety.
- Wintering bald eagles.
- Security badge reminder.
- Improve winter health.
- NEW! Winter Poster 2: Be prepared for freezing temperatures!
- Practice safety 24/7.
- Internal dosimetry discussion.

TARGET ZERO PERFORMANCE

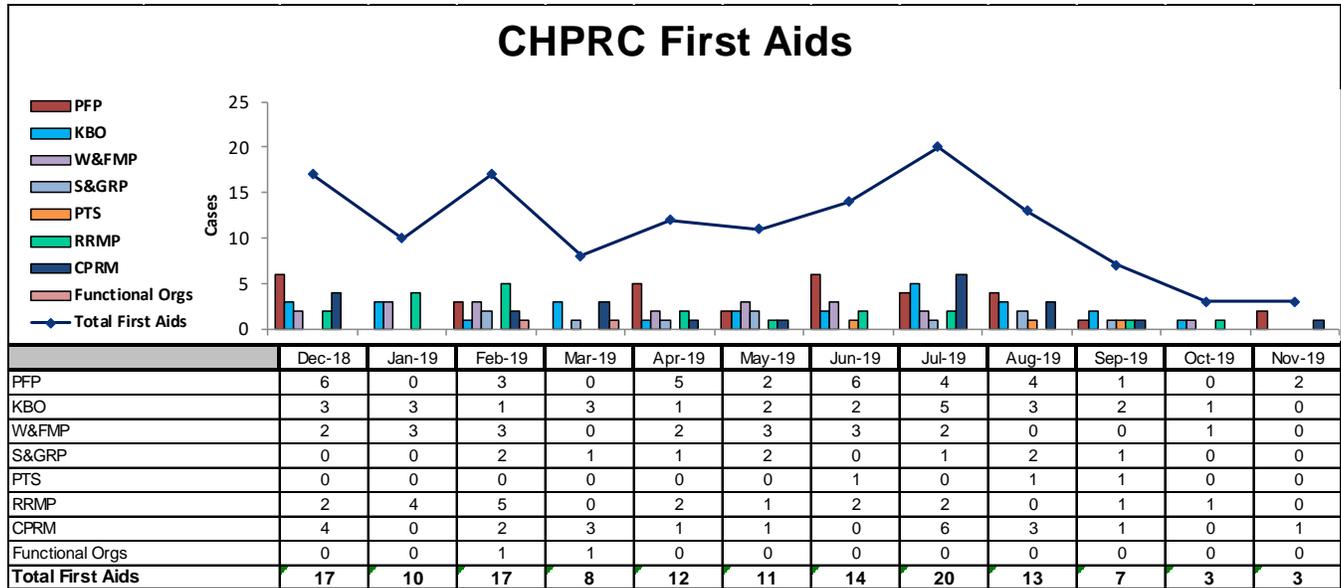
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.73 is based on a total of 14 recordable injuries. November had two reported recordable cases.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.31 is based on a total of six days away cases. November had one reported DART case.



First Aid Case Summary: CHPRC reported three first aid cases in November. The contributors were two sprains/strains/pains and one abrasion/bruise/contusion 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

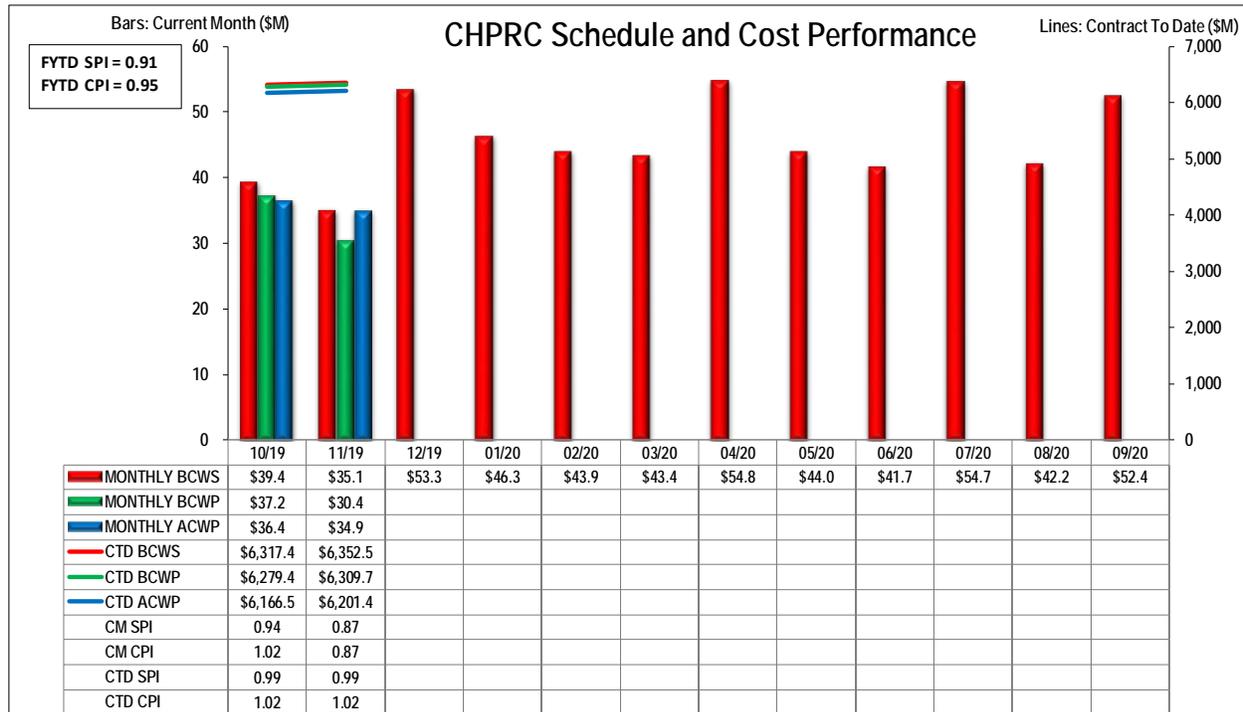
Projects

- 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		BAC	EAC	Variance
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost				
RL-0011 - Nuclear Materials Stab & Disp PFP	4.6	2.5	3.7	(2.1)	(1.2)	1,128.2	1,116.2	1,212.9	(12.0)	(96.8)	1,143.6	1,235.9	(92.3)	
RL-0012 - SNF Stabilization & Disposition	0.1	0.1	(0.0)	-	0.1	759.5	759.5	729.9	(0.0)	29.6	759.6	729.9	29.7	
RL-0013 - Solid Waste Stab & Disposition	11.4	11.0	11.4	(0.4)	(0.4)	1,503.4	1,497.9	1,414.0	(5.5)	83.9	1,678.8	1,586.3	92.5	
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	7.1	6.5	6.6	(0.6)	(0.1)	1,648.9	1,644.2	1,596.3	(4.6)	47.9	1,766.0	1,708.4	57.5	
RL-0040 - Nuc Fac D&D - Remainder	3.7	3.1	4.2	(0.6)	(1.1)	573.0	567.3	548.7	(5.7)	18.6	625.8	609.5	16.3	
RL-0041 - Nuc Fac D&D - RC Closure Project	8.0	7.0	8.7	(1.0)	(1.7)	710.3	695.5	675.2	(14.9)	20.3	822.5	802.6	19.9	
RL-0042 - Nuc Fac D&D - FFTF Project	0.2	0.2	0.2	-	(0.1)	29.1	29.1	24.3	0.0	4.9	33.0	28.4	4.6	
(Values are rounded to the nearest \$0.1M)	Total	35.1	30.4	34.9	(4.7)	(4.5)	6,352.5	6,309.7	6,201.4	(42.8)	108.3	6,829.2	6,701.0	128.2

Performance Summary

CHPRC continues to track completion of the contract within budget. Currently, a variance at completion of \$128.2 million is projected, with an additional \$48.4 million of management reserve (MR), for a total positive variance of \$176.6 million. For November, the project was 13.4 percent behind schedule and 14.9 percent over planned cost. Contract to date, the project was 0.7 percent behind schedule and 1.7 percent under planned cost.

Approximately one quarter of the current month (CM) negative cost variance is due to PFP. Progress on the demolition of 234-5Z has continued to lag, while costs over the same period have not decreased due to weather conditions, using a deliberate approach and a stepwise method to demolition. Similarly, nearly one quarter of the CM negative cost variance experienced on the RRMP is due to latent beta contamination issues that continue to hinder the pilot hole installation work within Room 18 of the 324 Building. Productivity is low, while costs remain the same. KBO incurred higher than planned costs associated with mobilization and training for the installation subcontractor for GFMRS and vertical pipe casings. The plan assumed the subcontractor would provide partially trained staff and that assumption did not materialize. In addition, the management-directed stand down at REDOX contributed to the negative variance as work crews are focusing on implementation of the phased approach plan, delaying performance of planned work.

The CM negative schedule variance is primarily due to PFP. Progress on the Plutonium Reclamation Facility rubble pile has been delayed due to delays on the demolition of 234-5Z resulting from weather, use of deliberate speed and a stepwise approach. Additional negative schedule variances include the delay of procurement and installation of equipment at the 324 Facility due to continuing impacts of unanticipated latent beta contamination and the failure of the A/D Crane, the management-directed work standdown at REDOX due to concerned stakeholders, the delay in demolition of 166KE due to unexpected contents of the oil tanks resulting in an alternate disposition path, unanticipated issues requiring resolution associated with the Composite Analysis and the S&GRP late air stripper subcontract submittal impacting procurement.

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	31.3	(1.8)
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	0.6	0.0	0.5
RL-0013	Waste and Fuels Management Project	211.3	202.9	8.4
RL-0013	Management of Cesium and Strontium Capsules	14.3	0.7	13.6
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.1	131.0	1.1
RL-0040	Nuclear Facility D&D, Remainder of Hanford	67.1	67.1	(0.0)
RL-0041	Nuclear Facility D&D, River Corridor	143.0	142.0	0.9
RL-0042	Fast Flux Test Facility Closure	4.8	3.7	1.1
Total Estimate at Complete		602.5	578.8	23.8

Funds/Variance Analysis

There was no change in November to the FY2020 expected funding of \$602.5 million. The spending forecast reduced overall \$5.5 million from last month, primarily driven by adjustments to labor for attrition and alignment to resources on board.

BASELINE CHANGE REQUESTS

In November, CHPRC approved and implemented five baseline change requests (BCRs) into the Performance Measurement Baseline (PMB) budget. One of the three BCRs impacted the PMB budget. Each change request is identified in the tables below:

Change Request #	Title	PBS	Summary of Change
BCR-013-20-001R0	<i>Remove 2 Sludge Shipments and Align Accounts for Garnet Filters</i>	RL-0013	This BCR removes two planned but unneeded sludge shipments and moves surveillance and maintenance tasks to a work package that will remain open after the existing work breakdown structure (WBS) is closed. This BCR decreased the PMB by \$175.6K.
BCR-030-20-001R0	<i>Incorporate 200-WA-1 Impacts from Supporting the New Regulator Approach for Central Plateau Source Area RODs</i>	RL-0030	This BCR incorporated potential impacts of supporting a new regulator approach for Central Plateau source area record of Decision (ROD) into the PMB in accordance with the U.S. Department of Energy, Richland Operations Office (RL) direction. This BCR did not change the PMB value.
BCR-030-20-003R0	<i>Revise WBS 030.33.01.01.01 LOE Resource Profile Dates</i>	RL-0030	This BCR corrected erroneous resource activity dates within an existing level of effort. This BCR did not change the PMB value.
BCR-041-20-001R0	<i>Updates to WBS Dictionaries and BOEs to Align with Final FY2020 Deliverable</i>	RL-0041	This BCR revised the WBS dictionaries and the corresponding basis of estimates (BOEs) for Minimum Safe, KW Basin Sand Filter Media Removal to clarify the scope to be performed in FY2020.
BCRA-PRC-20-004R0	<i>HPIC Updates November 2019</i>	RL-0013 RL-0030 RL-0040 RL-0041	This BCR incorporated November FY2020 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

The allocated (distributed) budget decreased \$175.6K in November.

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 November.

Management Reserve (MR) Activity

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

There was no change to MR in November.

Fee Activity

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

There was no change to fee in November.

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).

November 2019 Summary of Changes (\$M)

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	FY2020	Contract Period Total	Total PMB
October 2019 Estimate											
PMB	3,391.5	391.7	471.3	504.8	485.0	470.6	2,323.5	563.1	551.4	6,829.4	6,829.4
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	599.7	7,155.8	7,155.8
November 2019 Change											
PMB											
Change to PMB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.2
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	-0.2	-0.2	-0.2
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

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

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	FY2019	FY2020
October 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
November 2019 MR Changes/Utilization									
RL-0011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RL-0042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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

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 - 11/17/2019			
Reporting Category			
	\$ Value	%	Goal %
SB	\$1,674.91	56.35%	49.3%
SDB	\$307.23	10.34%	8.2%
SWOB	\$303.25	10.20%	7.5%
HUB	\$96.58	3.25%	2.2%
VOSB	\$255.53	8.60%	3.5%
SDVO	\$163.15	5.49%	1.3%
NAB	\$89.89	3.02%	N/A
Large	\$795.26	26.75%	N/A
UNK	\$0.00	0.00%	N/A
GOVT	\$5.36	0.18%	N/A
GOVT CONT	\$483.22	16.26%	N/A
EDUCATION	\$0.17	0.01%	N/A
NONPROFIT_	\$4.40	0.15%	N/A
FOREIGN	\$9.19	0.31%	N/A
Total	\$2,972.51	100.00%	N/A

PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
CHPRC Contract Value:	\$6,596.68
SB actual:	\$1,674.91
SB Performed %:	25.39%

PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed	
CHPRC Contract Value:	\$6,596.68
CHPRC Self Performed:	\$3,626.94
CHPRC Self Performed %:	54.98%

Notes:

1. Since the contract award in October 2008, CHPRC has subcontracted more than \$2.9 billion in goods and services, with more than 56 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

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Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In November, the Plutonium Finishing Plant's (PFP) Closure Project team safely completed lower-risk demolition of the PFP Main Processing Facility, marking a significant accomplishment in the CH2M HILL Plateau Remediation Company (CHPRC) cleanup mission. Following recent U.S. Department of Energy (DOE), Washington State Department of Ecology (Ecology) and U.S. Environmental Protection Agency (EPA) approval, the Project began the final phase of PFP demolition, which includes removal of the Main Processing Facility's two former processing lines as well as packaging and removal of the remaining rubble from the Plutonium Reclamation Facility (PRF). These activities are expected to continue through early 2020. The work is being done under the same demolition strategy and enhanced safety controls that have proven effective in protecting our workers, the public and the environment since lower-risk demolition work was restarted in September 2018. Forty-one containers of lower-risk demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal during the reporting period.

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
LLW/MLLW Shipped	287 m ³	21,876 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	2	33	<p>11/05/2019 - Employee experienced back pain after bending down to connect the hook/cable on a roll-on/roll-off truck. Worker was taken to HPM Corporation (HPMC) for evaluation, provided over-the-counter medicine and released back to work without restriction. (25412)</p> <p>11/18/2019 - Employee felt pain in the right side back muscle while lifting a full bag of water absorbent. Worker was taken to HPMC for evaluation, provided a hot/cold compress and released back to work without restriction. (25426)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments:

- Completed demolition and debris loadout of second floor and duct level of the 234-5Z Building zone 5, which completed the low risk portion of demolition and debris removal.
- Crews began final phase of demolition, starting with breaking into Tunnel 4, removing and sizing drain piping, and then backfilling the tunnel.
- Crews continued training with the Hanford Fire Department to learn about specialized firefighting gear and practice doffing techniques to ensure that the gear is safely removed when firefighters exit the high contamination area. The training sessions benefit both teams' knowledge and understanding of the equipment and procedures.
- Shipped 41 containers of low-level demolition debris to ERDF, completing shipment of all low risk 234-5Z demolition waste.

MAJOR ISSUES

Issue: The Project's FY2020 forecast reflects spending approximately \$1.8M 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.

Current Status: CHPRC is working with the U.S. Department of Energy, 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 spotlight chart: There are no major changes to the spotlight chart in November.													
Realized Risks (Risks that are currently impacting project cost/schedule)													
No realized risks identified in November.													
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)													
No critical risks identified in November.													
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: 10px;"> <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 November. 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											
PFP-P-014: "Bump and Roll, 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 (Labor Assets Management Program), 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: 10px;"> <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>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 November. The project continues to review staffing levels on a weekly basis 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											
FY2020 Key Risks													
PFP-P3-003: "Weather Impacts During 234-5Z Demolition"	Inclement weather, including moderate winds, low or high temperatures, above average snowfall, or thunderstorms will result in in-scope unplanned work and project schedule impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 8 days	●	↔	Risk Trigger: High winds and cold weather may impact the project in the fall/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. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <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>Develop winter preparedness plan</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in November. A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. There were no additional substantial actions identified during the preparation of the preparedness plan. 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 December. The process to blow out water lines at the end of each shift has been implemented and has been successful in avoiding issues.	Mitigation Action(s)	FC Date	%	Develop winter preparedness plan	Complete	100			
Mitigation Action(s)	FC Date	%											
Develop winter preparedness plan	Complete	100											

Unmitigated Risk Impacts	Assessment		Comments															
	Month	Trend																
RL-0011/WBS-011.OA																		
<p>PFPP-P4-002: "Weather Impacts During 236-Z Demolition"</p> <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%) 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%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Develop winter preparedness plan.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in November. A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. There were no additional substantial actions identified during preparation of the plan. 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 December. The process to blow out water lines at the end of each shift has been implemented and has been successful in avoiding issues.</p>	Mitigation Action(s)	FC Date	%	Develop winter preparedness plan.	Complete	100									
Mitigation Action(s)	FC Date	%																
Develop winter preparedness plan.	Complete	100																
<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%) 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%;"> <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 November. 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 November.																		

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	4.6	2.5	3.7	(2.1)	-45.2%	(1.2)	-47.6%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Variance: (-\$2.1M/-45.2%)

The unfavorable schedule variance is due to delays to the project caused by weather, a series approach to demolition, a conservative approach and reshuffling activities based on worker input. Current performance is being taken on work that was scheduled to be completed in March 2019. However, offsetting BCWS is based on progress of PRF rubble disposition, which was pushed back by the delays mentioned and is now scheduled to begin in January 2020.

CM Cost Variance: (-\$1.2M/-47.6%)

The unfavorable cost variance is primarily due to completion of demolition and size-reduction activities using a deliberate approach, which dictates a slower pace, causing performance to be considerably less than the actual accumulated costs. Additionally, the Project has realized longer activity durations due to the implementation of more conservative demolition work controls, such as re-sequencing the work plan and taking a series approach to demolition, size reduction and loadout.

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	1,128.2	1,116.2	1,212.9	(12.0)	-1.1%	(96.8)	-8.7%	1,143.6	1,235.9	22.9	(92.3)

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Variance: (-\$12.0M/-1.1%)

The CTD schedule variance is within threshold.

CTD Cost Variance: (-\$96.8M/-8.7%)

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 transuranic (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): (-\$92.3M/-8.1%)

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.

In February 2019, BCR-011C-18-005R2, “PFP CAP 2 Project Completion,” was issued to implement the RL-approved revised scope, cost and schedule baseline for RL-0011.C2 project completion. The Baseline Change Request set the remaining historical BCWS equal to the BCWP as of June 24, 2018, consistent with DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, and the RL approving authorities’ determination to establish a new performance baseline as documented in 18-AMRP-0062, *Performance Baseline Deviation Notification of Plutonium Finishing Plant (PFP) Demolition Project – RL-0011.C2*, dated February 27, 2018.

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	31.3	(1.8)

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 completion of activities for remote mechanical C and A process line demolition and debris disposition as well as loadout of glovebox HA-46. The 236-Z Canyon demolition will also resume with completion anticipated by March 3, 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		3/3/2020	The project completed low risk demolition and began final phase demolition in November.

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 (FSCF) are complete to date. Upcoming DOE approval for the completion of 234-5Z will initiate a new FSCF.

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

November 2019
CHPRC-2019-11, 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 finalized and is expected to be submitted to the U.S. Department of Energy (DOE), Richland Operations Office (RL) in December.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	0	16	N/A
Near Misses	0	1	N/A

KEY ACCOMPLISHMENTS

Documentation for the completion of Tri-Party Agreement milestone M-016-176 was finalized.

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	139.8%

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/+139.8%)

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	759.5	759.5	729.9	(0.0)	-0.0%	29.6	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 (+\$29.6M/+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	0.5

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

FY2020 funding for PBS RL-0012 is \$0.6 million. The projected funding includes carryover from FY2019 and new budget authority. FY2020 funding aligns with the RL 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

November 2019
CHPRC-2019-11, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In the November reporting period (October 28 to November 17, 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 formal kickoff meeting for Capsule Storage Area (CSA) construction, a subproject of the W-135 Management of Cesium (Cs) and Strontium (Sr) Capsule Project, was held on November 13, 2019. Mobilization for the CSA is planned for March 2020.
- The Waste Encapsulation Storage Facility (WESF) team completed painting of the walls, ceilings and floors in the canyon. Additional waste items were removed out into the truckport and placed into roll-on/roll-off containers for disposal at ERDF.
- The Waste Receiving and Processing Facility (WRAP) team completed relamping of 2740W parking lot lights.
- At T Plant, workers received the sludge transportation storage trailer with sludge storage cask W-409.
- At the IDF, the balance of the plant subcontract was awarded to install utilities, inspection structures and mobile offices. Staff began developing procedures to support operations. Work continued on the final hazard classification, the *Resource Conservation and Recovery Act of 1976* (RCRA) permit and site leveling.

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 transuranic (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	18%
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 the CH2M HILL Plateau Remediation Company (CHPRC) Transportation organization	9/30/2020	0%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1*	N/A *1 DART, Project Technical Services (PTS) in support of RL-0013.
Total Recordable Injuries	0	0	N/A
First Aid Cases	0	27	N/A
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- Solid Waste Operations Complex (SWOC) Part B: On October 21, 2019, the Quality Assurance Project Plan (QAPP) for CWC-WRAP was transmitted to the U.S. Department of Energy (DOE), Richland Operations Office (RL) for concurrent review with CHPRC.

13.02 Capsule Storage and Disposition

- Completed one operational drill at WESF.
- Completed painting efforts in WESF canyon.
- Completed 27 preventative maintenance (PM) packages.

13.03 Canister Storage Building (CSB)

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

13.06 Transuranic (TRU) Repackaging

- Completed repackaging of 116.0 m³ of transuranic mixed (TRUM) and TRU waste in November, for a total of 116.0 m³ fiscal year to date (FYTD).
- One waste storage container was removed from the Outside Storage Areas A/B in support of the fiscal year (FY) 2021 TPA Milestone M-091-52 commitment. This activity increased the total number of waste storage containers removed to 16 of 20.

13.07 Waste Receiving and Processing

- Completed replacement of lamp fixtures.
- Completed 149 surveillances and 13 PM packages.

13.08 T Plant

- Completed duct heater repair in 291T.
- Completed 437 surveillances and 26 PM packages.
- Received the sludge transportation storage trailer with sludge storage cask W-409.

13.09 CWC and Low-Level Burial Ground

- Completed annual abnormal container management program surveillance.
- Completed replacement of the Trench 34 report temperature and the Super 7A gasket.
- Shipped one Super 7A from CWC to Perma-Fix Northwest (PFNW)
- Received 20 standard waste boxes from PFWN to CWC in three shipments.

- Completed 213 surveillances and 21 PM packages.

13.15 TRU Disposition

- Continuing enhancement of acceptable knowledge on TRU waste streams, three of ten are in process.

13.16 Offsite Spent Nuclear Fuel Disposition

- Maintained coordination of offsite spent nuclear fuel disposition.

13.21 Mixed Waste Disposal Trenches

- Completed 84 surveillances.
- Received four boxes from PFNW into Mixed Waste Trench (MWT) 31 in one shipment.

13.24 Management of Cesium and Strontium Capsules Project

- With the support of PTS, the formal kickoff meeting for CSA construction was held on November 13, 2019. Mobilization for the CSA is planned for March 2020.
- Initiated design changes at the WESF truckport utility relocation for the W-135 project construction.

River Risk Management Project

13.10 Environmental Restoration Disposal Facility

- Received 1,214 tons of waste for disposal in November.
- Received 4,330 tons of waste for disposal FYTD. Any corrections in previous months are reflected in this total.
- Received 48 shipments (673 tons) of Plutonium Finishing Plant (PFP) waste using the enhanced radiological controls during disposal operations.
- Disposal offloaded three long-length items in November.
- Transportation achieved one million miles driven safely since transition to CHPRC.

13.12 Integrated Disposal Facility

- Care and Custody
 - Completed November monthly inspections.
 - Completed two significant storm event inspections.
- IDF Operational Readiness
 - With the support of PTS, the following progress was made on installation of IDF infrastructure:
 - Continued clearing, grubbing and grading activities of the waste receiving area for IDF.
 - Awarded the balance of plant contract for facility and utility installation and began contractor submittal activities. Field mobilization and construction is anticipated for early January.
 - Issued the Request for Proposal for the supply and construction of the leachate tank domes and held a pre-bid conference and jobsite walkdown with perspective contractors.
 - Initiated the requirements management processes by starting to collect requirements from key documents. Requirements collection will be in progress through February 2020. The requirements will be implemented and verified for readiness at a later time.
- RCRA Permit Modification Request
 - Finalized all RCRA Permit Addenda for IDF, including Addendum A, Part A; Addendum B, Waste Analysis Plan; Addendum C, Process Information; Addendum D, Groundwater Monitoring Plan; Addendum E, Security; Addendum F, Preparedness and Prevention; Addendum G, Training; Addendum H, Closure Plan; Addendum I, Inspection, and Addendum K, Post-Closure.
 - Initiated the clearance process and final publication requirements to prepare the permit for CHPRC certification and submittal to RL.
 - Provided the 30-day public notice that the RL 60-day public comment period for the IDF RCRA Permit will be initiated in mid-December.

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 long-term storage (i.e., protecting boxes with tarps or protective shoring; over-packing drums). Streamlined and consolidated container management procedures. RL authorized additional FY2019 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 planned to receive 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 Cask Storage System (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.

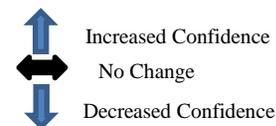
Status

CHPRC submitted an early procurement request to RL for review/approval on October 21, 2019. RL has prepared their response and has indicated it will authorize early procurement for the construction and fabrication of the CSA, Universal Capsule Sleeves and the Transportable Storage Container Basket. RL has also shared that they are withholding authorization of early procurement of the Transportable Storage Container and Vertical Concrete Cask 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 November.													
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 November. 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 the Washington State Department of Ecology (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 November. Select appropriate 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 November. 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>Develop and submit an early procurement request, enabling the W-135 Project to initiate CSA procurement/construction prior to receiving approval of the CSA PDSA.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.</td> <td>11/26/19</td> <td>90</td> </tr> <tr> <td>Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.</td> <td>2/05/20</td> <td>75</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 is forecast by November 30, 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 two weeks to February 5, 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	%	Develop and submit an early procurement request, enabling the W-135 Project to initiate CSA procurement/construction prior to receiving approval of the CSA PDSA.	Complete	100	Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.	11/26/19	90	Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	2/05/20	75
Risk Recovery Action(s)	FC Date	%														
Develop and submit an early procurement request, enabling the W-135 Project to initiate CSA procurement/construction prior to receiving approval of the CSA PDSA.	Complete	100														
Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.	11/26/19	90														
Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	2/05/20	75														
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 the start of 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>Develop and submit an early procurement request enabling the W-135 Project to initiate CSS procurement/fabrication prior to receiving approval of the CSA PDSA.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Receive RL approval of CSA Early Procurement and Construction as requested via CHPRC-1904278</td> <td>11/26/19</td> <td>90</td> </tr> <tr> <td>Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA</td> <td>2/05/20</td> <td>75</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 is forecast by November 30, 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 two weeks to February 5, 2020. Resolution of DOE-HQ comments is anticipated to lead to RL issuing a SER approving the CSA PDSA currently forecast for April 2020.</p>	Risk Recovery Action(s)	FC Date	%	Develop and submit an early procurement request enabling the W-135 Project to initiate CSS procurement/fabrication prior to receiving approval of the CSA PDSA.	Complete	100	Receive RL approval of CSA Early Procurement and Construction as requested via CHPRC-1904278	11/26/19	90	Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA	2/05/20	75
Risk Recovery Action(s)	FC Date	%														
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Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA	2/05/20	75														
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 November. This risk was identified as a critical risk for FY2020. 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, requires re-design or requires 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 November. 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 December 2019 following RL approval of consent packages and an early procurement request (CHPRC-1904278).</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 November. 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: \$3M, 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 November. 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 November. 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 FY2020-2021, pending weather conditions. The MDSA 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 November. 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 November. 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 November. This risk has been identified as a key risk for FY2020. The CSA RCRA Part B Permit is out for public comment, with the period closing on December 20, 2019. To date, limited comments have been 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 November. 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”	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. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$300K, 96 days			<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 preventive/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 November. 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 preventive/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 preventive/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”	Unexpected site conditions are encountered during soil excavation activities, resulting in recovery actions. Risk Handling Strategy: Accept Probability: Low (10% to 24%) Worst Case Impacts: \$240K, 16 days			<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: 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 November .																

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	11.4	11.0	11.4	(0.4)	-3.7%	(0.4)	-3.6%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$0.4M/-3.7%)

The CM schedule variance is within threshold.

CM Cost Performance (-\$0.4M/-3.6%)

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	1,503.4	1,497.9	1,414.0	(5.5)	-0.4%	83.9	5.6%	1,678.8	1,586.3	172.3	92.5

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$5.5M/-0.4%)

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$83.9/+5.6%)

The CTD favorable cost variance is a result of realizing efficiencies such as organizational flattening and streamlining; right-sizing capabilities for planned scope; optimizing resources with reorganization and consolidation of engineering capabilities across W&FMP; combined administrative/records functions across WESF and CSB; removing waste from building(s) and reducing the need for inspections/surveillances; reducing the size and number of radioactive areas/radioactive material 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; and 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 (+\$92.5M/+5.5%)

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

size and number of radioactive areas/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; and 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	211.3	202.9	8.4
Management of Cesium and Strontium Capsules (Line Item)	14.3	0.7	13.6
RL-0013 – Total	225.6	203.6	22.0

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The current FY2020 projected funding level of \$225.6 million is based on the final FY2020 project management baseline (PMB) annual update submitted to RL in September, with updates through fiscal month November. Line Item funding is based on FY2019 carryover and FY2020 new funding targets. The spending forecast of \$203.6 million reflects a reduction of approximately \$3.6 million, primarily driven by adjustments to labor for attrition and alignment to reflect resources on board.

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-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 CD2/3 – RL: Review/Approve PDSA (1 st FY)	5/16/2019(A)	4/06/2020
RL Review IDF FHC	7/19/2019(A)	12/16/2019
RL Final IDF FHC Review and SER Prep	1/20/2020	2/11/2020
RL Review WESF Documented Safety Analysis/Technical Safety Requirement and Issue SER	12/27/2019	4/24/2020
Initiate RL Review of CD-2/CD-3 Documentation	4/24/2020	8/21/2020

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

November 2019
CHPRC-2019-11, 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

In November, Pump and Treat (P&T) operations continued progress on the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)* remedial process documentation for the River Corridor and Central Plateau. Groundwater treatment completed during this month 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	30.0	56.7	2.1	4.0						
HX P&T	23.0	45.0	3.2	6.4						
KR-4 P&T	12.5	22.0	0.1	0.2						
KW P&T	12.8	25.5	1.8	3.8						
KX P&T	38.5	78.3	2.5	4.9						
200 West P&T	97.1	190.3	0.0	2.0	144.0	296.0	1.48×10 ¹¹	2.77×10 ¹¹	11.3	19.9
Combined	213.9	417.8	9.7	21.3	144.0	296.0	1.48×10¹¹	2.77×10¹¹	11.3	19.9
FY2020 Gold Metric	--	2,200.0	--	80.0	--	1,450.0	--	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
	Fiscal Year (FY) 2019 Carryover	Current Calendar Month	
200-BP-5	2	0	0
200-ZP-1	1	1	1
Total FY2019 Carryover Wells	3	1	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	9%
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	16%
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	15%

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-HR-3 OU

- Agreement was reached between the U.S. Department of Energy (DOE), Richland Operations Office (RL), U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) on October 28, 2019, so that implementing documents (e.g., Sampling & Analysis Plan and Waste Management Plan) are fundamental components of a Remedial Design/Remedial Action Work Plan (RD/RAWP) and will be incorporated into the RD/RAWP as addendums. This agreement resolved the remaining comment on the RD/RAWP.

100-KR-4 OU

- Continued operations of the 100K West soil flushing infiltration gallery. As of November 30, 2019, just over 11.2 million gallons of water have been delivered to the infiltration gallery.

100-NR-2 OU

- Completed the respirometer sampling of the in situ bioventing site (UPR-100-N-17) under low river conditions. This sampling is used to determine the respirometer rate of the in situ microorganisms as a measure of the remediation effectiveness.
- Completed the Cultural Resource Review consultation process for the bioventing characterization project. This action resulted in a “No Potential Effect” determination, so there will not be a need for a Memorandum of Agreement (MOA) to define mitigation measures.
- Completed disposition of Ecology’s comments on the biovent characterization Sampling and Analysis Plan (SAP).

Central Plateau

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

- Collected representative water sample from basalt core hole for well 699-47-55 (C9750) on October 30, 2019.

200-WA-1 OU

- Completed the electro resistivity tomography (ERT) survey at the 216-U-1/2 and 216-U-16 waste sites October 25, 2019 and initiated data interpretation and report preparation activities associated with this survey.

200-UP-1 OU

- Transmitted DOE/RL-2017-60, *Remedial Design Investigation Report for the 200-UP-1 Operable Unit Southeast Chromium Plume*, Revision 0, to RL on October 30, 2019.

200-ZP-1 OU

- Completed final tie in of 200-ZP-1 injection well 699-48-70 (YE33).
- Received EPA and RL approval on November 12, 2019 for Optimization Study Near-Term Monitoring (TPA-CN-0875).
- Received EPA and RL approval on November 12, 2019 for installation of 11 new extraction wells supporting the 200-ZP-1 Optimization Study Plan (TPA-CN-0876).

Environmental Integration

- RL and CH2M HILL Plateau Remediation Company (CHPRC) hosted a Hanford Site visit from an independent, multi-disciplinary team of experts to kick off a peer review of the Cumulative Impact Evaluation (CIE) technical approach. The team spent a week in Richland participating in a field tour highlighting reference geological features and waste sites, a review of historical Hanford Site operations and associated waste streams, and overview sessions summarizing the technical aspects of the approach to developing a CIE modeling toolset. Representatives from EPA and Ecology attended the sessions as observers. The week concluded with initial feedback of briefs from the peer review team to the CIE team and DOE senior management. The independent peer review team expects to finish its work and issue a report by the end of December 2019.

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

- Operated the 200 West P&T at an average of 2,248 gallons per minute (gpm) in November 2019. Commenced operation of the permanent effluent chlorination system. Completed bulk carbon removal from the fluidized bed reactors, carbon separators and stripper box.

100 Area P&Ts

- Operated the DX P&T at 694 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 288 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 532 gpm, below the facility capacity of 900 gpm.

MAJOR ISSUES

No major issues 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	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
Explanation of major changes to the project monthly stoplight chart: No major changes in November.										
Realized Risks (Risks that are currently impacting project cost/schedule)										
No Realized Risks identified in November.										
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No Critical Risk identified in November.										
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
No High Risks identified in November.										
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 fiscal year (FY) 2020. <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: 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								
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: 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								
Unassigned Risks (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in November.										

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	7.1	6.5	6.6	(0.6)	-8.5%	(-0.1)	-1.3%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$0.6M/-8.5%)

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

- Examination of the Cumulative Impact Evaluation (CIE) unqualified model simulations (completed in FY2019) revealed unanticipated issues (in-scope unplanned) in the Composite Analysis (CA) base case simulation that must be addressed before continuation of the FY2020 planned work. In-scope unplanned activities include correction of issues in the CA inventory data package, resolution of issues with the recharge evolution tool (RET) and performance of additional reviews of model representativeness.
- The vendor submittal package for the 200-ZP-1 air stripper tower was not received, delaying the associated performance.

CM Cost Performance (-0.1M/-1.3%)

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	1,648.9	1,644.2	1,596.3	(4.6)	-0.3%	47.9	2.9%	1,766.0	1,708.4	112.1	57.5

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$4.6M/-0.3%)

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 (+\$57.5M/+3.3%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0030 Soil and Groundwater Remediation	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	132.1	131.0	1.1

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

There was no change in November to FY2020 projected funding of \$132.1 million. The spending forecast of \$131.0 million reflects a reduction of approximately \$1.1 million, primarily driven by adjustments to labor for attrition and alignment to reflect resources on board.

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, *Hanford Facility Agreement and Consent Order* (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 200-DV-1 Treatability Test Evaluation Report, Revision 0 to Ecology (DOE/RL-2017-58)	10/01/2019(A)	11/21/2019
RL Review 200-UP-1 Remedial Design/Remedial Action Work Plan, Revision 2 Decisional Draft	10/01/2019(A)	10/30/2019(A)
RL Review 100-KR-4 RI, Draft Revision 0	12/02/2019	12/09/2019
RL Review 100-NR Biovent Characterization Revised Final Cultural Resource Review (CRR)	12/09/2019	12/12/2019
RL Transmit 200-ZP-1 Operations and Maintenance (O&M) Plan, Draft A to EPA for Review	12/18/2019	12/31/2019
RL Review 100-KR-4 Draft Continuing Sources Tech Memo	12/18/2019	12/24/2019
RL Transmit 200-UP-1 RD/RA Work Plan, Draft A Revision 1 to Regulators for Review	01/07/2020	01/21/2020
RL Transmit 100-KR-4 RI Draft Revision 0 to EPA for Review	01/09/2020	01/23/2020
RL Transmit 200-ZP-1 O&M Plan, Draft A to EPA for Review	01/09/2020	01/22/2020
RL Transmit Central Plateau Tracer Study Sample Analysis Plan, Draft Revision 0 to Regulators for Review	01/16/2020	01/16/2020
RL Submit Final 100-NR Biovent Characterization CRR to State Historic Preservation Office/Tribes	01/29/2020	01/30/2020

*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

November 2019
CHPRC-2019-11, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In November, Central Plateau Risk Management (CPRM) project crews abated more than 2,700 feet of steam line asbestos in the 200 East and 200 West Areas, including completing all steam line scope associated with the Integrated Disposal Facility and 222-S Labs. Personnel initiated biological hazard cleanup on all three floors of the 224-B Building and electricians initiated installation of temporary power and lighting throughout the facility. At the Reduction and Oxidation (REDOX) Facility, the project received and reviewed the 60 percent design for the temporary ventilation system and finalized the layout design of the REDOX North yard. Completed cold and dark preparatory work, including ground scans, for the 2701-AB building. Finally, 957 gallons of radioactively contaminated water was pumped from the V11-216-A-TK-2 PUREX catch tank.

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	1	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	1	22	11/14/19 – Employee received an abrasion on thumb on a cabinet door. Employee was transported to HPM Corporation for treatment, given over the counter medicine and released back to work without restriction. (25421)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

CPRM Surveillance and Maintenance

- Repaired washouts at 2607-E3 (Sanitary Sewer/Drain Field), 216-A-29 (Snow Canyon), 218-E-12A (Burial Ground), 216-T-17 (Trench), 200-W-53 (Soil Contamination Area), 216-S-18 (Trench) and 216-U-8 (Crib).
- Performed electrical utilities walkdown at MO-2525 for storage containers HS-001 and HS-002.
- Performed a walkdown with Washington River Protection Solutions of a proposed pipeline flush on a possible inactive pipeline (200-E-127-PL-B) owned by CPRM to determine if a transfer line is causing a subsidence to appear.
- Shipped waste associated with RMA-004 (Radioactive Material Area) at B-Plant off the Waste Encapsulation and Storage Facility footprint.
- Pumped 957 gallons of radioactively contaminated water from the V11-216-A-TK-2 Plutonium Uranium Extraction Plant (PUREX) catch tank.
- Made initial characterization entry via borescope for 191-S sump at REDOX.

REDOX Canyon Risk Mitigation

- Received and reviewed proposals for a contractor to open a portion of the North Sample Gallery wall to facilitate future waste loadouts.
- Developed procurement list and placed procurements to support the infrastructure upgrades at REDOX, including the new step-off pad trailer in the north yard.
- Finalized request for proposals for a contractor to place a temporary road and concrete slab for the future placement of the temporary exhaust system at REDOX.
- Finalized site layout plan in the North yard with worker engagement to support the infrastructure improvements.
- Completed low hazard work package reviews with subject matter expert input.
- Reviewed submitted proposals for the procurement of a new substation for REDOX required to support cold-and-dark process.
- Received and reviewed 60 percent design report from subcontractor for the temporary exhaust system.

224-B Demo Prep

- Completed temporary lighting installation and biological hazard cleanup work packages for 224-B.
- Submitted the Plant Force Work Review and developed the draft statement of work for the purchase of the rest room/shower and doublewide trailer as well as the installation contractor for 224-B.
- Completed the relocation of CONNEX 2181 to support ground-penetrating radar (GPR) scans and grubbing in preparation for the trailer installs at 224-B.
- Completed the GPR scans and radiological surveys for 224-B.
- Completed the work package and job hazard analysis review for both the removal of fencing and installation of a gate on the south of 224-B as well as the installation of anchor points for fall protection on the 224-B roof.

276-BA Closure

- Samples sent for re-analysis whose initial analysis results reflected silver being above closure performance standards were received and met closure performance standards.

PUREX North

- Finalized ECR and Work Package for doublewide mobile office installation. Two mobile offices will house fieldwork crews to support future fieldwork at PUREX North.

- Started developing documents to support proof of mechanical and electrical isolations of PUREX ancillary buildings (2701-AB, 2714-A, 214-A and 211-A).
- Initiated characterization sampling instructions to support hazardous material (HAZMAT) removal.

Steam Line Removal

- Completed abatement, processing and loadout (500 out of 500 linear feet) of steam lines adjacent to the 222-S Laboratory.
- Completed the asbestos insulated steam line abatement (2,126 out of 2,126 linear feet) and 80% of the pipe support demolition for Leg 22 along 7th Street in 200 East.
- Abated 654 linear feet of asbestos insulated steam lines (out of 2,000 linear feet) for Leg 23 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

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 PUREX sample analysis plan to support sampling and 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, currently focused on dispositioning public comments on 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 rather than tying the activity to a fiscal year.

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 are performing 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 will be awarded in December, and installation of the trailer will likely occur in January. REDOX personnel has 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.) will be ordered in December. Meetings with carpenters and ironworkers will take place in December to begin the procurements needed to support the final setup of the step-off pad trailer. Completed low hazard work package reviews with subject matter experts input in November. A formal procedure that addresses the response to the discovery of unidentified liquids within REDOX is forecast to be completed in December.

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.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0040/WBS-040																
Explanation of major changes to the project monthly stoplight chart: There are no major changes to the stoplight chart in November. Risk REDOX-11: "Unexpected Discovery – Hazmat" was removed from the stoplight chart.																
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			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. <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>December 2019</td> <td>75</td> </tr> </tbody> </table> Risk Action Assessment: No major changes in November . Work packages are being modified, and hazard identifications are being worked to address the water issue. 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. The procedure will be finalized in December.	Risk Recovery Action(s)	FC Date	%	Evaluate means to identify and sample liquids discovered after inclement weather.	December 2019	75						
Risk Recovery Action(s)	FC Date	%														
Evaluate means to identify and sample liquids discovered after inclement weather.	December 2019	75														
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			Risk Event: A concerned citizen called a stop work, which caused delays and unplanned work necessary to address the required action. <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>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>25</td> </tr> <tr> <td>Upgrade temporary power/lighting and localized ventilation</td> <td>June 2020</td> <td>0</td> </tr> </tbody> </table> Risk Action Assessment: 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.	Risk Recovery Action(s)	FC Date	%	Develop site layout plan for infrastructure upgrades	Complete	100	Create and implement a phased approach to address identified concerns	June 2020	25	Upgrade temporary power/lighting and localized ventilation	June 2020	0
Risk Recovery Action(s)	FC Date	%														
Develop site layout plan for infrastructure upgrades	Complete	100														
Create and implement a phased approach to address identified concerns	June 2020	25														
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			Risk Event: Leaking roof results in unsafe working conditions for personnel. <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform cold-and-dark activities to shut off building power.</td> <td>August 2020</td> <td>40</td> </tr> <tr> <td>Repair minor roof defects.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> 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 are expected December 11, 2019. Once proposals are reviewed, there will be a better understanding of the forecasted cold-and-dark completion date. 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.	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"> <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 November . 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 November .													
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"> <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>1/30/2019</td> <td>85</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in November . This risk was identified as a key project risk for FY2020. CPRM is working with TerraGraphics to complete an aging structures analysis. Structure analysis of the 242-T Evaporator and 241-Z-361 was completed during November. The remaining structure 231-Z requested for evaluation is under contract negotiation, the forecasted completion date has been extended month from the 12/31/19 dated reported in October pending development of a refined completion date can be determined based on preliminary structural analysis results 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.	1/30/2019	85			
Mitigation Action(s)	FC Date	%											
Perform lifecycle evaluations of critical structures, systems, and components.	1/30/2019	85											
Unassigned Risks (Pending ownership of identified risks/opportunities)													
No unassigned risks identified in November .													

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	3.7	3.1	4.2	(0.6)	-16.8%	(1.1)	-35.9%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance: (-\$0.6M/-16.8%)

The current month negative schedule variance is mainly attributed to the management-directed work stand down at REDOX. Personnel are focusing on completing the action plan required to return to work. In addition, procurement delays associated with PUREX North work scope contributed to the negative variance. Walkdowns were needed to investigate PUREX ancillary buildings to plan properly for materials required for abatement and demolition activities. There were issues with resource availability to support the investigative walk-downs, causing them to be rescheduled and therefore taking more time than originally planned. Walkdowns have been completed, all materials have been identified, an Electronic Bill of Material order has been drafted and the order will be placed closer to mobilization of personnel performing fieldwork.

CM Cost Performance: (-\$1.1M/-35.9%)

The current month cost variance is mainly attributed to increased Mission Support Alliance (MSA) services received in support of the 200 West steam line removal project. Heavy equipment usage for down-sizing of steamlines and footings, waste processing, and waste loadout required significantly more motor carrier and fleet services than planned. Additionally, the footings were much larger than planned in the baseline, which required more time to downsize and loadout, therefore increasing costs.

An additional contributor to the variance are costs associated with the unplanned contract to analyze the likelihood of failure of various structures on the Central Plateau due to contents and age. Analysis of an existing crack in the 241-Z-361 tank to evaluate the structural integrity continued into November. Finally, the management-directed work stand down at REDOX contributed to the variance as work crews are focusing on implementation of the Phased Approach plan. This is delaying previously planned work until all identified issues associated with the management directed stand down have been addressed.

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	573.0	567.3	548.7	(5.7)	-1.0%	18.6	3.3%	625.8	609.5	60.7	16.3

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance: (-\$5.7M/-1.0%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$18.6M/+3.3%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$16.3M/+2.6%)

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	67.1	67.1	(0.0)

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

FY2020 expected funding of \$67.1 million includes \$7.4 million of carryover funding and an expected new budget authority of \$60.0 million. The spending forecast is based on the final FY2020 performance measurement baseline annual update submitted to RL on September 11, 2019, with updates through November.

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) Sampling Analysis Plan (SAP) (2017-33)	10/21/2019(A)	02/04/2020
Regulator Review 224-B (B Plant) Removal Action Work Plan (RAWP) (2017-34)	8/16/2017(A)	01/15/2020
RL and Ecology Review PUREX N Closure Plan (2015-72)	07/18/2019(A)	02/12/2020
Regulator Review Tier 2 PUREX RAWP (2016-47)	07/23/2019(A)	01/16/2020
Regulator Review Tier 2 PUREX SAP (2016-46)	06/10/2019(A)	02/04/2020
Regulator Review B Plant EE/CA (2017-34)	10/02/2019(A)	01/14/2020
RL Review PUREX Action Memorandum (2016-53)	01/21/2020*	02/10/2020

*CHPRC's forecast Delivery Date of the PUREX Action Memorandum (2016-53) to RL for their review slipped about 2.5 months from the November 06, 2019 forecast date in October 2019 due to the delay in the approval of the PUREX EE/CA, which was required in order for the PUREX AM to be prepared for Decisional Draft (DD) transmittal to RL.

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

November 2019
CHPRC-2019-11, 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):

In the 105KW Basin, crews continued clearing the northern part of the west bay, making a footprint for the sparging station and vertical pipe casings (VPCs) that will be utilized to segregate high dose debris recovered from the basin. Work also continued to stage and obtain dose rates of debris items throughout the basin to support creation of an overall debris map and support the Environmental Restoration Disposal Facility (ERDF) waste acceptance calculations. The offsite fabrication of the sparging station, tipping assembly and VPC base sections continued. At the Maintenance and Storage Facility (MASF), development of tools required to size-reduce pole tools, inspect the settler tubes and collect a sample from the sand filter continued. Deactivation activities at the 105KW basin initiated by starting lockout/tagout and draining activities associated with the basin water recirculation system. In cooperation with the Hanford Atomic Metal Trades Council and Building Trades, Garnet Filter Media Removal System (GFMRS) mockup training was completed at MASF to support and improve planned installation and operational activities. Work packages and technical documents were prepared to support transition from the Engineered Container Retrieval and Transfer System (ECRTS) to GFMRS operations. Mobilization of subcontractor that will perform the GFMRS installation was completed, and a Joint Evaluation Team (JET) was held to verify RA-2 level readiness required for GFMRS startup. CHPRC approved the final design for the 105KE Safe Storage Enclosure. The team reviewed and verified calculations to support the closure of the 100-K-99 waste site. The newly selected 100-K Area soil remediation subcontractor initiated mobilization.

River Risk Management Project (RRMP):

In support of 300-296 Waste Site remediation, the Hanford Fire Department (HFD) completed the required annual inspection and testing of the 324 Building fire protection system. The project completed grouting cubicles on the first floor and initiated grouting cubicles on the second floor of A Cell Gallery. In addition, performed sealing of the B Cell Gallery, second floor west cubicle and east cubicle. Crews routed the water supply from 131 B-Gallery to Room 18 and installed a camera in Room 18. Crews also drilled anchor holes and installed angle supports for steel plates on the truck lock floor. Crews installed six north-shoring piles outside the 324 Building to support future soil stabilization under the east wall of B Cell, where 17 of 21 piles are installed. Structural modifications in the 324 Building basement continued with the completion of the fourth pilot hole and progressed with drilling at the fifth location. Crews mobilized the scissor lift from C Cell to the airlock to access the A/D crane for investigation and performed troubleshooting of the A/D Crane. Due to a worker contamination at the 324 facility on November 14, 2019, a management directed stand down was implemented on 300-296 project rad work within the facility. A CHPRC and Jacobs working group is being formed to look at opportunities to minimize contamination risks and optimize radiological controls.

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 CH2M HILL Plateau Remediation Company (CHPRC) procedures.	9/30/2020	16%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	1	2	11/07/2019 - Employee suffered laceration on forehead when component was thrown by buffer wheel and struck face shield. (25418)
Total Recordable Injuries	2	1	11/19/2019 - Subcontractor suffered fractured right middle finger when finger was caught between plate and jack while moving transformer jack from truck bed. (25427) PTS 11/07/2019 - Employee suffered laceration on forehead when component was thrown by buffer wheel and struck face shield. (25418)
First Aid Cases	0	10	N/A
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

100K Basin Operations

- 100K Closure Project:
 - 100K Demolition
 - Resumed pumping oily water from the 166KE Fuel Storage Bunker.
 - 100 K West Basin Deactivation
 - Continued clearing the northern part of the west bay to clear footprint to install the sparging station and vertical pipe casings (VPCs), which will segregate high dose debris retrieved from the basin.
 - Completed operator and Construction Trades training on the MASF mockup to support and improve planned installation and operational activities of the GFMRS.
 - JET verified RA-2 level readiness for GFMRS startup.
 - 100K Remaining Wastes Sites
 - The remediation subcontractor initiated mobilization.
 - Verified calculations to support the closure of the 100-K-99 waste site.
 - 105K East Reactor Interim Safe Storage Structure (ISS)
 - The final design for the 105KE Safe Storage Enclosure was approved by CHPRC.

RRMP, 324 Building Disposition Project

- Miscellaneous:
 - Installed anemometer on south airlock supply inlet.
 - Completed monthly crane preventive maintenance.
 - Installed lockout/tagout on D Cell interference.
- Facility preparations:
 - Drilled anchor holes and installed angle supports for steel plates on the truck lock floor.
 - Routed water supply from 131 B-Gallery to Room 18.
 - Installed camera in Room 18.
 - Performed cell sealing of B Cell Gallery, second floor west cubicle and east cubicle.
- Structural modifications:
 - Completed drilling and grouting 17 of 21 pile locations for the north temporary shoring site in support of future soil stabilization installation.
 - Completed the fourth pilot hole in Room 18.
 - Completed drill rig maintenance and mobilization to final pilot hole location in Room 18.
- Cell cleanout:
 - Received shielded cradle supporting 324 Building waste loadout.
 - Filled sixth 9×5×5 box with three bins of B Cell debris and A Cell.
 - Drilled anchor holes and installed angle supports for steel plates on the truck lock floor.
 - Mobilized scissor lift from C Cell to the airlock to access the A/D crane for investigation.
 - Performed investigation and troubleshooting of A/D Crane.
- Mockup:
 - Performed monthly preventive maintenance on mockup crane.
 - Continued proficiency training on installed equipment.

Project Technical Support

- Training and Procedures:
 - Worked with facility management to validate and update training templates for 324 Building Project operations personnel. The new templates display training needs for personnel and simplify template assignments based on position, reduce redundancy and ensure that workers are assigned proper and complete training for their role.

MAJOR ISSUES

Issue

The 100K Closure Project is ready to award the vertical pipe casing (VPC) fabrication contract as authorized in the revised FY2019 Plan. U.S. Department of Energy, Richland Operations Office (RL) has an informal hold on the contract.

Corrective Action

A briefing was delivered to the RL assistant manager for River and Plateau, director for Project and Facilities Division (PFD), in July regarding the efficacy of using the VPC system through execution of the 100K West Basin deactivation and demolition strategy as presented in the FY2020 Performance Measurement Baseline (PMB) annual update.

Status

The RL PFD director approved the fabrication of the debris washing station for the VPC system. In October, the project was still awaiting authorization to proceed with the balance of fabrication activities for the VPCs. Authorization to proceed was received in November. Issue closed and will be removed next month.

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, the project management suspended 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.

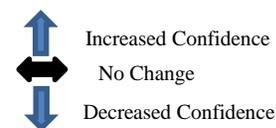
Status

Resumption team members have been actively working with project personnel and SMEs in identifying revised control strategies to greatly reduce the potential of future radiological contamination events. Existing processes and equipment currently utilized are being evaluated to assist with developing recovery actions required before resuming work in radiologically contaminated areas at the 324 Building.

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																									
<p>Explanation of major changes to the project monthly spotlight chart: For November, Risk RCC-300-296-36, "Contamination Experienced During Radiochemical Engineering Cells (REC) Cell Operations," was moved from the <i>High Risk Threat Value</i> to the <i>Realized Risk</i> section. The forecast completion of structural modification design, a Recovery Action associated with RCC-300-296-30, slipped 53 days.</p>																									
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	●	↔	<p>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.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Recovery Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Contractor prepare and submit structure modification design -30 percent to 60 percent (VE2810).</td> <td style="text-align: center;">8/15/2018</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Perform micropile demonstration and verification to support structural modification design (VS1220A).</td> <td style="text-align: center;">1/24/2019</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Structural modifications design micropile comment resolution (VS1220C).</td> <td style="text-align: center;">5/13/2019</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Perform pilot holing for structural mods (VS5010).</td> <td style="text-align: center;">9/7/2019</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Perform Pit 6 soil verification testing/geotech (VS1220B).</td> <td style="text-align: center;">8/21/2019</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Contractor prepare and submit structural modification design (VN1220).</td> <td style="text-align: center;">12/30/2019</td> <td style="text-align: center;">95</td> </tr> </tbody> </table> <p>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 November 7, 2019 date forecast in October and now forecast will be complete December 30, 2019.</p>	Recovery Action(s)	FC Date	%	Contractor prepare and submit structure modification design -30 percent to 60 percent (VE2810).	8/15/2018	100	Perform micropile demonstration and verification to support structural modification design (VS1220A).	1/24/2019	100	Structural modifications design micropile comment resolution (VS1220C).	5/13/2019	100	Perform pilot holing for structural mods (VS5010).	9/7/2019	100	Perform Pit 6 soil verification testing/geotech (VS1220B).	8/21/2019	100	Contractor prepare and submit structural modification design (VN1220).	12/30/2019	95
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RCC-300-296-07, "300-296 Failure of a 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	●	↔	<p>Risk Trigger Metric: In August, the Radiochemical Engineering Cells (REC) A/D Crane failed during operations.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Recovery Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Determine B Cell replacement crane options</td> <td style="text-align: center;">3/19/2019</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Award contract – B Cell IOT crane – 324 Building</td> <td style="text-align: center;">6/20/2019</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Perform A/D Crane Survey/Investigation</td> <td style="text-align: center;">11/12/2019</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Procure/Fabricate A/D Crane Parts</td> <td style="text-align: center;">12/12/2019</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Perform A/D Crane Repair</td> <td style="text-align: center;">2/5/2020</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> <p>Recovery Assessment: A/D Crane survey and 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 delays 35 days due to additional verification of components and measurements. Performing the repairs has been delayed by the procurement and realization of risk RCC-300-296-36, "Contamination Experienced During Radiochemical Engineering Cells (REC) Cell Operations". The FC date for performing crane repairs is subject to change, pending definition of revised practices and controls to minimize the potential of future radiological contamination.</p>	Recovery Action(s)	FC Date	%	Determine B Cell replacement crane options	3/19/2019	100	Award contract – B Cell IOT crane – 324 Building	6/20/2019	100	Perform A/D Crane Survey/Investigation	11/12/2019	100	Procure/Fabricate A/D Crane Parts	12/12/2019	0	Perform A/D Crane Repair	2/5/2020	0			
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0041/WBS-041																			
RCC-300-296-36, "Contamination Experienced During Radiochemical Engineering Cells (REC) Cell 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, 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>7/17/2019</td> <td>100</td> </tr> <tr> <td>Review and modify RAD controls and strategies to improve worker safety</td> <td>TBD</td> <td>0</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 initiated an analysis of events and is developing corrective actions necessary. Cleanup work in radiologically controlled areas inside the building will not resume until there is an acceptable control strategy moving forward.</p>	Recovery Action(s)	FC Date	%	Perform CHA floor scabbling and apply epoxy floor coating	7/17/2019	100	Review and modify RAD controls and strategies to improve worker safety	TBD	0	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	7/17/2019	100																	
Review and modify RAD controls and strategies to improve worker safety	TBD	0																	
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 November.																			
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: 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 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 March 28, 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: 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 (NOC, 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 FY2019.</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: 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>1/20/2020</td> <td>75</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. The forecast date to mobilize and train a second soil stabilization crew slipped 7 days to January 20, 2019.</p>	Mitigation Action(s)	FC Date	%	Mobilize and train second soil stabilization crew	1/20/2020	75	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	1/20/2020	75																	
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, remote excavation arm (REA) 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>12/19/2019</td> <td>90</td> </tr> <tr> <td>Procure universal cutting tool</td> <td>8/20/2020</td> <td>5</td> </tr> <tr> <td>Develop extensive systems repair and maint. protocol</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Evaluate and procure critical spare parts</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: Potential impacts continue to be monitored and assessed for mitigation as project evolutions continue. Estimate to complete (ETC) is updated monthly to reflect potential impacts of risk being realized.</p>	Mitigation Action(s)	FC Date	%	Procure MSM manipulators and storage carts	12/19/2019	90	Procure universal cutting tool	8/20/2020	5	Develop extensive systems repair and maint. protocol	Ongoing	N/A	Evaluate and procure critical spare parts	Ongoing	N/A
Mitigation Action(s)	FC Date	%																	
Procure MSM manipulators and storage carts	12/19/2019	90																	
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Develop extensive systems repair and maint. protocol	Ongoing	N/A																	
Evaluate and procure critical spare parts	Ongoing	N/A																	
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 Waste Containers</td> <td>TBD</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: 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 Waste Containers	TBD	N/A						
Mitigation Action(s)	FC Date	%																	
Continue use of increased shielding and ALARA controls	Ongoing	N/A																	
Procurement of Specialized Waste Containers	TBD	N/A																	
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>8/11/2020</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. Impacts continue to be incorporated into the project schedule, along with the estimate to complete and reflect further impacts of risk being realized.</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)	8/11/2020	78			
Mitigation Action(s)	FC Date	%																	
Install radiological assay system and perform construction acceptance test at mockup	3/14/2019	100																	
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0041/WBS-041																
100K-SR-05, "Unexpected Site Conditions"	Unexpected site conditions are encountered during soil excavation activities, resulting in recovery actions, causing unplanned, and project in-scope work and schedule delays. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$760K, 32 days	●	↔	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. <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> Mitigation Assessment: Accept	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"	During fabrication and installation, problems with design are encountered resulting in design changes, resulting in cost and schedule impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$400K, 32 days	●	↔	Risk Trigger Metric: During installation of ECRTS tie-in equipment in support of North Loadout Pit and GFMR, design issues were identified that could not be determined during mock up testing at MASF, resulting in design changes. This scenario would impact the firm fixed price <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 walkdowns will be implemented to reduce the risk.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Integrated system testing/operator training in support of KW basin sand filter media removal.</td> <td>1/30/20</td> <td>0</td> </tr> </tbody> </table> construction contractor Mitigation Assessment: Integrated system testing and operator training is complete for the GFMR system. The need for additional training for the SFMR system is being evaluated by the Project.	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 walkdowns will be implemented to reduce the risk.	Complete	100	Integrated system testing/operator training in support of KW basin sand filter media removal.	1/30/20	0
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 walkdowns will be implemented to reduce the risk.	Complete	100														
Integrated system testing/operator training in support of KW basin sand filter media removal.	1/30/20	0														
Unassigned Risks (Pending ownership of identified risks/opportunities)																
No unassigned risks identified in November.																

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	8.0	7.0	8.7	(1.0)	-12.1%	(1.7)	-24.9%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$1.0M/-12.1%)

The CM schedule variance for RRMP is primarily due to delays in progressing with fabrication of the B Cell Crane (cable reel) and universal cutting tool procurements. In addition, 324 Building equipment installation activities related to the radiological assay system and shielded probe collimator have been delayed as resources are being prioritized to support B Cell debris removal and A/D Crane investigations. In addition, 100K is behind schedule due to impacts from disposition of oily water from 166KE/AKE. Removal of tank contents is requiring alternative disposition methods due to consistency of oily water found in the tanks. In addition, 100K is behind schedule due to impacts from the delay in RL authorization of the fabrication of the VPCs and a delay in award and mobilization of the 100-K waste site remediation subcontractor.

CM Cost Performance (-\$1.7M/-24.9%)

The unfavorable variance for RRMP was primarily related to latent beta contamination issues that continue to hinder the pilot hole installation work within Room 18 of the 324 Building. Productivity is

low, while costs remain the same. K Basin -Operations incurred a higher than planned costs associated with mobilization and training costs from the for the installation subcontractor for garnet filter media removal system and vertical pipe casings. CHPRC planning assumed the subcontractor would provide partially trained staff and did not.

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	710.3	695.5	675.2	(14.9)	-2.1%	20.3	2.9%	822.5	802.6	127.4	199.9

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$14.9M/-2.1%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance (+\$20.3M/+2.9%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$199.9M/+2.4%)

The 100K Closure positive variance at completion (VAC) is primarily due to labor; fewer resources have been supporting the level of effort program management, and required usage-based services support was less than planned. Some resources were diverted to other priority work scope, and some resource sharing has occurred. Additionally, completing the Confirmatory Sampling – No Action waste sites early and under budget contributed to the forecast VAC.

Offsetting the positive variance, the 324 Building Disposition project experienced unplanned costs for subcontractor development of the design phases for structural modifications. Additional design requirements were placed on the subcontractor that were not originally part of their scope of work. These additional requirements included more extensive building modeling, soil stabilization, and building foundation verifications and site testing demonstrations, all of which have contributed to the increased EAC. In addition, latent beta contamination issues continue to hinder work within the 324 Building and effect the subsequent follow on fieldwork for performing structural modifications.

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	143.0	142.0	1.0
Numbers are rounded to the nearest \$0.1 million.			

Funds/Variance Analysis

There was no change in November to FY2020 expected funding of \$143.0 million. The spending forecast reduced overall from last month by, \$1.0 million, primarily driven by adjustments to labor for attrition and alignment to resources on board.

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	11/21/2019	On schedule

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)	12/19/2019
DOE Authorization to Proceed on VPC Fabrication – 105-KW Basin*	6/13/2019(A)	11/6/2019(A)
RL Issue SER for 324 Building DSA/TSR	9/10/2019(A)	11/21/2019
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

*CHPRC has been awaiting RL authorization to fabricate the VPCs to support deactivation activities at the 105KW Basin. Since authorization was not received by October 15, 2019, the fabrication of the VPCs and associated installation are now on the critical path to deactivation.

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

November 2019
CHPRC-2019-11, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

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

KEY ACCOMPLISHMENTS

RL-0042 Accomplishments

- Work crews initiated installation of the P-16 variable frequency drive (VFD) and electrical equipment located in building 480-D.
- Building 402 roof repair:
 - Obtained the Hanford Site Fire Marshal permit required to proceed with 402 Building roof repair.
 - Received approval for roof repair work package SM-19-00201.
 - Mobilized vendor supplies/equipment and started roof repair coating. Roof application is expected to be completed by November 30, 2019.

MAJOR ISSUES

Issue

Initiated development of an engineering change request (ECR) 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 discussion 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	0.2	0.2	0.2	0.0	0.0%	(0.1)	-30.8%

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: (\$-0.1M/-30.8%)

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	29.1	29.1	24.3	0.0	0.0%	4.9	16.7%	33.0	28.4	4.1	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: (+\$4.9M/+16.7%)

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/+14.1%)

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	3.7	1.1

Numbers are rounded to the nearest \$0.1 million.

Funds Analysis

FY2020 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 \$3.7 million based on the final FY2020 project management baseline annual update submitted to RL on September 11, 2019, with updates through November. The variance of \$1.1 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



November 2019
CHPRC-2019-11, 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 / 10 / 28							
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 / 11 / 17							
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 558,996	d. TARGET PROFIT/FEE 278,070	e. TARGET PRICE 6,596,684	f. ESTIMATED PRICE 7,027,399	g. CONTRACT CEILING 6,596,684	h. ESTIMATED CONTRACT CEILING 7,027,399	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 6,700,965									c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)					
b. WORST CASE 6,797,379																	
c. MOST LIKELY 6,749,329			6,877,610			128,281											
8. PERFORMANCE DATA																	
CAPN.PBS																	
ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION			
	BUDGETED COST		ACTUAL COST WORK PERFORMED		VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED		VARIANCE						
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
RL-0011 Nuclear Mat Stab & Disp PFP	4,627	2,536	3,743	-2,091	-1,207	1,128,185	1,116,185	1,212,950	-12,001	-96,765	0	0	0	1,143,564	1,235,882	-92,317	
RL-0012 SNF Stabilization & Disp	66	66	-26	0	92	759,502	759,502	729,858	0	29,645	0	0	0	759,593	729,878	29,715	
RL-0013 Solid Waste Stab & Disp	11,386	10,961	11,356	-425	-395	1,503,434	1,497,900	1,414,036	-5,534	83,864	0	0	0	1,678,763	1,586,311	92,453	
RL-0030 Soil & Water Rem-Grndwtr/Vadose	7,128	6,523	6,610	-605	-87	1,648,869	1,644,244	1,596,326	-4,625	47,918	0	0	0	1,765,967	1,708,418	57,549	
RL-0040 Nuc Fac D&D - Remainder Hanfrd	3,739	3,111	4,227	-628	-1,116	573,031	567,302	548,741	-5,728	18,561	0	0	0	625,801	609,484	16,317	
RL-0041 Nuc Fac D&D - RC Closure Proj	7,969	7,002	8,747	-967	-1,745	710,338	695,470	675,210	-14,868	20,260	0	0	0	822,500	802,613	19,887	
RL-0042 Nuc Fac D&D - FTF Proj	181	181	236	0	-56	29,129	29,129	24,268	0	4,860	0	0	0	33,025	28,379	4,645	
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	35,096	30,380	34,894	-4,716	-4,514	6,352,488	6,309,732	6,201,390	-42,756	108,342	0	0	0	6,829,214	6,700,965	128,249	
f. MANAGEMENT RESERVE	48,364																
g. TOTAL	35,096	30,380	34,894	-4,716	-4,514	6,352,488	6,309,732	6,201,390	-42,756	108,342	0	0	0	6,877,578			
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																	
a. VARIANCE ADJUSTMENT																	
b. TOTAL CONTRACT VARIANCE										-42,756	108,342				6,877,578	6,700,965	176,613

*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 / 10 / 28		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019 / 11 / 17		
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	1,110	806	1,036	-304	-230	101,603	99,705	93,245	-1,898	6,461	0	0	0	116,176	108,308	7,868
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	82	82	69	0	13	8,776	8,776	5,738	0	3,038	0	0	0	9,926	6,892	3,034
3B - PFP Closure Project	4,627	2,536	3,743	-2,091	-1,207	1,039,546	1,027,545	1,131,885	-12,001	-104,341	0	0	0	1,054,925	1,154,817	-99,893
3C - Waste & Fuels Management Project	8,286	8,188	8,739	-98	-552	1,327,079	1,322,501	1,242,051	-4,578	80,450	0	0	0	1,458,653	1,373,131	85,522
3D - Soil & Groundwater Remediation	5,997	5,697	5,556	-301	141	1,445,519	1,442,792	1,395,372	-2,727	47,421	0	0	0	1,547,757	1,492,111	55,646
3G - K Basin Oper & Plateau Remediation Project	4,139	3,679	4,305	-460	-626	1,116,728	1,112,037	1,055,767	-4,691	56,270	0	0	0	1,173,843	1,120,305	53,538
3H - River Risk Management Project	6,955	6,121	6,998	-834	-877	321,814	310,681	329,915	-11,133	-19,234	0	0	0	420,132	433,418	-13,286
3K - Central Plateau Risk Reduction	3,900	3,271	4,448	-628	-1,176	513,434	507,706	493,331	-5,728	14,375	0	0	0	569,813	557,895	11,918
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)	35,096	30,380	34,894	-4,716	-4,514	6,352,488	6,309,732	6,201,390	-42,756	108,342	0	0	0	6,829,214	6,700,965	128,249
f. MANAGEMENT RESERVE														48,364		
g. TOTAL	35,096	30,380	34,894	-4,716	-4,514	6,352,488	6,309,732	6,201,390	-42,756	108,342	0	0	0	6,877,578		

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 / 10 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 11 / 17	
		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)		
300 - Office of the President	9	935	6	7	7	7	6	6	6	6	6	6	6	0	1000
303 - Internal Audit	5	605	4	4	4	5	5	5	5	5	5	5	5	0	655
304 - General Counsel	4	556	4	4	4	4	4	4	4	4	4	4	4	0	592
31 - Communications	8	1227	7	7	8	8	8	8	8	8	8	8	7	0	1303
32 - Safety Health Security & Quality	62	8581	63	64	63	63	63	63	63	63	63	63	63	0	9212
34 - Env Program & Strategic Plng	42	5886	41	45	44	43	45	47	47	46	45	40	1	6330	
35 - Business Services	53	8179	55	57	58	64	64	64	65	65	65	64	0	8797	
36 - Prime Contract & Proj Integr	36	4451	37	37	38	38	39	37	38	38	38	38	0	4830	
37 - Resource Mgmt & Strategic Intg	41	3393	40	39	42	44	44	44	44	44	44	44	0	3821	
38 - Project Technical Services	36	6488	38	39	40	40	40	40	40	40	40	40	0	6884	
3B - PFP Closure Project	179	54051	186	178	193	166	115	12	1	0	0	0	0	54900	
3C - Waste & Fuels Management Project	385	58973	388	385	377	384	379	396	408	393	395	374	21	62872	
3D - Soil & Groundwater Remediation	254	43187	251	259	258	271	282	279	276	262	262	229	20	45835	
3G - K Basin Oper & Plateau Remediation Project	200	37144	195	209	199	218	194	218	227	230	211	204	172	39422	
3H - River Risk Management Project	218	9293	227	230	234	233	232	226	219	221	225	228	149	11717	
3K - Central Plateau Risk Reduction	225	20389	225	232	238	238	238	229	232	236	230	231	385	23103	
g. TOTAL DIRECT	1758	263339	1768	1795	1804	1824	1757	1677	1681	1660	1640	1578	748	281272	

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) 2019/10/28	
b. LOCATION (Address and ZIP Code) Richland, WA 99354		b. NUMBER DE-AC06-08RL14788		b. PHASE Base			b. TO (YYYY/MM/DD) 2019/11/17		
		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:	35,096	30,380	34,894	(4,716)	-13.4%	(4,514)	-14.9%	0.87	0.87
Cumulative:	6,352,488	6,309,732	6,201,390	(42,756)	-0.7%	108,342	1.7%	0.99	1.02
	BAC	EAC	VAC in \$	VAC in %	TCPI				
At Complete:	6,829,214	6,700,965	128,249	1.9%	1.04				
Explanation of Variance/Description of Problem:									
Current Period Schedule and Cost Variance: Approximately one quarter of the current month (CM) negative cost variance is due to PFP. Progress on the demolition of 234-5Z has continued to lag, while costs over the same period have not decreased due to weather conditions, using a deliberate approach and a stepwise method to demolition. Similarly, nearly one quarter of the CM negative cost variance experienced on the RRMP is due to latent beta contamination issues that continue to hinder the pilot hole installation work within Room 18 of the 324 Building. Productivity is low, while costs remain the same. KBO incurred higher than planned costs associated with mobilization and training for the installation subcontractor for GFMRs and vertical pipe casings. The plan assumed the subcontractor would provide partially trained staff and that assumption did not materialize. In addition, the management-directed stand down at REDOX contributed to the negative variance as work crews are focusing on implementation of the phased approach plan, delaying performance of planned work.									
The CM negative schedule variance is primarily due to PFP. Progress on the Plutonium Reclamation Facility rubble pile has been delayed due to delays on the demolition of 234-5Z resulting from weather, use of deliberate speed and a stepwise approach. Additional negative schedule variances include the delay of procurement and installation of equipment at the 324 Facility due to continuing impacts of unanticipated latent beta contamination and the failure of the A/D Crane, the management-directed work standdown at REDOX due to concerned stakeholders, the delay in demolition of 166KE due to unexpected contents of the oil tanks resulting in an alternate disposition path, unanticipated issues requiring resolution associated with the Composite Analysis and the S&GRP late air stripper subcontract submittal impacting procurement.									
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 \$128.2 million is projected, with an additional \$48.4 million of management reserve (MR), for a total positive variance of \$176.6 million. For November, the project was 13.4 percent behind schedule and 14.9 percent over planned cost. Contract to date, the project was 0.7 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 November. The \$31K delta is a result of rounding over time for implementation of multiple change order definitizations.									
Five BCRs were implemented in period. They included:									
<ul style="list-style-type: none"> • BCR-013-20-001R0, Remove 2 Sludge Shipments and Align Accounts for Garnet Filters • BCR-030-20-001R0, Incorporate 200-WA-1 Impacts from Supporting the New Regulator Approach for Central Plateau Source Area RODs • BCR-030-20-003R0, Revise WBS 030.33.01.01.01 LOE Resource Profile Dates 									

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

- BCR-041-20-001R0, Updates to WBS Dictionaries and BOEs to Align with Final FY2020 Deliverable
- BCRA-PRC-20-004R0, HPIC Updates November 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 +\$127.4 million, +1.9% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

CPS - In Process		
	Total Authorized Unpriced Work	\$558,996
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
Grand Total Adjustments		\$558,996

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 November.

Management Reserve Activity

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

The MR increased by \$1,951K in November.

Fee Activity

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

There was no change to fee in November.

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: 12/17/2019	Approved by:	Date:
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Appendix B

Project Services and Support (WBS 000)

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

M. A. Wright
Vice President for
Project Technical
Services

November 2019
CHPRC-2019-11, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

D. J. Henderson
Director of
Communications

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

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

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

This section is reported quarterly.

Appendix C

Capital Asset Projects

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

November 2019
CHPRC-2019-11, 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

November 2019
CHPRC-2019-11, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Work on removal of the final glovebox from the 234-5Z Building and completion of critical decision (CD) 4, *Approve Project Completion*, is on hold. The remaining glovebox (HA-46) has been staged until the 234-5Z Building is demolished. The total number of gloveboxes removed to date is 173 (99 percent complete).

The following are key metrics associated with this capital asset project (CAP).

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

KEY ACCOMPLISHMENTS

RL-0011_C1 Accomplishments:

- Lower-risk demolition was completed in November. Glovebox HA-46 will be removed during final phase demolition of 234-5Z.

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

CRITICAL PATH ANALYSIS

The Plutonium Finishing Plant (PFP) critical path schedule begins activities to complete remote mechanical C and A process line demolition and debris disposition as well as load-out of glovebox HA-46. Completion of the removal and disposal of glovebox HA-46 is currently forecast by December 23, 2019, a six calendar day delay from the October forecast date due to activity duration adjustments of the RL-0011.C2 – Demolition of PFP Facilities Project. Removal and disposal of glovebox HA-46 will lead to 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	03/17/2020	The current CAP 1 project forecasted completion date is March 17, 2020, a six calendar day slip to the forecast completion date reported in October.

*Due date reflects CD-4 due date with U.S. Department of Energy (DOE) contingency.

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Nothing to report at this time.

DOE ACTIONS/DECISIONS

Working with the U.S. Department of Energy, Richland Operations Office to prepare for 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

November 2019
CHPRC-2019-11, 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 / 10 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 11 / 17	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18	

5. CONTRACT DATA								
a. QUANTITY 1	b. NEGOTIATED COST 330,987	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 9,878	e. TARGET PRICE 340,865	f. ESTIMATED PRICE 344,850	g. CONTRACT CEILING 340,865	h. ESTIMATED CONTRACT CEILING 344,850	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		d. DATE SIGNED (YYYYMMDD)
a. BEST CASE	332,579			c. SIGNATURE			
b. WORST CASE	334,991						
c. MOST LIKELY	334,972	330,987	-3,985				

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	0	0	0	0	235,514	235,495	259,792	-19	-24,296	0	0	0	235,514	259,792	-24,277
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	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,579	-17,427
f. MANAGEMENT RESERVE	2,393															
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545	332,579	-15,034
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																
a. VARIANCE ADJUSTMENT	-															
b. TOTAL CONTRACT VARIANCE	-19															

*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 / 10 / 28	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 11 / 17	
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	0	0	0	0	254,725	254,706	279,999	-19	-25,293	0	0	0	254,725	279,999	-25,274	
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)	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,579	-17,427	
f. MANAGEMENT RESERVE														2,393			
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545			

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 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_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: 2019/10/28 b. TO: 2019/11/17								
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)	
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		
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		
7. MANAGEMENT RESERVE																			
8. TOTAL																			

CONTRACT PERFORMANCE REPORT FORMAT 4 - STAFFING													FORM APPROVED OMB No. 0704-0188		
1. CONTRACTOR			2. CONTRACT				3. PROGRAM				4. REPORT PERIOD		Dollars in: FTE		
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 / 10 / 28		b. TO (YYYYMMDD) 2019 / 11 / 17		
b. LOCATION (Address and ZIP Code) Richland, WA			b. NUMBER RL14788		b. PHASE		c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18								
c. TYPE CPAF			d. SHARE RATIO												
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)		
35 - Business Services	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
3B - PFP Closure Project	0	15441	0	0	0	0	0	0	0	0	0	0	0	0	15441
g. TOTAL DIRECT	0	15458	0	0	0	0	0	0	0	0	0	0	0	0	15458

Appendix C.2

Capital Asset Project

RL-0011.C2 - Demolition of PFP Facilities



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

November 2019
CHPRC-2019-11, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In November, the Plutonium Finishing Plant's (PFP) Closure Project team safely completed lower-risk demolition of the PFP main processing facility, marking a significant accomplishment in the CH2M HILL Plateau Remediation Company's (CHPRC) cleanup mission. Following recent U.S. Department of Energy (DOE), Washington State Department of Ecology (Ecology) and U.S. Environmental Protection Agency (EPA) approval, work commenced on the final phase of PFP demolition, which includes removal of the main processing facility's two former processing lines as well as packaging and removal of the remaining rubble from the Plutonium Reclamation Facility. These activities are expected to continue through early 2020. The work is being done under the same demolition strategy and enhanced safety controls that have proven effective in protecting our workers, the public and the environment since lower-risk demolition work began in September 2018. Forty-one containers of lower-risk 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 demolition and debris load-out of second floor and duct level of the 234-5Z Building zone 5, which completed the low risk portion of demolition and debris removal.
- Crews began final phase of demolition, starting with breaking into Tunnel #4, removing and sizing drain piping and then backfilling the tunnel.
- Crews continued training with the Hanford Fire Department to learn about specialized firefighting gear and practice doffing techniques to ensure that the gear is safely removed when firefighters exit the high contamination area. The training sessions benefit both teams' knowledge and understanding of the equipment and procedures.
- Shipped 41 containers of low-level demolition debris to ERDF, completing shipment of all low-risk 234-5Z demolition waste.

MAJOR ISSUES

Issue: The Project’s FY2020 forecast reflects spending approximately \$1.8 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.

Current Status: CHPRC is working with the U.S. Department of Energy, 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.C2													
Explanation of major changes to the project monthly spotlight chart: There are no major changes to the spotlight chart in November.													
Realized Risks (Risks that are currently impacting project cost/schedule)													
No realized risks identified in November.													
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)													
No critical risks identified in November.													
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	●	↔	<p>Risk Trigger: Due to more stringent work controls, key resources are insufficient to complete work activities as planned.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <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>Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in November. Management continues to review project staffing levels on a weekly basis to reduce the probability of this risk occurring.</p>	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, 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, Labor Assets Management Program (LAMP) or other job postings. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 96 days	●	↔	<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" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <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>Communicate with other entities to reduce impact of bump and roll process.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in November. Management continues to review project 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											

Unmitigated Risk Impacts	Assessment		Comments															
	Month	Trend																
RL-0011/WBS-011.C2																		
FY2020 Key Risks																		
<p>PFP-P3-003: “Weather Impacts During 234-5Z Demolition”</p> <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 during 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>Develop winter preparedness plan</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: <i>No major changes in November.</i> A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. There were no additional substantial actions identified during the preparation of the preparedness plan. Heated fixative tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. <i>Installation of heat trace and insulation on the fixative tanks will be completed in December. The process to blow out water lines at the end of each shift has been implemented and has been successful in avoiding issues.</i></p>	Mitigation Action(s)	FC Date	%	Develop winter preparedness plan	Complete	100									
Mitigation Action(s)	FC Date	%																
Develop winter preparedness plan	Complete	100																
<p>PFP-P4-002: “Weather Impacts During 236-Z Demolition”</p> <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 during 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>Develop winter preparedness plan.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: <i>No major changes in November.</i> A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. There were no additional substantial actions identified during preparation of the plan. Heated fixative tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. <i>Installation of heat trace and insulation on the fixative tanks will be completed in December. The process to blow out water lines at the end of each shift has been implemented and has been successful in avoiding issues.</i></p>	Mitigation Action(s)	FC Date	%	Develop winter preparedness plan.	Complete	100									
Mitigation Action(s)	FC Date	%																
Develop winter preparedness plan.	Complete	100																
<p>PFP-P-004: “Stop Work From Concerned Workers”</p> <p>Concerned workers 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: <i>No major changes in November.</i> Increased communication and worker involvement to avoid confusion and concern to minimize stop works have continued; however, 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 <i>November</i> .																		

CRITICAL PATH ANALYSIS

The PFP critical path schedule begins with completion of activities for remote mechanical C and A process line demolition and debris disposition as well as load-out of glovebox HA-46. The 236-Z Canyon demolition will also resume, with completion anticipated by March 3, 2020, meeting the requirements for the *Hanford Federal Facility Agreement and Consent Order* (Tri Party Agreement) Milestone M 083 00A, "Plutonium Finishing Plant 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 lower-risk demolition and began final-phase demolition in November.

*Due date reflects CD-4 due date with U.S. Department of Energy (DOE) contingency.

†Forecast date reflects CD-4 completion date (does not include DOE 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

November 2019
CHPRC-2019-11, Rev. 0
Contract DE-AC07-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT				3. PROGRAM				4. REPORT PERIOD								
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract				a. NAME RL_0011_C2 PFP Demolition Capital Asset Project				a. FROM (YYYYMMDD) 2019 / 10 / 28								
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788				b. PHASE				b. TO (YYYYMMDD) 2019 / 11 / 17								
		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 176,496	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			d. DATE SIGNED (YYYYMMDD)							
a. BEST CASE		170,923			c. SIGNATURE													
b. WORST CASE		179,131																
c. MOST LIKELY		171,496	139,278	-32,218														
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								
		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)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
RL-0011 Nuclear Mat Stab & Disp PFP																		
RL_0011_C2.05 Disposition PFP Facility		3,814	1,726	3,013	-2,088	-1,287	126,296	114,322	152,798	-11,974	-38,475	0	0	0	138,704	170,923	-32,218	
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		3,814	1,726	3,013	-2,088	-1,287	126,296	114,322	152,798	-11,974	-38,475	0	0	0	138,704	170,923	-32,218	
f. MANAGEMENT RESERVE															573			
g. TOTAL		3,814	1,726	3,013	-2,088	-1,287	126,296	114,322	152,798	-11,974	-38,475	0	0	0	139,278			
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																		
a. VARIANCE ADJUSTMENT																		
b. TOTAL CONTRACT VARIANCE																		
													-11,974	-38,475		139,278	170,923	-31,645

**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 / 10 / 28		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019 / 11 / 17		
		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	3,814	1,726	3,013	-2,088	-1,287	126,296	114,322	152,798	-11,974	-38,475	0	0	0	138,704	170,923	-32,218		
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)	3,814	1,726	3,013	-2,088	-1,287	126,296	114,322	152,798	-11,974	-38,475	0	0	0	138,704	170,923	-32,218		
f. MANAGEMENT RESERVE														573				
g. TOTAL	3,814	1,726	3,013	-2,088	-1,287	126,296	114,322	152,798	-11,974	-38,475	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: 2019/10/28 b. TO: 2019/11/17									
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											BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)							UNDISTRIB BUDGET (18)	TOTAL BUDGET (19)
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)			
a. PM BASELINE (BEGIN OF PERIOD)	122,482	577	5,090	4,739	2,526	54	55	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)	126,296	3,814	5,090	4,739	2,526	54	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 / 10 / 28						
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18		b. TO (YYYYMMDD) 2019 / 11 / 17								
		c. TYPE CPAF		d. SHARE RATIO												
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	147	4373	146	138	154	117	85	0	0	0	0	0	0	0	0	5012
g. TOTAL DIRECT	147	4373	146	138	154	117	85	0	0	0	0	0	0	0	0	5012

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) 2019/10/28			
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019/11/17			
		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:		3,814.2	1,726.1	3,012.7	-2,088.0	-54.7%	-1,286.5	-74.5%	0.45	0.57
Cumulative:		126,296.0	114,322.5	152,797.9	-11,973.5	-9.5%	-38,475.4	-33.7%	0.91	0.75
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		138,704.4	170,922.5	-32,218.2	-23.2%	0	1.35			
Explanation of Variance/Description of Problem:										
Current Month:										
Schedule Variance: The Current Month (CM) favorable schedule variance is primarily due to performance being taken on work that was scheduled to be completed in March 2019. The PFP Closure Project team safely completed lower-risk demolition of the PFP main processing facility and work commenced on the final phase of PFP demolition, which includes removal of the main processing facility's two former processing lines as well as packaging and removal of the remaining rubble from the Plutonium Reclamation Facility. These activities are expected to continue through early 2020. The project re-baseline was formulated in June 2018, with projected completion of low risk demolition in March 2019. However, the project was impacted by weather, D&D Lamps, and stop works, pushing completion of low risk into October 2019.										
This variance is partially offset by BCWS from BCR-011C-19-005R0, which drew Management Reserve cost and schedule margin to address the impact of high summer temperatures on demolition activities and the implementation of more conservative demolition work controls.										
Cost Variance: The CM cost variance is within thresholds.										
Cumulative to Date:										
Schedule Variance: The cumulative schedule variance is due to delayed completion of low risk work scope due to implementation of revised controls and a deliberate approach to demolition activities.										
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.										
This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
Impact:										
Schedule Impact: Completion of all demolition activities 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.										
Cost Impact: A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017.										
Corrective Action:										
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 3, 2020.										
Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):										
There was no change in the difference between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of November.										
The following items are addressed, as applicable:										
1. Schedule Margin Analysis: No draw downs of schedule margin were made in the month of November.										
2. Data dictionary Changes: No change in the month of November.										
3. Forecast Schedule with No Baseline: No change in the month of November.										
4. UB Balance: No change in the month of November.										
5. Negative Actual Cost of Work Performed (ACWP): No change in the month of November.										
6. Earned Actual Cost (EAC) Analysis: Best Case = \$170,923; Most Likely = \$171,496; Worst Case = \$179,131. 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.										
7. Negative CV > VAC: No change in the month of November.										
8. Management Reserve Transactions: No change in the month of November.										
9. Freeze Period Changes: No change in the month of November.										
10. Retroactive Changes: No change in the month of November.										
11. Earned Value Type Changes: No change in the month of November.										
Prepared by: Jason Knowlton			Date: 12/12/19			Approved by:		Date:		