

Monthly Performance Report

January 2020

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
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CH2MHILL
Plateau Remediation Company
a Jacobs company



L. Ty Blackford
President and
Chief Executive Officer

Monthly Performance Report

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January 2020
CHPRC-2020-01, Revision 0

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EXECUTIVE SUMMARY

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

- **Waste and Fuels Management Project:** The Management of Cesium and Strontium Capsule (MCSC) project team completed an internal review of the W-135 Project Waste Encapsulation and Storage Facility (WESF) Modifications Department of Energy (DOE) Critical Decision-2/3, “Establishment of Project Baseline/Readiness to Start Construction”, package. The team is incorporating corrections and improvements in preparation for the planned CHPRC Project Review Board assessment in February of the package’s readiness to submit to DOE, Richland Operations Office (RL) for approval. Demolition was completed on the major portion of the 100K5W Operations Project knock-out pot mockup structure; which was located in the footprint of the new MCSC Project mockup structure at the Maintenance and Storage Facility (MASF). Initiated delivery of major structural components of the G Cell mockup, at MASF. At WESF, the crew performed decontamination activities to the truckport-to-canyon opening and obtained verification measurements for the W-135 Project, WESF Modifications, to ensure field dimensions are consistent with design media. They also completed installation of the grounding components on the G Cell windows in preparation for upcoming window refurbishment activities. At T Plant, the crew completed annual Sludge Transfer Storage Container nitrogen purge system gauge calibration and replacement and electrical panel schedule updates. The transuranic (TRU) program continued to perform enhancement of acceptable knowledge on TRU waste streams. The first of 10 waste streams is complete.



Crews began building new access roads and installing lighting, utilities and support buildings at the Integrated Disposal Facility (IDF) in support of the Hanford Site’s Direct-Feed Low-Activity Waste program.

- **River Risk Management Project (RRMP):** At the 324 Building Disposition Project, a resumption team formed following a worker contamination incident at the 324 Building Facility on November 14, 2019. The resumption team, continued to look at opportunities to minimize contamination risks and optimize radiological controls and worker safety. A draft root cause analysis and corrective action plan was received and is being finalized. At the Integrated Disposal Facility (IDF), the public comment period continued for the facilities *Resource Conservations and Recovery Act of 1976 (RCRA)* permit modification application to add secondary waste disposal. The public comment period is scheduled to end in mid-February. Site infrastructure construction continued and the tank cover replacement contract was awarded during January. Work continued on defining operational scope and developing operational procedures for execution of disposal operations, projected to commence in fiscal year (FY) 2022.
- **Central Plateau Risk Management Project:** Crews abated approximately 224 feet of asbestos insulation on above ground steamlines in the 200 East Area along 7th Street and re-entered U-Canyon to perform scoping walkdowns to identify any remaining asbestos requiring abatement in the facility. At the 224B Facility in the 200 East Area, characterization above 8 feet for all three floors on the non-cell side was completed. At Plutonium Uranium Exrtaction Plant North, personnel completed radiological characterization of the interior walls and ceilings in the 214A and 2714A Facilities and completed the mechanical isolation index for the 2701AB Facility. At REDOX, totes containing sodium hydroxide were drained from the Silo were shipped

offsite for treatment. The design was finalized for the delivery system to stabilize the 216-Z-2, 216-Z-9, and 241-Z-361 waste sites in the 200 West Area.

- **Soil and Groundwater Remediation Project (S&GRP):** Two extraction wells in the 200-BP-5 Operable Unit were completed in January, concluding the very challenging and unique FY2019 drilling campaign. Careful coordination with the Plutonium Finishing Plant (PFP) Closure Project team allowed early completion of RCRA sampling within the PFP control zone, which included wells located in the contamination area and airborne radioactivity area. Subcontracts were awarded ahead of schedule for the construction of the remaining three 200-ZP-1 extraction wells. The 200 West Area Pump and Treat Facility continued to operate at record flow rates. S&GRP continued trending toward a record year for groundwater treatment.
- **Plutonium Finishing Plant Closure Project:** Crews worked on mobilizing and preparing the loadout area for Plutonium Reclamation Facility (PRF) rubble disposition. Preparations included grooming traveling paths, installing berms to control water flow, and placing gravel and dirt to allow smooth loading and unloading of PRF debris. Loadout of the remaining Remote Mechanical A line debris was on hold due to wind and cold weather impacts. Sixteen containers of final phase demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal.
- **K Basins Operations (KBO):** Soil remediation at the 100K Area continued with excavation of the 116-KE-2 Waste Site; over 1,750 tons of soil was loaded out for disposal at the ERDF. Garnet Filter Media Retrieval system equipment was transferred from MASF to 100K and crews initiated its installation in the 105KW Basin. Basin crews also initiated removal of select Engineered Container Retrieval and Transfer Systems hoses that are no longer required to support underwater debris removal, relocation, and segregation. Debris size reduction equipment and tools including a newly developed set of hydraulic shears was staged for basin installation. This equipment will be used to size-reduce pole tools and other small debris in the basin. At MASF, mockup activities for the fuel specimen conditioning effort were performed and equipment was staged at the 142K Facility for pre-installation activities. Development of tooling to support settler tube inspection, north loadout pit inspection, sand filter inspection, and 166KW Facility sampling was continued. Off-site, fabrication continued on the vertical pipe casing (VPC) base sections and associated components. Following installation, the VPCs will be used to segregate and consolidate basin debris in the west bay. The contract for the VPC auguring demonstration was awarded and initiated. The design of the specialty auguring tool and mockup is underway.

The President's Zero Accident Council meeting for January was hosted by the PFP Closure Project. The three main ideas were:

- Be prepared to stay on your feet.
- Be prepared through communication.
- Be prepared when bad things happen.

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

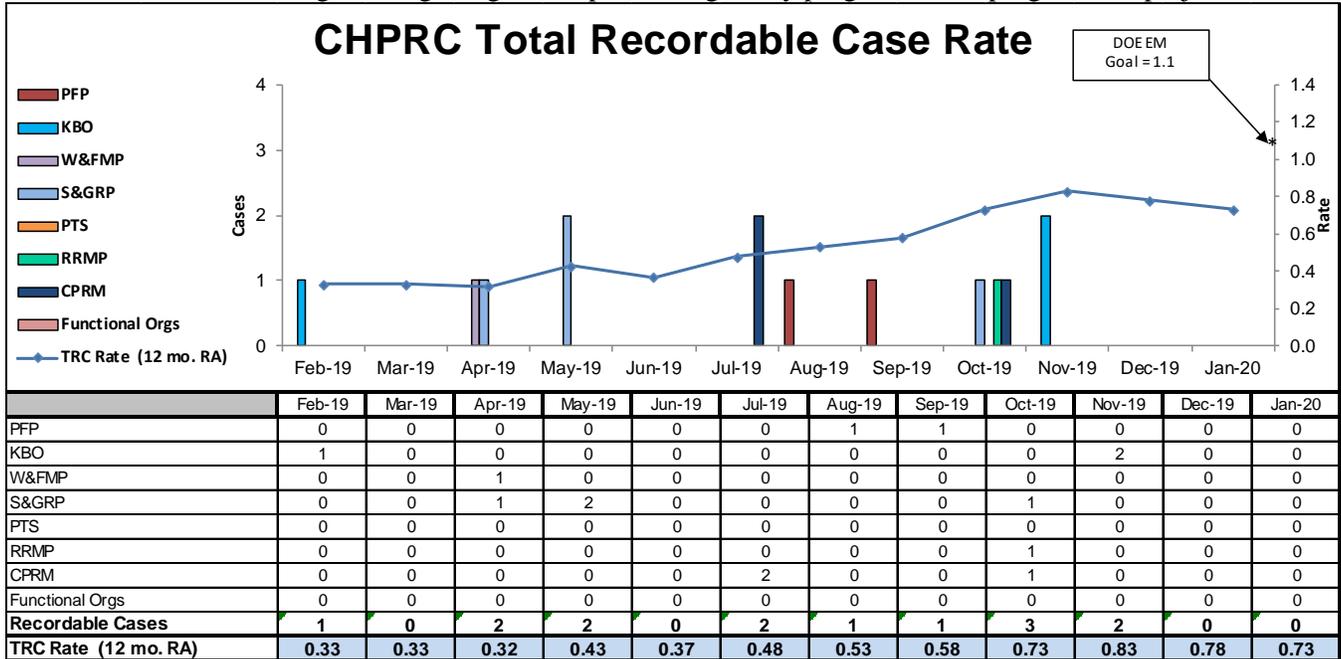
- Safe New Year.
- Drive Responsibly.
- Outdoor Activities.
- CHPRC 2020 SIP.

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

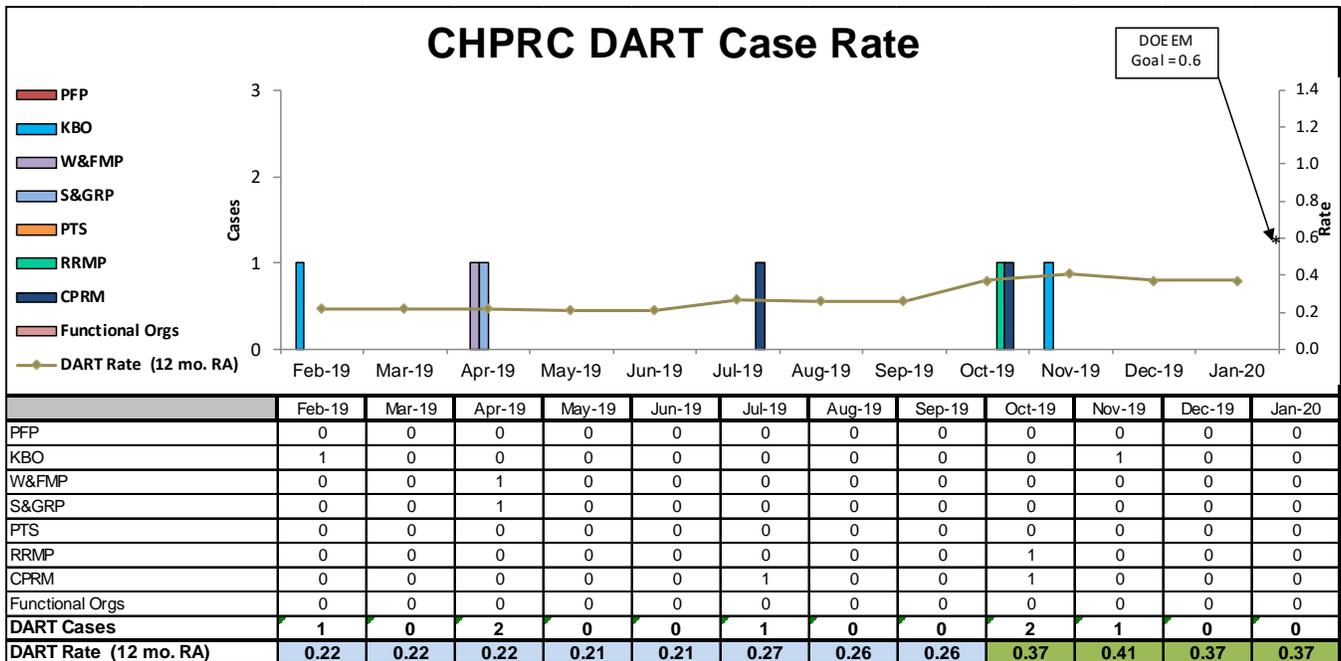
- Four lessons learned:
 - OPEXShare: 2019-NV-NNSS-718 USDOL-MSHA—Fatality Alert—Miner was fatally injured after falling 37 feet down a shaft.
 - OPEXShare: WRPS-IB-20-001 Lack of "Freedom of Thought" during Concurrent Verification Likely Caused Misaligned Valve.
 - OPEXShare: 2015-OR-UCORDD-1002 Cut Hand during Transite Panel Abatement.
 - OPEXShare: 2020-29427-SST Aluminum Landing Presents Slip Hazard.
- Injuries
- Weekly ethics moments.
- Vehicle events.
- Welcome Back! Safety Re-FOCUS 2020.
- Increased injury rates.
- Traffic safety initiative.
- Vehicle safety policy.
- Conduct of operations.
- Driving responsibly poster.
- Merge like a zipper.
- Site form updates.
- Proper cartridge installation.
- HPMC medical appointments.
- Safety reminder.
- Driving and poor visibility.
- Welcome Back! Safety re-focus.

TARGET ZERO PERFORMANCE

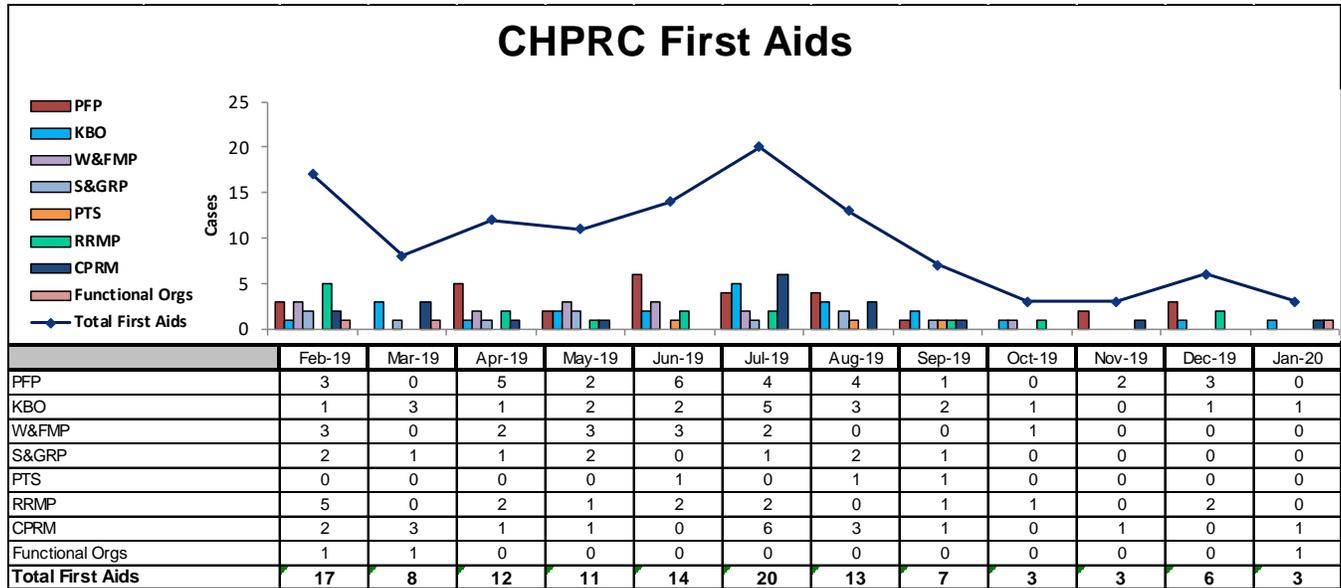
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



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. January had no reported Recordable cases.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.37 is based upon a total of seven Days Away cases. January had no reported DART cases.



First Aid Case Summary: CHPRC reported three first aid cases in January. The contributors were one sprains/strains/pains, one abrasions/bruises/contusions and one cuts/lacerations/punctures 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

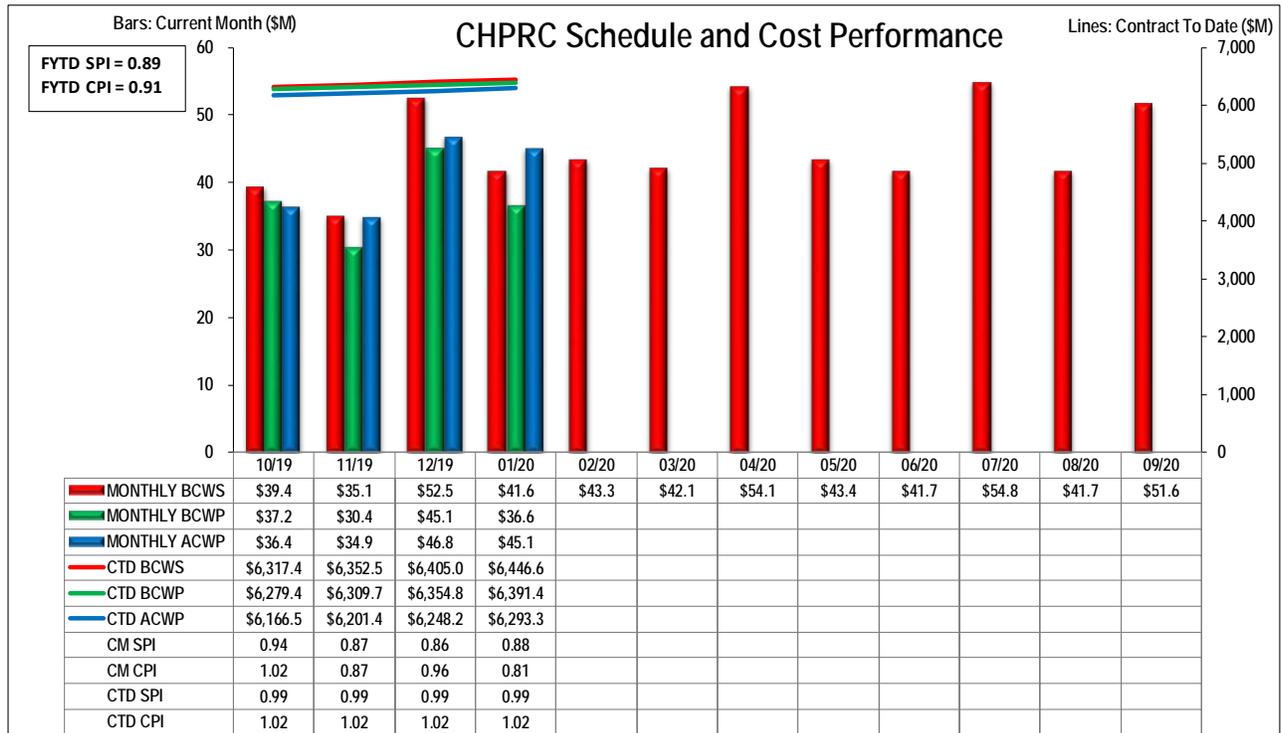
Projects

- 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	BAC	EAC	Variance		
RL-0011 - Nuclear Materials Stab & Disp PFP	5.7	1.0	4.5	(4.7)	(3.5)	1,140.3	1,124.7	1,222.9	(15.6)	(98.2)	1,143.6	1,239.3	(95.7)		
RL-0012 - SNF Stabilization & Disposition	-	-	(0.0)	-	0.0	759.6	759.6	729.8	(0.0)	29.8	759.6	729.8	29.8		
RL-0013 - Solid Waste Stab & Disposition	15.7	14.6	15.4	(1.1)	(0.7)	1,536.9	1,527.1	1,443.8	(9.8)	83.3	1,678.2	1,591.0	87.2		
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	8.8	8.5	8.4	(0.3)	0.1	1,668.3	1,661.8	1,613.9	(6.5)	48.0	1,764.1	1,709.9	54.1		
RL-0040 - Nuc Fac D&D - Remainder	4.4	5.0	5.7	0.6	(0.7)	582.9	576.5	559.9	(6.3)	16.6	624.1	608.9	15.2		
RL-0041 - Nuc Fac D&D - RC Closure Project	6.6	7.2	10.8	0.6	(3.6)	728.9	712.1	697.9	(16.8)	14.2	816.9	800.2	16.7		
RL-0042 - Nuc Fac D&D - FTF Project	0.4	0.2	0.3	(0.1)	(0.1)	29.8	29.6	25.0	(0.1)	4.6	32.9	28.6	4.3		
Total	41.6	36.6	45.1	(5.0)	(8.5)	6,446.6	6,391.4	6,293.3	(55.2)	98.1	6,819.4	6,707.7	111.7		

(Values are rounded to the nearest \$0.1M)

Performance Summary

CHPRC continues to track completion of the contract within budget. Currently, a variance at completion of \$111.7 million is projected, with an additional \$48.4 million of management reserve (MR), for a total positive variance of \$160.0 million. For January, the project was 12.0 percent behind schedule and 23.1 percent over planned cost. Contract to date, the project was 0.9 percent behind schedule and 1.5 percent under planned cost.

The current month (CM) negative cost variance is primarily due to the PFP Closure Project and RRMP. At PFP, high winds, tumbleweed accumulation, and a frozen waterline caused by equipment failure engaged crews with response actions while minimal loadout was completed. Additionally, at RRMP, the negative cost variance is primarily due to the November 14, 2019, contamination event at the 324 Facility resulting in a management stop work in radiologically contaminated areas. Meanwhile resumption and corrective action plans are being worked, incurring costs without progress on planned scope.

The CM negative schedule variance is primarily due to the PFP Closure Project. High winds, tumbleweed accumulation, and a frozen waterline caused by equipment failure engaged crews with response actions while minimal loadout was completed. Additionally, at RRMP, the negative schedule variance is primarily due to the November 14, 2019, contamination event at the 324 Facility resulting in a management stop work in radiologically contaminated areas. While resumption and corrective action plans are being worked, progress on planned scope is limited.

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	34.8	(5.2)
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	0.6	(0.0)	0.6
RL-0013	Waste and Fuels Management Project	198.8	202.1	(3.3)
RL-0013	Management of Cesium and Strontium Capsules	14.3	0.6	13.7
RL-0030	Soil, Groundwater and Vadose Zone Remediation	134.7	125.7	9.0
RL-0040	Nuclear Facility D&D, Remainder of Hanford	93.3	93.1	0.1
RL-0041	Nuclear Facility D&D, River Corridor	150.9	150.3	0.6
RL-0042	Fast Flux Test Facility Closure	4.8	4.7	0.0
Total Estimate at Complete		626.8	611.3	15.5

Funds/Variance Analysis

FY2020 projected funding of \$626.8 million remains unchanged from last month. The spending forecast was increased \$28.9 million for additional work authorized incorporating the FY2020 Assistant Manager for River and Plateau Execution Integrated Priority List Revision 2a, which includes acceleration of the Cask Storage System fabrication procurement of the KE Reactor Interim Safe Storage, and initiating various aging facilities’ risk mitigations and demolition activities.

BASELINE CHANGE REQUESTS

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

Change Request #	Title	PBS	Summary of Change
BCR-013-20-002R0	<i>Revise W-135 Schedule Logic for Construction Technical Support</i>	RL-0013	This BCR replanned the level of effort WESF technical support activity to a discrete activity. This new earned value technique will enable more accurate performance measurement. This BCR did not change the PMB value.
BCR-013-20-011R0	<i>W-135 Admin and Construction Trailers</i>	RL-0013	This BCR modified the WBS for the Management of Cesium and Strontium Capsules W-135 Project to align the work scope and budget for trailer procurements consistent with their capital determinations and segregate costs accordingly. This BCR did not change the PMB value.
BCR-030-20-007R0	<i>Re-plan 200W P&T Preventative Maintenance Activities</i>	RL-0030	This BCR corrects the scope, schedule and budget implemented in December 2019, BCR-030-20-002R0, <i>Incorporate Re-planning per the 200-ZP-1 Optimization Study</i> , for WBS 030.23.03.01.01.38, <i>200 W P&T Preventative Maintenance</i> . The removal of Activity 03.PCM.2W.FY20 – 200W P&T Preventative Maintenance FY20 – 7.5T Bridge Crane Inspection, corrects the error and accurately reflects the correct scope. This BCR did not change the PMB value.
BCR-030-20-009R0	<i>Re-plan 200-BP-5 IA RE/RAWP</i>	RL-0030	This BCR re-planned the 200-BP-5 Interim Action (IA) Remedial Design/Remedial Action Work Plan (RD/RAWP) activities from work breakdown structure (WBS) element 030.20.03.04.01, <i>BP-5 IA RD/RAWP</i> , into WBS element 030.20.02.01.03, <i>200-BP-5 IA RD/RA WP</i> , consistent with RL Contracting Officer (CO) direction received via Correspondence No. 2000211, <i>Moving Planning of BP-5 RD/RAWP From One WBS Element to Another</i> , dated January 13, 2020. This BCR did not change the PMB value.
BCR-040-20-001R0	<i>Remove 202-S REDOX scope and implement Infrastructure and Safety Upgrades</i>	RL-0040	This BCR re-planned FY2020 work scope at REDOX. The BCR stemmed from management-directed work stoppage for all non-regulatory work at REDOX, to focus on increasing the infrastructure necessary to support future work with additional labor needs and logical requirements to ensure worker safety and comply with CHPRC's agreement with the Hanford Atomic Metal Trades Council (HAMTC). Additionally, re-planned FY2020 work scope to implement the actions identified and to de-scope work that could no longer be completed in FY2020 as a result of the directed stop work. This BCR decreased the PMB value by \$1,695.8K.

Change Request #	Title	PBS	Summary of Change
BCR-041-20-004R0	<i>Modify FY2020 100K Soil Remediation</i>	RL-0041	This BCR modified the FY2020 PMB planning for 100K Area soil remediation work scope to reflect the awarded subcontract cost for the new subcontractor performing FY2020 excavation activities. The new subcontractor's fixed unit rates are higher than originally planned. In addition, the excavation of planned waste sites were re-sequenced to align with the subcontractor schedule. This BCR increased the PMB by \$388.2K.
BCR-042-20-003R0	<i>Treatment of Na Contaminated Waste Stored on 400 Area ISA</i>	RL-0042	This BCR incorporated direction received by RL Contracting Officer's Representative (COR) via Correspondence No. 1905191, to proceed with the disposition of 19 drums containing sodium-contaminated waste currently stored on the 400 Area interim storage area (ISA) pad. This BCR decreased the PMB by \$156.8K.
BCRA-PRC-20-006R0	<i>HPIC Updates January 2020</i>	RL-0013 RL-0030 RL-0041 RL-0042	This Administrative BCR documented Hanford Programs Integrated Control Module (HPIC) changes made in the January 2020 performance period prior to archive. These changes include new work packages, Cost Account Charge Number (CACN) requests, and Control Account Manager (CAM). This BCR did not change the PMB value.
BCR-PRC-20-007R0	<i>Modify FY2020 100K Deactivation Work Scope</i>	RL-0013 RL-0041	This BCR incorporated a change in approach and removal for the Sand Filter Media Removal (SFMR) from staging and grouting in the 105 KW Basin north load-out pit, to staging and grouting in vertical pipe casings (VPC) for future removal and disposition during demolition of the basin. This BCR also re-plans this work using construction resources according to Plant Forces Work Review (PFWR) PRC 020-19_A. This BCR decreased the PMB by 5,941.2K.

The allocated (distributed) budget decreased \$7,405.7K in January.

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 January.

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 January.

Fee Activity

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

There was no change to fee in January.

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).

January 2020 Summary of Changes (\$M)

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	FY2020	Contract Period Total	Total PMB
December 2019 Estimate											
PMB	3,391.5	391.7	471.3	504.8	485.0	470.6	2,323.5	563.1	548.7	6,826.8	6,826.8
MR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.4	48.4	48.4
Fee	155.5	14.3	14.5	27.8	10.6	18.9	86.1	36.5	0.0	278.1	278.1
Total	3,547.0	406.0	485.8	532.6	495.6	489.5	2,409.6	599.5	597.1	7,153.2	7,153.2
January 2020 Change											
PMB											
<i>Change to PMB</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>-7.4</i>	<i>-7.4</i>	<i>-7.4</i>
MR											
<i>Change to MR</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
Fee											
<i>Change to Fee</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
Total Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-7.4	-7.4	-7.4
January 2020 Estimate											
PMB	3,391.5	391.7	471.3	504.8	485.0	470.6	2,323.5	563.1	541.3	6,819.4	6,819.4
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	589.7	7,145.8	7,145.8

Changes to/Utilization of Management Reserve in January 2020 (\$M)

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	FY2019	FY2020	Total
December 2019 MR Totals										
RL-0011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5
RL-0012	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	5.4
RL-0013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	8.4
RL-0030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.6
RL-0040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	11.5
RL-0041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	13.6
RL-0042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.4	48.4
January 2020 MR Changes/Utilization										
RL-0011	0.0	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	0.0
RL-0013	0.0	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	0.0
RL-0040	0.0	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	0.0
RL-0042	0.0	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	0.0
January 2020 MR Totals										
RL-0011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5
RL-0012	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	5.4
RL-0013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	8.4
RL-0030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.6
RL-0040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	11.5
RL-0041	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	13.6
RL-0042	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.4	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 - 1/26/2020					
Reporting Category					
	\$ Value	%	Goal %		
SB	\$1,715.61	56.80%	49.3%	PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
SDB	\$322.87	10.69%	8.2%		
SWOB	\$306.48	10.15%	7.5%		
HUB	\$99.22	3.29%	2.2%	CHPRC Contract Value:	\$6,596.68
VOSB	\$264.38	8.75%	3.5%	SB actual:	\$1,715.61
SDVO	\$171.56	5.68%	1.3%	SB Performed %:	26.01%
NAB	\$104.35	3.45%	N/A	PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed	
Large	\$802.17	26.56%	N/A		
GOVT	\$5.44	0.18%	N/A	CHPRC Contract Value:	\$6,596.68
GOVT CONT	\$483.22	16.00%	N/A	CHPRC Self Performed:	\$3,576.43
EDUCATION	\$0.17	0.01%	N/A	CHPRC Self Performed %:	54.22%
NONPROFIT_	\$4.43	0.15%	N/A		
FOREIGN	\$9.21	0.31%	N/A		
Total	\$3,020.26	100.00%	N/A		

Notes:

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
J.12/C.2.2, C.2.3	PBS-11, <i>Plutonium Finishing Plant Closure Project</i> PBS-13, <i>Solid and Liquid Waste Treatment and Disposal</i>	Offsite Transportation of Radioactive Material: RL provides equipment and government drivers to transport 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

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In January, the Plutonium Finishing Plant (PFP) Closure Project team worked on mobilizing and preparing the loadout area for Plutonium Reclamation Facility (PRF) rubble disposition. Preparations included grooming traveling paths, installing berms to control water flow and placing gravel and dirt to allow smooth loading and unloading of PRF debris. Loadout of the remaining Remote Mechanical A line debris was paused due to wind and cold weather impacts. Sixteen containers of final phase demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal.

Key Metrics

<i>Key Performance Indicators</i>	<i>Current Month</i>	<i>Contract to Date</i>
COMPLETE Glovebox/Hood Removed or Dispositioned in Place	0	232 gloveboxes/hoods
COMPLETE KPP Rooms/Areas Ready for Demo	0	72 rooms/areas
COMPLETE Asbestos/Asbestos Containing Material Removed	0	35,827
COMPLETE Process Vacuum Piping Dispositioned	0	7,231 feet
COMPLETE Process Transfer Line Dispositioned	0	1,525 feet
COMPLETE Pencil Tank Units Removed (Shipped)	0	196 pencil tank units
COMPLETE Buildings Ready for Demo	0	68 structures
Buildings Demolished or Removed	0	63 structures
Non-radioactive Waste Shipped	0	89.8 m ³
Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped	0	5,014 m ³
Low-level Waste (LLW)/Mixed (M)LLW Shipped	112 m ³	22,387 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 of 1980 (CERCLA)</i> 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	2	N/A
First Aid Cases	0	30	N/A
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments:

- Mobilized and prepared the loadout area for PRF rubble disposition. Preparations included grooming traveling paths, installing berms to control water flow and placing gravel and dirt.
- Built side shields for roll on/roll off truck loading.
- Completed setup and test run for PRF can-lining process.
- Built platforms for the 212-Z lag yard ERDF can-lining station.
- Completed setup of scaffold structure for closing bags after PRF debris loadout.
- Shipped 16 containers of final phase demolition debris to ERDF.

MAJOR ISSUES

Issue

The project's fiscal year (FY) 2020 forecast reflects spending approximately \$5.2 million more than the entire allotted carryover balance. Additional funding is required in FY2020 to complete PFP demolition. The current forecast reflects that projected funding would not be exceeded until about April 2020.

Corrective Action

Resolve funding shortfall.

Status

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

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

Unmitigated Risk Impacts	Assessment		Comments									
	Month	Trend										
RL-0011/WBS-011.OA												
Explanation of major changes to the project monthly stoplight chart: There are no major changes to the stoplight chart in January .												
Realized Risks (Risks that are currently impacting project cost/schedule)												
No realized risks identified in January .												
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)												
No critical risks identified in January .												
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)												
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: Low (10% to 25%) 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"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Review RCT and D&D head count changes weekly to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: Based on current project status, this risk is no longer considered to have a high threat value. As such, it will be removed from the stoplight chart prior to February reporting. The project continues to review staffing levels weekly to reduce the probability of this risk occurring.</p>	Mitigation Action(s)	FC Date	%	Review RCT and D&D head count changes weekly to ensure adequate resource profiles.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%										
Review RCT and D&D head count changes weekly to ensure adequate resource profiles.	Ongoing	N/A										
PFP-P-014: "Bump and Roll, Labor Assets Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit Employees Affecting Productivity"	PFP Hanford Atomic Metal Trades Council (HAMTC) labor resources are not available or are unqualified due to the bump and roll, LAMP, or other job postings. Risk Handling Strategy: Control Probability: Low (10% to 25%) 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"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communicate with other entities to reduce impact of the bump-and-roll process.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Review RCT and D&D head count changes weekly to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: Based on current project status, this risk is no longer considered to have a high threat value. As such, it will be removed from the stoplight chart prior to February reporting. The project continues to review staffing levels weekly to reduce the probability of this risk occurring.</p>	Mitigation Action(s)	FC Date	%	Communicate with other entities to reduce impact of the bump-and-roll process.	Ongoing	N/A	Review RCT and D&D head count changes weekly to ensure adequate resource profiles.	Ongoing	N/A
Mitigation Action(s)	FC Date	%										
Communicate with other entities to reduce impact of the bump-and-roll process.	Ongoing	N/A										
Review RCT and D&D head count changes weekly to ensure adequate resource profiles.	Ongoing	N/A										

Unmitigated Risk Impacts	Assessment		Comments															
	Month	Trend																
RL-0011/WBS-011.OA																		
FY2020 Key Risks																		
<p>PF3-P-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: Low (10% to 25%) Worst Case Impacts: \$0, 8 days</p>	●	↔	<p>Risk Trigger: High winds and cold weather may impact the project in the fall/winter seasons. Average winds above 15 miles per hour (mph) shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and therefore shuts down fieldwork activities.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install heat trace and installation on fixative tanks</td> <td>1/16/20</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. Heated fixative tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. Installation of heat trace and insulation on the fixative tanks was completed in January. Wind events heavily impacted the project in January, including four days with work control zone restrictions due to high winds. Additionally, resources were diverted to wind-caused tumbleweed cleanup for multiple days, impacting debris reduction, loadout, and 236-Z mobilization efforts. Cold temperatures and equipment malfunction resulted in the water line freezing at the end of the month, resulting in three days of schedule impacts.</p>	Mitigation Action(s)	FC Date	%	Install heat trace and installation on fixative tanks	1/16/20	100									
Mitigation Action(s)	FC Date	%																
Install heat trace and installation on fixative tanks	1/16/20	100																
<p>PF3-P-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: Low (10% to 25%) Worst Case Impacts: \$0, 30 days</p>	●	↔	<p>Risk Trigger: High winds and cold weather may impact the project in the fall and winter seasons. Average winds above 15 mph shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and therefore shuts down fieldwork activities.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install heat trace and installation on fixative tanks.</td> <td>1/16/20</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. A winter preparedness plan was developed for PFP to mitigate impacts from cold weather. Heated tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. Installation of heat trace and insulation on the fixative tanks was completed in January. Wind events heavily impacted the project in January, including four days with work control zone restrictions due to high winds. Additionally, resources were diverted to wind-caused tumbleweed cleanup for multiple days, impacting debris reduction, loadout, and 236-Z mobilization efforts. Cold temperatures and equipment malfunction resulted in the water line freezing at the end of the month, resulting in three days of schedule impacts.</p>	Mitigation Action(s)	FC Date	%	Install heat trace and installation on fixative tanks.	1/16/20	100									
Mitigation Action(s)	FC Date	%																
Install heat trace and installation on fixative tanks.	1/16/20	100																
<p>PF3-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: Medium (26% to 74%) Worst Case Impacts: \$0, 16 days</p>	●	↔	<p>Risk Trigger: During PFP demolition activities, an increase in stop works could result in delays.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. 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 January.																		

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	5.7	1.0	4.5	(4.7)	-82.2%	(3.5)	-341.8%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Variance: (-\$4.7M/-82.2%)

The unfavorable schedule variance is due to delays to the project caused by weather. The project experienced advisory level winds that closed the PFP work control zone for multiple days in January. The advisory level winds also led to tumbleweed accumulation response actions that occupied crews for an additional four days. In the last week of January, cold temperatures and equipment failure resulted in the water line freezing, causing an additional four days in which no loadout was possible.

CM Cost Variance: (-\$3.5M/-341.8%)

The unfavorable cost variance is due to the delays mentioned in the schedule variance above. Crews worked on wind and water line response actions and were unable to complete critical path activities. The project incurred average monthly material and labor costs.

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	1,140.3	1,124.7	1,222.9	(15.6)	-1.4%	(98.2)	-8.7%	1,143.6	1,239.3	16.4	(95.7)

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Variance: (-\$15.6M/-1.4%)

The CTD schedule variance is within threshold.

CTD Cost Variance: (-\$98.2M/-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 for TRU waste disposition loadout activities; 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 (RCA) 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 holdup, 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): (-\$95.7M/-8.4%)

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 RCA and programmatic assessments also contributed to the variance.

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0011 Nuclear Matl Stab & Disp PFP	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	29.5	34.8	(5.2)

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 the 236-Z Canyon loadout anticipated to complete by April 6, 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 June 23, 2020.

MILESTONE STATUS

The following table is a one-year look ahead to project breakdown structure (PBS) RL-0011 Tri-Party Agreement enforceable milestones, nonenforceable 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		4/6/2020	The project recognized a 16-day slip to the forecasted completion date since December due to weather impacts.

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 applicable U.S. Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or transportation safety document requirements.	Ongoing

DOE ACTIONS/DECISIONS

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

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)

CH2MHILL
Plateau Remediation Company
a Jacobs company



R. M. Geimer
Vice President for
K Basin Operations

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Sludge removal from the 105K West basin completed in fiscal year (FY)2019. Documentation for the completion of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Milestone M-016-176 was submitted to the U.S. Department of Energy (DOE), Richland Operations Office (RL) in December. There was no significant progress in January, as the project is completing administrative closeout activities.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

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

KEY ACCOMPLISHMENTS

None currently identified.

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	0.0	0.0	0.0	0.0	0.0%	0.0	0.0%

Numbers rounded to the nearest \$0.1 million.

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

Variance is within threshold.

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

Variance is within threshold.

Contract-to-Date (CTD)

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	759.6	759.6	729.8	0.0	0.0%	29.8	3.9%	759.6	729.8	0.0	29.8

Numbers rounded to the nearest \$0.1 million.

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

The variance is within reporting thresholds.

CTD Cost Performance (+\$29.8M/+3.9%)

The variance is within reporting thresholds.

Variance at Completion (+\$29.8M/+3.9%)

The variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	0.6	0.0	0.6

Numbers rounded to the nearest \$0.1 million.

Funds/Variance Analysis

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

Critical Path Analysis

All project scope is complete with the exception of closeout-related activities. The project completed Tri-Party Agreement Milestone M-016-176 ahead of the December 31, 2019, due date.

MILESTONE STATUS

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

Number	Title	Due Date	Forecast Date	Status/ Comment
M-016-176	Complete sludge removal	12/31/2019	09/11/2019(A)	Complete

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

None currently identified.

Section C

Solid Waste Stabilization and Disposition (RL-0013)

CH2MHILL
Plateau Remediation Company
a Jacobs company



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

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

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January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In the January reporting period (December 23 to January 26, 2020), the Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. The River Risk Management Project 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 Management of Cesium (Cs) and Strontium (Sr) Capsule (MCSC) Project team completed an internal review of the W-135 Project, Waste Encapsulation and Storage Facility (WESF) modifications line item U.S. Department of Energy (DOE) Critical Decision (CD)-2/3 package. The team is incorporating corrections and improvements in preparation for the planned February CHPRC Project Review Board (PRB) assessment of the package's readiness to submit to the U.S. Department of Energy, Richland Operations Office (RL) for approval.
- The subcontractor responsible for erecting the MCSC mockup structure completed demolition of a major portion of the 100K Operations Project knock-out pot (KOP) mockup structure that was constructed for the completed sludge retrieval effort, which was located in the footprint of the new W-135 Project (WESF Modifications) mockup structure at the Maintenance and Storage Facility (MASF). The contractor also completed assembly of the major structural components of the G Cell mockup within its onsite shop and ultimately initiated transport of the materials to MASF.
- At WESF, the crew performed decontamination activities to the truckport-to-canyon opening and obtained verification measurements for the W-135 Project (WESF Modifications) to ensure field dimensions are consistent with design media. They also completed installation of the grounding components on the G Cell windows in preparation for upcoming window refurbishment activities.
- At T Plant, the crew completed annual Sludge Transfer and Storage Container Nitrogen Purge System gauge calibration and replacement and electrical panel schedule updates.
- At the IDF, the public comment period continued for the facilities *Resource Conservation and Recovery Act of 1976* (RCRA) permit modification application to add secondary waste disposal. The public comment period is scheduled to end in mid-February. Work on site infrastructure modification continued, and the tank cover replacement contract was awarded. Work also continued on defining operational scope and developing operational procedures for execution of disposal operations, projected to commence in fiscal year (FY)2022.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
20-EMS-WFMP-OBJ1-P1	Complete installation of MASF 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	42%
20-EMS-RRMP-OBJ1-P1	Track maintenance/recycling activities at ERDF (e.g., used oil recycling, tires, batteries and product drums, etc.)	On a quarterly basis, track the maintenance recycling activities of the ERDF subcontractor and CH2M HILL Plateau Remediation Company (CHPRC) transportation organization	9/30/2020	20%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2*	*1 DART, Project Technical Services (PTS) in support of RL-0013
Total Recordable Injuries	0	0	N/A
First Aid Cases	0	22	N/A
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- WESF Permit: On December 23, 2019, the Closure Plan Addendum for WESF was transmitted to the Washington State Department of Ecology (Ecology) for informal review.
- WESF Permit: On January 22, 2020, CHPRC closed all Ecology comments on the Waste Analysis Plan Addendum for WESF, completing the addendum.
- Solid Waste Operations Complex (SWOC) Part B Permit: On January 13, 2020, the Waste Analysis Plan Addendum for Central Waste Complex (CWC) - Waste Receiving and Processing Facility (WRAP) for was transmitted to Ecology for informal review.

- Consent Agreement and Final Order: On January 22, 2020, RL and CHPRC resumed the data quality objectives process for the CWC Outside Storage Area A and Outside Storage Area B.

13.02 Capsule Storage and Disposition

- Completed disposition of the non-conformance report associated with Mission Support Alliance, LLC (MSA) fabrication of the rail brackets for the 15-ton canyon crane rails. Installation of the new brackets is scheduled to begin early February.
- Completed repairs on run-in and belt tension on wet surface fluid cooler number 2. WSFC cooler number 2 is available for operation.
- Performed decontamination of the truckport-to-canyon opening and obtained verification measurements for the W-135 Project WESF Modification project engineers to ensure that field dimensions are consistent with design media.
- Supported the MSA water utilities team with the repairs of a leaking water line south of B Plant. After successfully recharging the system, retesting of facility components was successful.
- Completed installation of the grounding components on the G Cell windows in preparation for upcoming window refurbishment activities by W-135 Project WESF Modifications.
- Completed two operational drills at WESF.
- Completed 29 preventative maintenance (PM) packages.

13.03 Canister Storage Building (CSB)

- Completed one operational drill.
- Completed 24 PM packages.

13.06 TRU Repackaging

- Completed repackaging of 54.5 m³ of TRU/TRUM waste in December for a total of 266.5 m³ fiscal year to date (FYTD).

13.07 Waste Receiving and Processing

- Completed 219 surveillances and 11 PM packages.

13.08 T Plant

- Completed annual Nitrogen Purge System gauge calibration and replacement, electrical panel schedule updates and incident command post drill.
- Initiated 45-ton crane annual electrical maintenance.
- Shipped two drums from T Plant to ERDF in two shipments.
- Shipped two drums from T Plant to Stericycle in one shipment.
- Completed 581 surveillances and 29 PM packages.

13.09 CWC and Low-Level Burial Grounds

- Shipped one 1800TL and one Super 7A loaded radioactive waste containers from the CWC to Perma-Fix Northwest (PFNW) in two shipments for processing.
- Received eight standard radioactive waste boxes containing processed waste from PFWN at the CWC in two shipments.
- Received 11 filled radioactive waste drums from Pacific Northwest National Laboratory at the CWC.
- Completed 352 surveillances and 23 PM packages.

13.15 TRU Disposition

- Continuing enhancement of acceptable knowledge on TRU waste streams.

13.16 Offsite Spent Nuclear Fuel Disposition

- Maintained coordination of offsite spent nuclear fuel disposition.

13.21 Mixed-Waste Disposal Trenches

- Completed 137 surveillances.

13.24 Management of Cs and Sr Capsules Project

- The MCSC Project team completed an internal review of the W-135 Project WESF Modifications line item CD-2/3 package. The team worked on incorporating corrections and improvements to the package in preparation for the PRB planned in February tasked with performing an independent assessment of the package's readiness for transmittal to RL for review and approval.
- With the support of PTS, the following progress was made:
 - The subcontractor construction crew completed fit testing major components of the mockup structure within the subcontractor's facility and initiated transport of materials to MASF.
 - The subcontractor construction crew completed demolition of the major portion of the 100K KOP mockup structure.
 - Received bid packages from contractors for the WESF truckport utility relocation scope.
 - Received MSA budgetary estimate for completing the 13.8KV distribution work scope associated with the truckport utility relocation.
 - Commenced superstructure column and floor beam installation for the mockup facility.
 - Completed refurbishment of the MO135 restroom trailer at the Pac Mobile Facility. The refurbished trailer was delivered to the Hanford Site.
 - Installed MO135 and completed electrical power hookup to MO134 and MO135.
 - Installed MO2266; National Electrical Code inspection of the installation was pending at month end.

River Risk Management Project

13.10 Environmental Restoration Disposal Facility

- Received 1,485 tons of waste for disposal in January.
- Received 8,185 tons of waste for disposal FYTD. Any corrections in previous months are reflected in this total.
- Received 23 shipments (315 tons) of Plutonium Finishing Plant (PFP) Closure Project waste using the enhanced radiological controls during disposal operations.
- Offloaded the 241-A-103 C pit riser.

13.12 Integrated Disposal Facility

- Care and Custody
 - Completed monthly inspections.
 - Completed five significant storm event inspections.
 - Calibrated and installed new transducers for the Cell 1 and Cell 2 secondary leak detection system.

- Calibrated and installed a new transducer for the Cell 1 leachate collection and removal system (LCRS).
- Performed trouble shooting on the Cell 1 LCRS low-flow pump.
- IDF Operational Readiness
 - With the support of PTS, the following progress was made on installation of IDF infrastructure:
 - Continued site-grading activities of the waste receiving area.
 - Initiated utility installation for balance of plant.
 - Awarded a subcontract for construction of the leachate tank covers.
- RCRA Permit Modification Request
 - The RL 60-day public comment period for the IDF RCRA Permit Modification Request continued. Comments are due to Ecology by February 14, 2020.
 - A workshop was held with RL, CHPRC and Ecology to revise and update the permit conditions for the IDF.

MAJOR ISSUES

Issue

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

Corrective Action

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

Status

Continuing to use the best-demonstrated available technology to provide adequate configuration and minimize the potential for contamination spread during the long-term storage (i.e., protecting boxes with tarps or protective shoring; over-packing drums). Streamlined and consolidated container management procedures. RL authorized the FY2020 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue throughout the year.

Issue

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

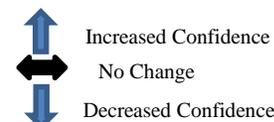
Status

CHPRC submitted an early procurement request to RL for review and approval on October 21, 2019. RL subsequently authorized early procurement for the construction and fabrication of the CSA, universal capsule sleeves and the transportable storage container baskets (reference 1905014/20-PFD-0003, dated November 26, 2019). RL is withholding authorization of early procurement of the transportable storage containers and vertical concrete casks until the associated RL PDSA review comments are satisfactorily resolved. CHPRC and RL personnel continue working to resolve outstanding PDSA comments. Authorization is anticipated in fiscal month March.

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 January.													
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" style="width: 100%;"> <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 January. Impacts associated with realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project.</p>	Risk Recovery Action(s)	FC Date	%	Conduct weekly meetings with Ecology and RL.	Ongoing	N/A			
Risk Recovery Action(s)	FC Date	%											
Conduct weekly meetings with Ecology and RL.	Ongoing	N/A											
13-RCRA-REV9-003: "RL-13 - Ecology Delays"	Scope supported by Ecology is impacted by delays in Ecology review time that do not align with the Permit Management Schedule. This issue requires that the project take recovery actions that result in schedule impacts. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$0, 96 days			<p>Risk Event: Ecology's review time is impacting the Permit Management Schedule.</p> <table border="1" style="width: 100%;"> <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 January. Select staff are prepared to respond to comments when they are received. Impacts associated with realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project.</p>	Risk Recovery Action(s)	FC Date	%	Conduct routine meetings with Ecology and the contractor to promote communication efforts.	Ongoing	N/A			
Risk Recovery Action(s)	FC Date	%											
Conduct routine meetings with Ecology and the contractor to promote communication efforts.	Ongoing	N/A											
WSD-138: "Regulatory Document (Closure Plan with Ecology) Results in Significant Comments from the Regulator"	Significant comments from the regulator on closure plans submitted for approval results in nonapproval 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" style="width: 100%;"> <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 January. 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	%											
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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/Fire Hazard Analysis (FHA) delays start of CSA construction.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very likely (>90%) Worst Case Impact: \$0K, 96 days</p>			<p>Risk Event: CHPRC received DOE-HQ comments on the CSA PDSA that require additional analysis. Due to the time it has taken to resolve RL comments, the delay of PDSA approval was impacting the start of CSA material procurement and construction.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.</td> <td>3/19/20</td> <td>80</td> </tr> </tbody> </table> <p>Risk Assessment Action: Due to outstanding comments on the CSA PDSA, RL was unable to approve this document by the scheduled date of September 12, 2019. The RL federal project director and the CHPRC project manager agreed that submitting an early procurement request was appropriate and would minimize negative impact to the W-135 project baseline. Approval of the early procurement request occurred via 1905014/20-PFD-0003 on November 26, 2019. In addition, the RL and CHPRC W-135 Team are working to resolve outstanding CSA PDSA comments. The forecast date from last month for resolution of DOE-HQ comments slipped five weeks to March 19, 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 May 2020.</p>	Risk Recovery Action(s)	FC Date	%	Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.	Complete	100	Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	3/19/20	80
Risk Recovery Action(s)	FC Date	%											
Receive RL approval of CSA early procurement and construction as requested via CHPRC-1904278.	Complete	100											
Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	3/19/20	80											
WSD-CSS-009: "PDSA Comments Result in Schedule Delays"	<p>Comments on the PDSA received from RL are not able to be resolved within the allotted time frame provided in the baseline schedule, resulting in schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very likely (>90%) Worst Case Impacts: \$1.7M, 192 days</p>			<p>Risk Event: CHPRC received DOE-HQ comments on the CSA PDSA that require additional analysis of the CSS final design. Depending on the analysis results, the CSS final design may need to be modified. Additionally, delay of the PDSA approval could impact CSS procurement/fabrication.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Receive RL approval of CSS early procurement as requested via CHPRC-1904278.</td> <td>3/5/20</td> <td>30</td> </tr> <tr> <td>Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.</td> <td>3/19/20</td> <td>80</td> </tr> </tbody> </table> <p>Risk Assessment Action: Due to outstanding comments, RL was unable to approve the CSA PDSA by the scheduled date of September 12, 2019. The RL federal project director and the CHPRC project manager agreed that submitting an early procurement request was appropriate and would minimize negative impact to the W-135 project baseline. Partial approval of the early procurement request occurred via 1905014/20-PFD-0003 on November 26, 2019; however, full authorization for procurement of the balance of CSS equipment is not anticipated until March 5, 2020. The forecast date from last month for resolution of DOE-HQ comments slipped five weeks to March 19, 2020. Resolution of DOE-HQ comments is anticipated to lead to RL issuing an SER, approving the CSA PDSA currently forecast for May 2020.</p>	Risk Recovery Action(s)	FC Date	%	Receive RL approval of CSS early procurement as requested via CHPRC-1904278.	3/5/20	30	Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	3/19/20	80
Risk Recovery Action(s)	FC Date	%											
Receive RL approval of CSS early procurement as requested via CHPRC-1904278.	3/5/20	30											
Continue working with DOE-HQ to resolve the comments that may prevent RL approval of the CSA PDSA.	3/19/20	80											
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)													
WSD-097: "Major Equipment Failure – T Plant"	<p>T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) 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 January. 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 the most critical spares.</p>	Mitigation Action(s)	FC Date	%	Implement aggressive CM/PM program.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%											
Implement aggressive CM/PM program.	Ongoing	N/A											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0013/WBS-013																
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																
WSD-CSS-006: "Fabrication of the Equipment from the Contractor"	<p>Fabrication of critical items for the long-term storage of the Cs and Sr capsules does not go exactly as planned, resulting in design changes and rework.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$5M, 64 days</p>	●	↔	<p>Risk Trigger Metric: Fabrication of required equipment and items does not go according to schedule, requiring re-design or additional components that will affect the project's cost and schedule baseline. Fabrication is not currently anticipated until fiscal month June.</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 January. Procurement of transfer (including universal capsule sleeves) and ancillary equipment commenced in January 2020 following RL approval of the Task 5/6 and 9 consent packages. Fabrication is scheduled to commence in June 2020.</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 January. This risk was identified as a key project risk for FY2020. The project continued to follow CHPRC procedures and safety programs to minimize any industrial accidents or contamination events. Four large waste boxes have been processed in FY2020, reducing the risk of a contamination event.</p>	Mitigation Action(s)	FC Date	%	Adhere to CHPRC procedures, safety programs and training programs are designed to minimize the potential of worker injury.	Ongoing	N/A	Process 10 large waste boxes.	7/21/20	40			
Mitigation Action(s)	FC Date	%														
Adhere to CHPRC procedures, safety programs and training programs are designed to minimize the potential of worker injury.	Ongoing	N/A														
Process 10 large waste boxes.	7/21/20	40														
WSD-125: "Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues"	<p>A pause in waste processing results in an unexpected container degradation within the SWOC (excluding TRU retrieval activities) and requires additional resources to respond.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$5M, 0 days</p>	●	↔	<p>Risk Trigger Metric: Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. 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
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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 January. This risk was identified as a key project risk for FY2020. The WRAP roof was analyzed for structural integrity following water intrusion. There was insufficient basis for the roof's integrity, which will lead to an eventual roof replacement planned for FY2020-21, pending weather conditions. The master documented safety analysis container stacking requirements are complete. Maintenance work at CWC will be scheduled based on facility work priorities.</p>	Mitigation Action(s)	FC Date	%	Conduct floor repairs as necessary.	Ongoing	N/A	Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A	Design roof replacement preparation process pad.	09/30/20	8
Mitigation Action(s)	FC Date	%														
Conduct floor repairs as necessary.	Ongoing	N/A														
Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A														
Design roof replacement preparation process pad.	09/30/20	8														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0013/WBS-013													
WSD-140: “As-Found-Unknown Conditions - W&FMP Facilities”	<p>Unknowns, as found or emergent conditions, impact the operability of one or more W&FMP facilities, requiring recovery actions that result in in-scope unplanned work.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very likely (>90%) Worst Case Impacts: \$2M, 0 days</p>	●	↔	<p>Risk Trigger Metric: Unknowns, as found or emergent conditions impact the operability of one or more W&FMP facilities, requiring recovery actions that result in in-scope unplanned work.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. 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 January. 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 January. This risk has been identified as a key risk for FY2020. The CSA RCRA Part B Permit public comment period closed on December 20, 2019. Six comments were received, and RL anticipates permit issuance by February 28, 2020. If there are any delays, RL and Ecology will process a TA (already drafted) to ensure that CSA construction is not delayed.</p>	Mitigation Action(s)	FC Date	%	Continued communication with Ecology to facilitate the early approval of the TA.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%											
Continued communication with Ecology to facilitate the early approval of the TA.	Ongoing	N/A											
WSD-CSA-013: “CSA Site Location Found to Have Extensive Contamination”	<p>The CSA location is found to have contaminated soil or volumes of unfavorable (e.g., loose) soils.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$100K, 48 days</p>	●	↔	<p>Risk Trigger Metric: Significant volumes of contaminated or otherwise unsuitable soils are discovered during CSA construction that cause delays and costs, resulting in the required excavation of additional soil and potentially causing the contamination of leased equipment. CSA construction is forecast to commence in March 2020.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. This risk has been identified as a key project risk for FY2020. This risk has been accepted, as the project has taken great precaution to plan the location of the CSA away from any potential contamination. In the unlikely event that contamination is detected within the CSA site location, project costs and a schedule delay will be accepted, and shipping the contaminated soil to ERDF for disposal will proceed.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A			
Mitigation Action(s)	FC Date	%											
None identified at this time.	N/A	N/A											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0013/WBS-013																
WSD-W135-31: "Canyon Crane Non-Functional/ Not Serviceable"	<p>The WESF crane is put back into limited usage for the W-130 Project; however, the crane is found to be unserviceable or fails during the W-135 operational activities.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$300K, 96 days</p>	●	↔	<p>Risk Trigger Metric: The canyon crane fails during use or cannot be returned to service after maintenance.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install rail brackets for canyon crane</td> <td>01/30/20</td> <td>80</td> </tr> <tr> <td>Perform preventative/corrective maintenance procedures on the crane to facilitate reliability</td> <td>08/31/20</td> <td>0</td> </tr> <tr> <td>Procure critical spares</td> <td>9/30/21</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: Significant progress was made on installation of new WESF canyon crane rail brackets in January. This risk has been identified as a key risk for FY2020. Facility personnel will complete replacement of 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	01/30/20	80	Perform preventative/corrective maintenance procedures on the crane to facilitate reliability	08/31/20	0	Procure critical spares	9/30/21	0
Mitigation Action(s)	FC Date	%														
Install rail brackets for canyon crane	01/30/20	80														
Perform preventative/corrective maintenance procedures on the crane to facilitate reliability	08/31/20	0														
Procure critical spares	9/30/21	0														
WSD-IDF-11: "Discovery of Unplanned Site Conditions"	<p>Unexpected site conditions are encountered during soil excavation activities, resulting in recovery actions.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Low (10% to 24%)</p> <p>Worst Case Impacts: \$240K, 16 days</p>	●	↔	<p>Risk Trigger Metric: During excavation activities within the established Waste Information Data System (WIDS) site the project encounters unplanned contamination, debris, legacy waste (drums) or utilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. 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 January.																

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	15.7	14.6	15.4	(1.1)	-6.8%	(0.7)	-5.1%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$1.1M/-6.8%)

The CM negative schedule variance is due to the following:

- Large Box Commercial TRUM Repack Group 3: The strategic prioritization of waste shipments. Priority was placed on the PFP 1800TL shipments, which were accelerated to mitigate shipment risk and to maintain the offsite contractor waste processing throughput.
- Low Level Waste Burial Grounds Base Operations: A late start with the burial ground cleanup (plant life extension system). Resource availability has been an issue with the deactivation and decontamination organization and completing the work package for cold-and-dark for the demolition of MO247/248.
- CSA construction: The delay of mobilization and training of subcontractors until the end of February to avoid construction in the winter months.
- IDF: Construction of a raw water pipeline to IDF and the installation of two fire hydrants and a raw water tanker truck fill station at IDF were scheduled to start during the January reporting period. This work was not initiated based on Hanford Fire Marshal input on the final design and identification of an existing raw water fill station located directly adjacent to the IDF that can be used to source raw water for IDF dust suppression. In conjunction with RL, the station was determined to be not required. A baseline change request (BCR) is being prepared to remove the scope. Planned electrical work was delayed pending completion of the Phase 1 excavation work.

CM Cost Performance (-\$0.7M/-5.1%)

The CM negative cost variance is due to the following:

- CSS fabrication/delivery: The current period negative cost variance is due to misalignment of subcontractor schedule and cost to the originally planned baseline. A BCR will be prepared in March to align the baseline with the subcontractor schedule.

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	1,536.9	1,527.1	1,443.8	(9.8)	-0.6%	83.3	5.5%	1,678.2	1,591.0	147.2	87.2

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$9.8M/-0.6%)

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$83.3/+5.5%)

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

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

Variance at Completion (+\$87.2M/+5.2%)

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

- Organizational flattening and streamlining.
- Right-sizing capabilities for planned scope.
- Optimizing resources with reorganization and consolidation of engineering capabilities across W&FMP.
- Combined administrative/records functions across WESF and CSB.
- Removing waste from building(s) and reducing the need for inspections/surveillances.
- Reducing the size and number of radioactive areas/radiation area monitors and associated surveillances/routines and records.
- Tagging out unneeded equipment and reducing the frequency and number of PM activities
- Increasing shared resources across all of the SWOC.

- Reducing dedicated resources for CAS and using project-wide support.
- Optimizing maintenance scheduling and execution, reducing operations fieldwork supervision.
- Increasing emphasis on managing planned absence coverage within existing resources.
- Simplifying and optimizing acquisition and procurement management within W&FMP.
- Eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and SWITS.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0013 Solid Waste Stabilization and Disposition	FY2020		Variance
	Projected Funding	Spending Forecast	
Waste Stabilization and Disposition	198.8	202.1	(3.3)
Management of Cesium and Strontium Capsules (Line Item)	14.3	0.6	13.7
RL-0013 – Total	213.1	202.7	10.4

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The current FY2020 projected funding level of \$213.1 million is based on the final FY2020 project management baseline annual update submitted to RL in September, with updates through fiscal month January. Line Item funding is based on FY2019 carryover and FY2020 new funding targets. The spending forecast of \$202.7 million reflects an increase of approximately \$3.7 million from December, primarily due to additional work authorized to incorporate the FY2020 assistant manager for River and Plateau (AMRP) Execution Integrated Priority List Revision 2a, which include acceleration of the CSS fabrication.

Critical Path Analysis

Critical path analysis will be provided upon request.

MILESTONE STATUS

The following table is a one-year look ahead of project breakdown structure (PBS) RL-0013 *Hanford Federal Facility Agreement and Consent Order*-enforceable milestones, non-enforceable target due dates and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-53	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste	9/30/2018			Ecology has not agreed to the change form
M-091-03N	TPA M-091-03N Submit Revision of TRUM Waste and Mixed Low-level Waste Preventative Maintenance Procedure to Ecology	6/30/2020		6/30/2020	On schedule
M-091-44T	Submit Change Request to Establish Schedule for Achieving Offsite Shipment of All TRUM Waste	9/30/2020		9/30/2020	On schedule
M-091-49A	Submit a Change Request to Establish a Schedule for Achieving the Retrieval of RSW	9/30/2020		9/30/2020	On schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS/DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
CSA – RL: Review/Approve PDSA (1 st FY)	5/16/2019(A)	5/29/2020
RL Review WESF Documented Safety Analysis/Technical Safety Requirement and Issue SER	12/17/2019(A)	4/20/2020
RL Approve IDF FHC	3/19/2020	4/2/2020
RL Review of Project W-135, WESF Modifications, CD-2/CD-3 Documentation	4/17/2020	8/14/2020

The expected due date for RL review and approval of the CSA PDSA slipped 38 days to May 29, 2020, since the expected date reported in December 2020. The revised date reflects current projections based on the status of resolving RL questions and concerns associated with the draft CSA PDSA submitted on May 16, 2019.

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

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

PROJECT SUMMARY

Progress continued in January on the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)* remedial process documentation for the River Corridor and Central Plateau. The challenging and unique fiscal year (FY)2019 drilling campaign was finished with the completion of two extraction wells at the 200-BP-5 Operable Unit (OU). The 200 West Area Pump and Treat (P&T) Facility continued to operate at record flow rates. Groundwater treatment and well drilling (including development) completed includes the following:

Treatment Facility	Million Gallons Treated		Chrome (kg)		Carbon Tet (kg)		Tech-99 (pCi)		Uranium (kg)	
	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD
DX P&T	32.2	121.2	1.5	6.9						
HX P&T	22.4	91.7	3.2	13.0						
KR-4 P&T	13.7	48.8	0.1	0.3						
KW P&T	13.1	51.8	1.0	6.2						
KX P&T	38.9	156.7	1.7	8.4						
200 West P&T	111.1	411.9	0.3	2.7	185.0	642.0	1.57×10 ¹¹	5.89×10 ¹¹	7.4	37.5
Combined	231.4	882.1	7.9	37.7	185.0	642.0	1.57×10¹¹	5.89×10¹¹	7.4	37.5
FY2020 Gold Metric	--	2,200.0	--	80.0	--	1,800.0	--	N/A	--	90.0

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

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

EMS Objectives and Target Status

Objective Action Plan #	Objective	Due Date	Status
20-SGRP-OBJ-1-P1	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	50%
20-SGRP-OBJ-2-P1	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	17%
20-SGRP-OBJ-3-P1	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	35%
20-SGRP-OBJ-4-P1	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	31%

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

- The U.S. Department of Energy (DOE), Richland Operations Office (RL) agreed to incorporate sampling and analysis plans (SAPs) into the remedial design/remedial action work plan (RD/RAWP) on January 13, 2020. This agreement resolves the issue brought forward by the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) on June 26, 2019, requesting that SAPs be incorporated into the RD/RAWP.

100-KR-4 OU

- Operations continued at the 100-K West soil flushing infiltration gallery. As of January 27, 2020, about 22.2 million gallons of water have been sent to the infiltration gallery, which continues to operate at the higher infiltration rate, ranging from 160 to 175 gallons per minute (gpm).
- Provided EPA with the Draft Revision 0 Remedial Investigation Report for review on January 17, 2020.

Central Plateau**200-BP-5 and 200-PO-1 OUs**

- Completed well construction activities for monitoring well 699-47-53B and well 699-47-55.

200-ZP-1 OU

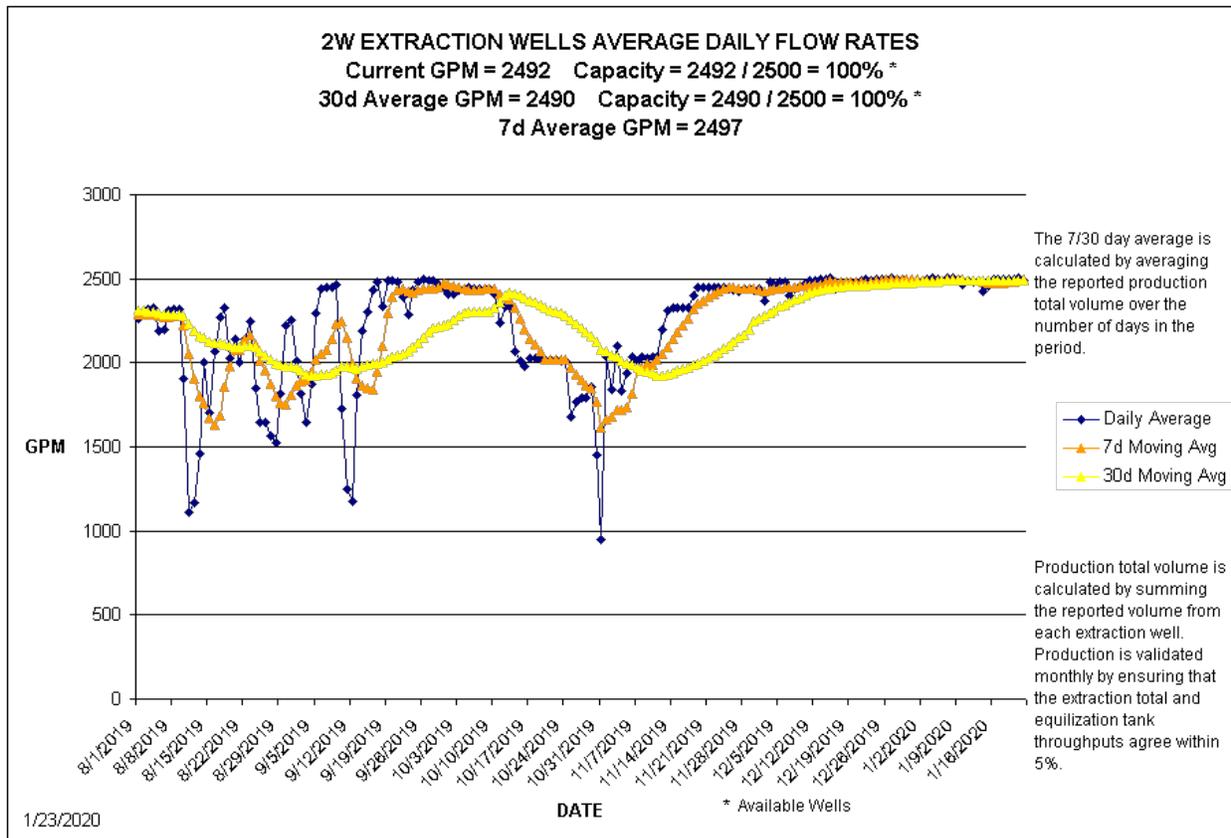
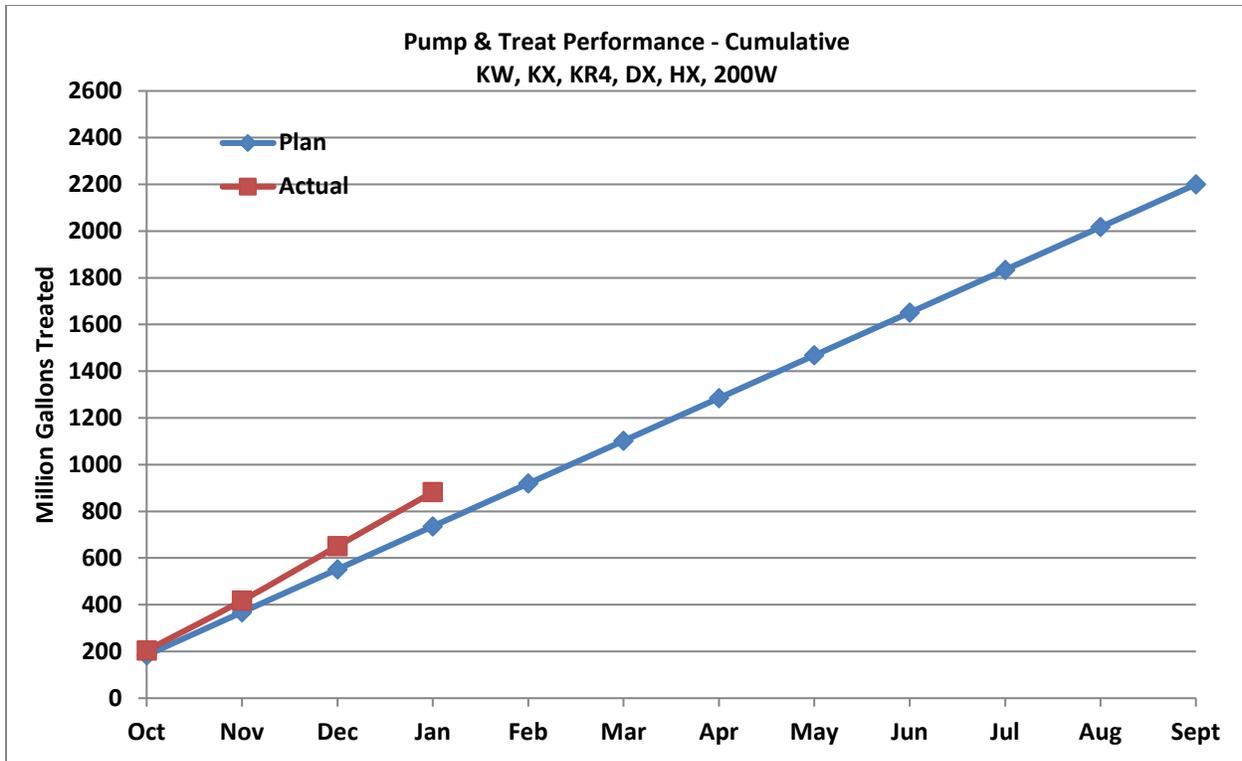
- Awarded the contract for the highly anticipated final three of five extraction wells, ahead of schedule, on January 20, 2020. Initiation of fieldwork is expected in March 2020.

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

- Operated the 200 West P&T at an average of 2,488 gpm. Continued progress on 200-ZP-1 optimization activities supporting the nitrate treatment system layup:
 - Completed fieldwork for layup of the rotary drum thickeners.
 - Commenced offloading lime from the lime silos for system layup.
 - Commenced cross tie between equalization tank and recycle tank.
 - Continued construction to place a road crossing and piping preparing for an additional air stripper to be installed later in the year.

100 Area P&Ts

- Operated the DX P&T at 721 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 304 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 879 gpm, below the facility capacity of 900 gpm.
- Operated the HX P&T at 503 gpm, below the facility capacity of 900 gpm.



MAJOR ISSUES

Issue

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

Corrective Action

RL resolved the issue.

Status

The issue was resolved by RL on January 13, 2020, upon RL agreement with the regulators to incorporate SAPs into the RD/RAWP. Work to address remaining comments from Ecology has resumed, including incorporating SAPs into the document as addendums. Issue is closed and will not be reported in future monthly reports.

Issue

A head-node server failure of the Gaia Environmental modeling computing system resulted in a shutdown of modeling runs in late December 2019, which impacted cumulative impact evaluation (CIE) and composite analysis work activities.

Corrective Action

Work with Mission Support Alliance, LLC (MSA) to develop a mitigation strategy to avoid future failures. This mitigation may include placing the front-end node on a virtual server to avoid a similar failure that was recently experienced.

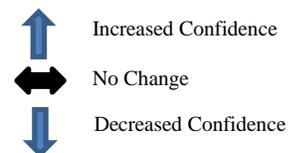
Status

Replacement of the failed component was completed in January 2020, and acceptance testing of the new configuration to bring the system back online is anticipated for completion in early February 2020.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
Explanation of major changes to the project monthly spotlight chart: The following new items have been added to the spotlight chart as realized risks: <ul style="list-style-type: none"> SGW-009: Key Environmental Modeling Hardware Failure SGW-216B-02: 216-B-63 Closure Plan Atypical Comments SGW-216B-01: 216-B-3 Closure Plan Atypical Comments SGW-216S-01: 216-S-10 Closure Plan Atypical Comments SGW-216A-01: 216-A-29 Closure Plan Atypical Comments SGW-KR4-05: FS (Feasibility Study) – Greater Than Expected Comments from RL or Regulators SGW-ZP1-03: Air Stripper Phase 1 Installation Design Maturity SGW-169-ZP1: ZP1 – Increase in Sampling & Analysis Requirements See Risk Event and Recovery Assessment below for details on the risk.										
Realized Risks (Risks that are currently impacting project cost/schedule)										
SGW-009: Key Environmental Modeling Hardware Failure	Computer hardware components for environmental modeling fail, requiring immediate replacement and resulting in cost and schedule impacts to CHPRC and other Hanford Site contractor’s projects. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$350K, 25 days	●	↑	Risk Event: The primary node of the GAIA modeling super computer server failed in December 2019, impacting CIE and composite analysis work activities. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 80%;">Recovery Action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>Replace failed server component.</td> <td>1/31/2020</td> <td>95</td> </tr> </tbody> </table> Recovery Assessment: MSA has replaced the failed component, and acceptance testing is in progress. Additional action of migration to a virtual server is being considered to prevent the impact of future system component failures.	Recovery Action(s)	FC Date	%	Replace failed server component.	1/31/2020	95
Recovery Action(s)	FC Date	%								
Replace failed server component.	1/31/2020	95								
SGW-216B-02: 216-B-63 Closure Plan Atypical Comments	Atypical 216-B-63 comments result in multiple rounds of comment resolution that require additional effort and duration. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$174.0K, 80 days	●	↓	Risk Event: RL’s 216-B-63 Closure Plan comments provided in June 2019 requested removal of the pipeline for consistency with the 241-CX Tank System Closure Plan and because they were being addressed in 200-IS-1 OU. CHPRC was coordinating with both RL and Ecology to resolve this comment while the review was concurrent. Efforts to resolve the pipeline comment were nearing completion between RL and Ecology in July 2019 when additional Ecology comments and research requests were provided from the new Ecology lead. The issue has grown to include a more global conveyance discussion (based on the December 2019 meeting), and new comments have been received that requested additional historic information (based on a January 2020 meeting). CHPRC continues efforts to support RL in resolving the original pipeline comments and the new comments. Ecology has expressed the desire to incorporate the resolutions into the two other closure plans currently in process (216-S-10 and 216-B-3) as well as those closure plans already certified or frozen. RL or CHPRC have not acted on this request. The issues will be revisited once resolution is reached within this 216-B-63 Closure Plan. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 80%;">Recovery Action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>None identified.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Recovery Assessment: CHPRC will continue to support comment resolution at RL’s request.	Recovery Action(s)	FC Date	%	None identified.	N/A	N/A
Recovery Action(s)	FC Date	%								
None identified.	N/A	N/A								

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
SGW-216B-01: <i>216-B-3 Closure Plan Atypical Comments</i>	Atypical 216-B-3 comments result in multiple rounds of comment resolution that require additional effort and duration. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$174.0K, 80 days	●	↓	Risk Event: RL and Ecology comments were originally received in April 2019. Since that date, additional Ecology comments were received in October and December 2019 as part of their “confirm comment capture” task. Additional comments were also received via the 216-B-63 Closure Plan review. <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Recovery Assessment: CHPRC will continue to support comment resolution at RL’s request. However, efforts are not planned on the new comments received via forts until resolution is reached within 216-B-63.	Recovery Action(s)	FC Date	%	None identified.	N/A	N/A
Recovery Action(s)	FC Date	%								
None identified.	N/A	N/A								
SGW-216S-01: <i>216-S-10 Closure Plan Atypical Comments</i>	Atypical 216-S-10 comments result in multiple rounds of comment resolution that require additional effort and duration. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$174.0K, 80 days	●	↓	Risk Event: RL and Ecology comments were originally received in June 2019. Since that date, additional Ecology comments were received in August, November and December 2019 as part of their “confirm comment capture” task. Additional comments were also received via the 216-B-63 Closure Plan review. <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Recovery Assessment: CHPRC will continue to support comment resolution at RL’s request. However, efforts are not planned on the new comments received via forts until resolution is reached within 216-B-63.	Recovery Action(s)	FC Date	%	None identified.	N/A	N/A
Recovery Action(s)	FC Date	%								
None identified.	N/A	N/A								
SGW-216A-01: <i>216-A-29 Closure Plan Atypical Comments</i>	Atypical 216-A-29 comments result in multiple rounds of comment resolution that require additional effort and duration. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$174.0K, 80 days	●	↓	Risk Event: This Closure Plan was “frozen” by Ecology in April 2019 with the remaining activity of certification and transmittal to occur concurrent with the in-process 216-B-63, 216-B-3 and 216-S-10 Closure Plans. During the 216-B-63, Closure Plan comment resolution meeting held in December 2019, Ecology expressed a desire to update the 216-A-29 Closure Plan upon resolution of the conveyance discussions. During the January 2020 conveyance follow-up meeting with Ecology, new comments were provided regarding a request for additional historical information, also with an informal statement that the other certified or frozen closure plans may also need to be revised according. <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Recovery Assessment: RL or CHPRC have not acted on these requests. The issues will be revisited once resolution is reached on 216-B-63 Closure Plan. There is no FY2020 budgeted cost of work scheduled for 216-A-29 Ditch Closure Plan.	Recovery Action(s)	FC Date	%	None identified.	N/A	N/A
Recovery Action(s)	FC Date	%								
None identified.	N/A	N/A								
SGW-KR4-05: <i>FS (Feasibility Study) – Greater Than Expected Comments from RL or Regulators</i>	Atypical RL or regulator review comments result in multiple rounds of comment resolution and/or are global in nature, requiring additional time for comment incorporation and/or re-work. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$120.0K, 48 days	●	↔	Risk Event: Early collaborative reviews of the decisional draft FS by EPA has resulted in a change in approach in the alternatives evolution that created rework of the FS during preparation of the Draft A version. <table border="1"> <thead> <tr> <th>Recovery 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> Recovery Assessment: Continue collaborating with EPA to help reduce the number of comments during their review.	Recovery Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Recovery Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
SGW-ZP1-03: <i>Air Stripper Phase 1 Installation Design Maturity</i>	Air Stripper Phase 1 installation final design is more complex than planned, resulting in increased project cost. Risk Handling Strategy: Accept Probability: Medium (26% to 74%) Worst Case Impacts: \$3,500K, 0 days	●	↔	Risk Event: Phase 1 installation design matures and the project experiences in-scope, unplanned work resulting in significant cost growth in FY2020. <table border="1"> <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: The Phase 1 installation activity was added to the performance measurement baseline without identifying discrete scope. Design activities have progressed enough to determine that Phase 1 must include preparatory fieldwork, receipt of tower and bolt to ground. The forecast cost based on the clarified requirements is \$1.9 million over budget. No mitigation actions have been identified; however, the current forecast under-run in the stripper tower procurement offsets the anticipated over-run in installation.	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Mitigation Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
<p>SGW-169-ZP1: <i>ZP1 – Increase in Sampling & Analysis Requirements</i></p> <p>Increased sampling requirements due to additional analysis requests or changes from the Data Quality Objective (DQO)/SAP for the five planned 200 ZP-1 extraction wells and two planned Ringold A monitoring wells.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very Likely (>90%) Worst Case Impacts: \$510K, 0 days</p>		●	↓	<p>Risk Event: Additional characterization was identified during the DQO/SAP development process for the Ringold A Monitoring Wells and ZP-1 Extraction Wells. This additional characterization is needed to adequately understand the subsurface conditions.</p> <table border="1"> <thead> <tr> <th>Recovery 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>Recovery Assessment: The characterization SAPs have been finalized and this risk has been realized. The estimate to complete has been revised to reflect the anticipated increase in sampling costs.</p>	Recovery Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Recovery Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No Critical Risks identified in January .										
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
No High Risks identified in January .										
FY2020 Key Risks										
<p>SGW-BP5-02: <i>BP5 – IX Skid Uncertainty</i></p> <p>Installation design differs from planning assumptions, causing impacts to cost and schedule.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Likely (26% to 74%) Worst Case Impacts: \$736K, 12 days</p>		●	↓	<p>Risk Event: RL has expressed a desire for an effluent concentration as low as reasonably possible (less than maximum contaminant level and previous targets). This request may result in design changes that differ from the planning assumptions. The design is 98 percent complete, so the outcome of the desired design changes may require design rework and result in design criteria that is more expensive and takes longer than planning assumptions.</p> <table border="1"> <thead> <tr> <th>Recovery 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>Recovery Assessment: Weekly meetings are being held with RL to work through revised design requirements.</p>	Recovery Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Recovery Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
<p>SGW-170: <i>Lack of Qualified Drilling Contractors</i></p> <p>Availability of qualified drilling bidders to perform the FY2020 drilling scope becomes hindered, resulting in cost and schedule impacts.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$1,509.7K, 0 days</p>		●	↑	<p>Risk Event: Due to an exodus in the nuclear environmental remediation business, qualified drilling contractors are difficult to find, resulting in higher subcontracting cost.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. 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.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Mitigation Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
<p>SGW-171: <i>Increase in Routine Sampling & Analysis Requirements</i></p> <p>Sampling and characterization requirements increase above planning assumptions due to changes from DQO/SAP sessions and/or other requested changes to analyses, resulting in cost impacts.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$1,792.0K, 0 days</p>		●	↔	<p>Risk Event: During review of the completed SAPs for multiple well locations, it is determined that an increase in the number of samples or complexity of sample type is above the baseline planning.</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: Although a Sampling Change Board has been formed to review and validate the sampling requirements for optimization, some of the SAPs were not completed during development of the FY2020 baseline budget. For that reason, budgets may not reflect required sampling, and in-scope, unplanned work may not be mitigated.</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 January .										

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	8.8	8.5	8.4	(0.3)	-3.4%	0.1	0.9%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$0.3M/-3.4%)

The current period schedule variance is within reporting threshold.

CM Cost Performance (+\$0.1M/+0.9%)

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	1,668.3	1,661.8	1,613.9	(6.5)	-0.4%	48.0	2.9%	1,764.1	1,709.9	96.0	54.1

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$6.5M/-0.4%)

The CTD negative schedule variance is within reporting thresholds.

CTD Cost Performance (+\$48.0M/+2.9%)

The CTD positive cost variance is within reporting thresholds.

Variance at Completion (+\$54.1M/+3.1%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0030 Soil and Groundwater Remediation	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	134.7	125.7	9.0

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

Projected FY2020 funding in January is \$134.7 million. The spending forecast of \$125.7 million reflects a funds reserve to support funding shortfalls within the Central Plateau control point. The FY2020 EAC was reduced from the prior period by approximately \$4.6 million due to scope changes reflected in the revised Assistant Manager for River Corridor and Central Plateau FY2020 Integrated Priority List, Revision 2a.

Critical Path Analysis

Critical path analysis will be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-93C	Initiate Characterization Fieldwork 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-UP-1 Performance Monitoring Plan, Revision 1 Draft A to Regulators for Review	6/7/2019(A)	2/11/2020
RL Transmit 200-UP-1 Remedial Design/Remedial Action Work Plan (RD RA/WP), Revision 1 Draft A to Regulators for Review	1/28/2020	2/11/2020
RL Review the 100-D/H Continuing Source Report	2/10/2020	2/24/2020
RL Review DOE/RL-2009-124 200-ZP-1 Operations & Maintenance (O&M) Plan - Remove Bio Treatment, Decisional Draft Revision 6	2/19/2020	4/4/2020
RL Forward 100-HR-3 RD/RAWP Draft Revision 0 to Regulators for Review	2/20/2020	2/24/2020
RL Transmit Resource Conservation and Recovery Act Annual Report to Ecology	2/21/2020	2/27/2020
RL Review of 100-D/H Waste Site Closeout Package B	2/24/2020	3/9/2020
RL Transmit DOE/RL-2019-42 Data Quality Objective/SAP for Defining Future 200-DV-1 Extraction Well Location Draft A to Ecology/EPA	3/2/2020	3/10/2020
RL Review 200-BP-5 WMA-C Drilling SAP Draft	3/3/2020	4/4/2020
RL Transmit Central Plateau Tracer Study Sample Analysis Plan (SAP) Draft Revision 0 to Regulators for Review	3/4/2020	3/5/2020
RL and Ecology Review of Low-Level Burial Ground Waste Management Area (WMA) - 1 Engineering Evaluation Report Regulator Review Draft	3/12/2020	4/2/2020
RL Review of KW Soil Flushing Decisional Draft Treatability Test Report	3/16/2020	4/15/2020
RL Review 100-D/H Waste Site Closeout Package C	3/18/2020	4/1/2020
RL Transmit 100-KR-4 Remedial Investigation (RI) Report Revision 0 to Regulators	3/25/2020	4/7/2020
RL Approve 100-KR-4 RI Report Revision 0	3/25/2020	4/7/2020
RL Transmit 100-KR-4 Feasibility Study Draft B for EPA Review	4/6/2020	4/21/2020
RL Certify and Submit to Ecology 216-S-10 Pond and Ditch Addendum	4/13/2020	4/27/2020
RL Transmit 200-ZP-1 O&M Plan Draft A to EPA	4/15/2020	4/19/2020

*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

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In January, Central Plateau Risk Management (CPRM) crews abated approximately 224 feet of asbestos insulation on above ground steam lines in the 200 East Area along 7th Street and re-entered U-Canyon to perform scoping walk downs to identify any remaining asbestos requiring abatement in the facility. At the 224B Facility in the 200 East Area, characterization above 8 feet for all three floors on the non-cell side was completed. At PUREX North, personnel completed radiological characterization of the interior walls and ceilings in the 214A and 2714A Facilities and completed the mechanical isolation index for the 2701AB Facility. At REDOX, totes containing sodium hydroxide drained from the Silo were shipped offsite for treatment. The design was finalized for the delivery system to stabilize the 216-Z-2, 216-Z-9 and 241-Z-361 Waste Sites in the 200 West Area.

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 walk downs.	9/30/2020	15%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	1	19	1/29/20 – Employee bent over to install ground rods. When the employee stood up, the worker felt a minor pain in the lower back, which increased in intensity over time. The event was reported to the manager immediately. Employee was given over-the-counter medicine and returned to work with no restrictions. (25465)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Central Plateau Risk Management (CPRM) Surveillance and Maintenance

- Completed 600 and 1100 Areas inactive waste site surveillances.
- Completed U Plant annual surveillance.
- Completed well inspection on Snow Canyon temporary storage and disposal (TSD) site.

REDOX Canyon Risk Mitigation

- Awarded doublewide personnel trailer and shower trailer installation contract at REDOX for Phase I activities.
- Awarded REDOX ventilation concrete slab and delivery road contract to support the future delivery of the temporary exhaust system.
- Received and reviewed the 90 percent design packages for the temporary exhaust system for REDOX.
- Finalized and received management approval for the peer/self-check process for personnel entering radiologically posted areas while wearing personal protective equipment.
- Shipped totes containing sodium hydroxide offsite for treatment.
- Completed and received procurements necessary to supply a doublewide trailer to be used for a step-off pad for REDOX entrance and egress.

224-B Demolition Preparation

- Completed all radiological characterization of accessible areas on the non-contaminated side of the 224B Facility.
- Completed the mechanical isolation cold-and-dark work package.
- Completed preparation of the B Plant trailer installation work package (MO-1106 and MO-2181).
- Awarded contract for the installation of the mobile personnel trailers, restroom trailer and shower trailer.
- Disconnected and prepped MO-1106 for transport to B Plant.

PUREX North

- Completed radiological characterization of 214-A and 2714-A interior walls and ceilings. No elevated readings were detected at either facility.
- Completed mechanical isolation index for 2701-AB.
- Obtained the occupancy permit for MO-1160 and MO-2181. Both trailers are located north of PUREX and will support future fieldwork at the facility.

Steam Line Removal

- Completed 1,269 linear feet of steam line pipe support demolition (1,410 total linear feet) for Leg 20 west of Baltimore Street in the 200 East Area.
- Abated the remaining 224 feet of steam line asbestos insulation to complete all 2,000 total linear feet of Leg 23 along 7th Street in the 200 East Area.

Aging Structures Stabilization

- Completed and submitted the final engineering design for installing the conveyance system to stabilize the 216-Z-2, 241-Z-361 and 216-Z-9 Waste Sites.
- Completed the Federal Construction Council review for the master statement of work for the conveyance fabrication and stabilization of the 216-Z-2, 241-Z-361 and 216-Z-9 Waste Sites.

MAJOR ISSUES

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 I 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 II addresses the working conditions on the interior of REDOX in radiologically posted areas, including ways to improve ventilation and temporary power needs in the areas where risk mitigation activities are being performed. The list of actions are updated weekly and posted in a location that is easily accessible to all REDOX personnel.

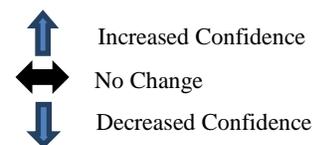
Status

With engagement from REDOX personnel, REDOX management identified a path of improving the infrastructure at REDOX, which includes moving the step-off pad outside the facility. Procurement activities are underway to improve the step-off pad. REDOX management and personnel have completed work package reviews and procedure reviews to address the future work scope. The contract to install the doublewide trailer and shower trailer has been awarded. Fieldwork is expected to be completed toward the end of February, and the step-off pad will be operating by mid-March. Ironworkers and carpenters have performed preparation work to ensure that Phase I will be completed by the end of fiscal month March. The development of a work package to install temporary power and lighting within REDOX is expected to finish in February to ensure that Phase II activities can begin after the completion of Phase I.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0040/WBS-040																
Explanation of major changes to the project monthly stoplight chart: Risk ZSS-008: "Greater than Expected Comments from Regulators" was added to the stoplight chart as a high-threat risk.																
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"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure a contractor to patch the annex roof.</td> <td>June 2020</td> <td>0%</td> </tr> <tr> <td>Develop plans to remove annexes.</td> <td>September 2020</td> <td>5%</td> </tr> </tbody> </table> Risk Action Assessment: No major changes in January . The project workers continue to repair minor roof defects. The new leak discovered in August continues to be evaluated to identify a path forward. A formal procedure for any discovery of liquids in REDOX was finalized in December. Two plans are currently being developed to address the leaking roofs at REDOX. Maintenance crews are looking into procuring a contractor to repair the roofs on the annexes where the leaks are expected to occur. The other plan is looking into the demolition of the annexes at REDOX once personnel from other projects are available and the work is authorized.	Risk Recovery Action(s)	FC Date	%	Procure a contractor to patch the annex roof.	June 2020	0%	Develop plans to remove annexes.	September 2020	5%			
Risk Recovery Action(s)	FC Date	%														
Procure a contractor to patch the annex roof.	June 2020	0%														
Develop plans to remove annexes.	September 2020	5%														
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"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure and install step-off pad trailer.</td> <td>March 2020</td> <td>60</td> </tr> <tr> <td>Create and implement a phased approach to address identified concerns.</td> <td>June 2020</td> <td>40</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. Action 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; the trailer was delivered in January and will be installed in February.	Risk Recovery Action(s)	FC Date	%	Procure and install step-off pad trailer.	March 2020	60	Create and implement a phased approach to address identified concerns.	June 2020	40	Upgrade temporary power/lighting and localized ventilation.	June 2020	0
Risk Recovery Action(s)	FC Date	%														
Procure and install step-off pad trailer.	March 2020	60														
Create and implement a phased approach to address identified concerns.	June 2020	40														
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"> <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 delivery of the substation is delayed due to manufacturer backups. Minor repairs to leaking parts of the roof can significantly reduce water intrusion, and the project workers 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.)													
<p>REDOX-05: "Collapse of Sand Filter"</p>	<p>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.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very low (<10%) Worst Case Impacts: \$260K, 48 days</p>	●	↔	<p>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.</p> <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> <p>Mitigation Assessment: No major changes in January. 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.</p>	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)													
<p>ZSS-008: "Greater Than Expected Comments from Regulators"</p>	<p>Comments from RL, regulators, or stakeholders on documents submitted for approval are excessive, need multiple rounds of resolution or change requirements that result in increased schedule and labor requirements, causing cost and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$100K, 16 days</p>	●	↔	<p>Risk Triggers: As regulatory documents are developed to obtain final decisions, the regulator comments impose additional cleanup requirements than what are currently expected, resulting in rework and increased scope. Excessive comments from RL or regulators result in schedule delays during comment resolution.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Develop 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>Mitigation Assessment: This risk was identified as a high threat value risk following the first quarter risk review. CHPRC has hired a subcontractor with substantial experience in developing quality documentation for such regulatory paths in an effort to minimize comments. CHPRC is also actively meeting weekly and interfacing throughout the week with the RL federal project director to coordinate the document development in anticipation of regulatory questions and comments along with developing multiple informative documents to support this effort. In the event that regulator comments become excessive and start to impact project schedule negatively, RL may utilize their emergency authority under the <i>Atomic Energy Act</i>.</p>	Mitigation Action(s)	FC Date	%	Develop 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
Mitigation Action(s)	FC Date	%											
Develop 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											
FY2020 Key Risks													
<p>BOS-003: "Facility Integrity"</p>	<p>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).</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$1M, 0 days</p>	●	↔	<p>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.</p> <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>4/1/2020</td> <td>85</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. This risk was identified as a key project risk for FY2020. Structural analysis of 231-Z is under contract negotiation. Routine surveillance and maintenance activities continue to be performed to mitigate risk.</p>	Mitigation Action(s)	FC Date	%	Perform lifecycle evaluations of critical structures, systems and components.	4/1/2020	85			
Mitigation Action(s)	FC Date	%											
Perform lifecycle evaluations of critical structures, systems and components.	4/1/2020	85											
Unassigned Risks (Pending ownership of identified risks/opportunities)													
No unassigned risks identified in January .													

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	4.4	5.0	5.7	0.6	14.5%	(0.7)	-14.4%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance: (+\$0.6M/+14.5%)

The CM favorable schedule variance is mainly attributed to the submittal and implementation of a baseline change request (BCR) to address the management directed work stoppage at REDOX by removing work scope that will no longer be performed in FY2020 and incorporating the scope necessary to complete the Phase I and Phase II stop work recovery actions. The implementation of this BCR created a positive schedule variance at REDOX for January. Additionally, work crews at REDOX have been performing the work required to complete Phase I stop work recovery actions, which is expecting to complete in mid-March, followed by the forecast completion of Phase II recovery actions in early June.

CM Cost Performance: (-\$0.7M/-14.4%)

The CM unfavorable cost variance is mainly attributed to the subcontractor for the design and fabrication of the temporary exhaust system at REDOX. The 90 percent design was submitted and reviewed by CHPRC. However, with some key personnel not available to review the design at the time expected, the review lagged a couple of weeks, delaying the completion of the review and hindering the subcontractor’s ability to invoice for completion of this scope, which was submitted later than planned.

Additionally, unplanned material and subcontractor costs associated with the B Plant trailer procurements and installations contributed to the variance. It was determined that the current infrastructure to house personnel near B Plant was inadequate; therefore, additional crew and restroom trailers were necessary to alleviate this problem.

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	582.9	576.5	559.9	(6.3)	-1.1%	16.6	2.9%	624.1	608.9	48.9	15.2

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance: (-\$6.3M/-1.1%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$16.6M/+2.9%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$15.2M/+2.4%)

The VAC is within reporting thresholds.

Contract performance report formats are provided in Appendix A.

**FUNDS vs. SPEND FORECAST
(\$M)**

RL-0040 Nuclear Facility D&D	FY2020		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	93.3	93.1	0.1
Numbers are rounded to the nearest \$0.1 million.			

Funds/Variance Analysis

FY2020 projected funding of \$93.3 million remains unchanged from last month. The spending forecast was increased \$25.9 million for additional work authorized to support various risk mitigation and demolition activities.

Critical Path Analysis

Critical path analysis can be provided upon request.

MILESTONE STATUS

The following table is a one-year look ahead of project breakdown structure RL-0040 *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement)-enforceable milestones, nonenforceable 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.
M-016-250E	Submit to Ecology a 3-Year Rolling Prioritized Schedule to Implement Waste Site Removal Actions	3/31/2020		3/31/2020	On schedule
M-037-10	Complete closure for 6 Specified TSD Units	9/30/2020		TBD	In abeyance
M-085-100	Submit Removal Action Work Plan for 224T to EPA	9/30/2020		4/28/2020	On schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
Regulator Review B Plant EE/CA (2017-34)	10/02/2019(A)	01/29/2020
RL Review 224T SAP (2019-37)	11/19/2019 (A)	01/30/2020
RL Review 224T RAWP (2019-36)	01/29/2020	02/19/2020
RL Review Time Critical Removal Action AM Z-Cribs	02/13/2020	02/25/2020
Regulator Review 224B (B Plant) Removal Action Work Plan (RAWP) (2017-34)	8/16/2017(A)	02/29/2020
Regulator Review Tier 2 PUREX RAWP (2016-47)	07/23/2019(A)	03/14/2020
RL and Ecology Review PUREX N Closure Plan (2015-72)	07/18/2019(A)	03/30/2020
Regulator Review Tier 2 PUREX Sampling Analysis Plan (SAP) (2016-46)	06/10/2019(A)	04/23/2020
Regulator Review PUREX Action Memorandum (AM) (2016-53)	12/22/2019 (A)	05/09/2020

Section F

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

CH2MHILL
Plateau Remediation Company
a Jacobs company



R. M. Geimer
Vice President for
K Basin Operations

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

M. A. Wright
Vice President for
Project Technical Services

PROJECT SUMMARY

K Basin Operations (KBO):

In January, soil remediation crews at the 100K Area resumed excavation of the 116-KE-2 Waste Site; over 1,750 tons of soil was loaded out for disposal at the Environmental Remediation and Disposal Facility (ERDF) by month's end. Garnet Filter Media Retrieval System (GFMRS) equipment was transferred from the Maintenance and Storage Facility (MASF) to the 100K Area, and crews initiated its installation in the 105KW Basin. Basin crews also commenced removal of select Engineered Container Retrieval and Transfer Systems (ECRTS) hoses that are no longer required to support underwater debris removal, relocation and segregation. Size reduction equipment and tools, including a newly developed set of hydraulic shears, were staged for basin installation. This equipment will be used to size-reduce pole tools and other small debris in the basin. At MASF, mockup activities for the fuel specimen conditioning effort were performed and equipment was staged at the 142K Facility for pre-installation activities. Development of tooling to support settler tube inspection, north loadout pit inspection, sand filter inspection, and 166KW Facility sampling continued. Off-site, fabrication continued on the vertical pipe casing (VPC) base sections and associated components. Following installation, the VPCs will be used to segregate and consolidate basin debris in the west bay. The contract for the VPC augering demonstration was awarded and initiated. The design of the specialty augering tool and mockup is underway.

The components for the vertical pipe casing continue to be fabricated, and the high-dose components have commenced fabrication. This equipment will segregate high-dose basin debris, perform dosing and consolidate basin debris in the east and center bays. The contract for the VPC augering demonstration was awarded, and the preliminary design of the specialty tool have begun. Excavation of the 116-KE-2 site has restarted, and 1,787 tons of soil was loaded out by month's end.

A Hanford Review Board (HRB) was held for the GFMRS. Crews mobilized at 105KW, and equipment was moved to 100K, where the initial mechanical installations were completed. The above-water hose connection will be completed once other scope work is completed. Mockup activities were performed at MASF for the fuel specimen conditioning effort, and equipment has been staged at the 142K Facility for pre-installation activities. The champion shear was staged for basin installation. This equipment will be used to size-reduce pole tools and other small debris. While demolition continued at the 166KE Facility, a draft work package, TWP and job hazard analysis (JHA) for remaining 165KE demolition preparation activities was completed. A draft of the 166KW roof structural analysis was completed, and a remoted-controlled robotic crawler was used to test the structural integrity of the roof of the facility.

River Risk Management Project (RRMP):

At the 324 Building Disposition Project, a resumption team was formed, including CH2M HILL Plateau Remediation Company (CHPRC) and Jacobs Engineering Group Inc. (Jacobs) subject matter experts (SME) following a worker contamination incident at the 324 Building Facility on November 14, 2019. A CHPRC management stop work was implemented on the 300-296 Waste Site Remediation Project's radiological work within the facility. Resumption team members continue to look at opportunities to minimize contamination risks and optimize radiological controls and worker safety. A draft root cause analysis and corrective action plan has been received and is being finalized.

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 the 100K Area.	Evaluate upcoming work from the Hanford Fire Department, decontamination and decommissioning (D&D) and soil remediation activities at the 100K Area to ensure the water discharge to ground requirements found in DOE/RL-97-67, <i>Pollution Prevention and Best Management Practices Plan for State Waste Discharge Permits ST 4508, ST 4509, and ST 4510</i> , and 100K-STD-OP-52370, <i>Discharges to Ground</i> , are followed.	9/30/2020	25%
20-EMS-KBO-OB2-P1	Improve compliance/pollution and spill prevention.	Evaluate the status of spill prevention, use of secondary containment, universal waste and other recycling compliance, and waste reduction opportunities for compliance with CHPRC procedures.	9/30/2020	32%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	11	179	1/15/2020: Employee was struck on the head when a radiological instrument fell from a shelf. Employee was taken to HPM Corporation (HPMC) for evaluation and returned to work without restriction. (2545)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

100K Basin Operations

- 100K Closure Project:
 - o 100K completed a draft of the 166KW roof structural analysis.
 - o 100K completed remote controlled robotic crawler structural field integrity testing of the 166KW roof.
 - o 100K West Basin Deactivation
 - Awarded the VPC augering demonstration contract and began preliminary design of the specialty augering tool.
 - Fabricated two sets of grouting manifolds that will be placed into engineered containers to enable loading with floor debris.
 - Started field installation of GFMRS equipment.
 - Performed final MASF mockup activities for the fuel specimen conditioning effort. The equipment was staged at 142K for pre-installation activities.
 - o Soil remediation crews assembled and staged the champion shear for basin installation
 - o Resumed excavation of the 116-KE-2 dig site, and loaded out over 1,787 tons of soil to ERDF.

RRMP, 324 Building Disposition Project

The procurement and fabrication of the following equipment continued:

- o Cell dams for the 324 Building.
- o B Cell 10T Crane.
- o Universal cutting tool.
- o Water delivery system for the airlock.
- o Concrete box for soil waste bins.
- o Waste box shielding, waste bins and waste containers for the 324 Building.
- o Modified shielded lids and frames were received at Mission Support Alliance, LLC.
- o Acquisition Verification Services for acceptance inspection.
- o Self-leveling lifting device.
- o Modified an airlock rail.
- Miscellaneous:
 - o Performed repair of the 324 Building stack alarm.
 - o Completed the monthly preventive maintenance of a record sampler.
 - o Completed repair of 11 truck lock sprinkler heads.
 - o Completed JHA for the 324 Building north gutter modifications.
 - o Fabricated and installed temporary lighting in the 324 Building, Team Room 3.
 - o Completed room handrail inspections.
 - o Performed beryllium decontamination in rooms 306/309.
 - o Completed monthly supply and exhaust fan lube.
 - o Completed annual instrument calibrations in room 324 D.
 - o Completed annual ladder inspections.
 - o Completed annual electrical distribution inspections.
 - o Repaired oil leak on Compressor 1002.

- Facility preparations:
 - Installed powered air purifying respirator pass through at 123 step-off pad radiological control work station.
- Cell cleanout:
 - Shipped three roll-on/roll-off cans to ERDF.
- Mockup:
 - Received cell dam test frame and installed 80 percent the cell dam test frame at MASF.
- Tours:
 - The U.S. Department of Energy (DOE) Environmental Assessment Tour.
 - Tour for the Sellafield Operations Team.
 - Tour for Japan, Rokkasho-Mura Village Councilors and office staff.

Project Technical Support

- Training and procedures:
 - Assembled a team and developed a plan to present advanced radiological practices training for the 324 Facility personnel.
 - Published procedure 324-PRO-OP-54436, *Static Pressure Controller Operations*, reinstated to provide instructions for controlling differential pressure for the 324 Building Radiochemical Engineering Complex (REC) cells and service gallery.

MAJOR ISSUES

Issue

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

Corrective Action

Characterization of the TCA will require removal of the lid to obtain visual and radiological surveys. Due to anticipated levels of contamination and radiation, this work is presumed to pose a high radiological risk requiring mitigation through use of containments, temporary shielding and ventilation, and mockup training to complete the task. Engineering assessments along with advanced worker involvement will be necessary to plan the disposition of the TCA. Radiological engineering modeling indicates that if a dose rate measurement taken 10 inches above the bottom of the inner vessel exceeds 6 rem/hour, then the sludge heel will have to be removed and processed separately, most likely being directed to the north loadout pit VPC (if not grouted yet) or pumped into a separate approved container for disposition. If this condition does not exist, then the residual water and material can be solidified and the TCA transferred to ERDF for grouting and disposal.

Status

Results from a nondestructive assay (NDA) performed on a shielded ion exchange module staged west of 105 KW in December-January will be evaluated as a test case to determine if NDA of TCA-1 is feasible for identifying specific radionuclide peaks in a shielded container. This activity may help predetermine if the residual material will need to be removed from the TCA before opening the outer lid. Other detailed planning and characterization activities, as described above, have been pushed out of fiscal year (FY)2020 to focus on higher priority activities within the KW Basin tied to the dewatering milestone.

Issue

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

Corrective Action

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

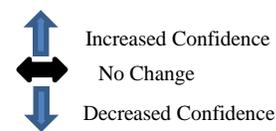
Status

Resumption team members have been actively working with project personnel and SMEs in identifying revised control strategies to reduce significantly the potential of future radiological contamination events. Existing processes and equipment are being evaluated to assist with developing recovery actions before resuming work in radiologically contaminated areas at the 324 Building. A draft root cause analysis and corrective action plan has been received and is being finalized.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments																					
		Month	Trend																						
RL-0041/WBS-041																									
Explanation of major changes to the project monthly stoplight chart: Risk 100K-SR-02: 100K Soil Remediation Subcontractor Equipment Is Contaminated was updated and added to the monthly stoplight chart, per the request of the project.																									
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"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contractor prepare and submit structure modification design - 30 percent to 60 percent (VE2810).</td> <td>8/15/18</td> <td>100</td> </tr> <tr> <td>Perform micropile demonstration and verification to support structural modification design (VS1220A).</td> <td>1/24/19</td> <td>100</td> </tr> <tr> <td>Structural modifications design micropile comment resolution (VS1220C).</td> <td>5/13/19</td> <td>100</td> </tr> <tr> <td>Perform pilot holing for structural modifications (VS5010).</td> <td>9/7/19</td> <td>100</td> </tr> <tr> <td>Perform pit 6 soil verification testing/geotech (VS1220B).</td> <td>8/21/19</td> <td>100</td> </tr> <tr> <td>Contractor prepare and submit structural modification design (VN1220).</td> <td>2/13/20</td> <td>96</td> </tr> </tbody> </table> <p>Recovery Assessment: No significant changes in January. 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 design is forecast for completion by February 13, 2020.</p>	Recovery Action(s)	FC Date	%	Contractor prepare and submit structure modification design - 30 percent to 60 percent (VE2810).	8/15/18	100	Perform micropile demonstration and verification to support structural modification design (VS1220A).	1/24/19	100	Structural modifications design micropile comment resolution (VS1220C).	5/13/19	100	Perform pilot holing for structural modifications (VS5010).	9/7/19	100	Perform pit 6 soil verification testing/geotech (VS1220B).	8/21/19	100	Contractor prepare and submit structural modification design (VN1220).	2/13/20	96
Recovery Action(s)	FC Date	%																							
Contractor prepare and submit structure modification design - 30 percent to 60 percent (VE2810).	8/15/18	100																							
Perform micropile demonstration and verification to support structural modification design (VS1220A).	1/24/19	100																							
Structural modifications design micropile comment resolution (VS1220C).	5/13/19	100																							
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Contractor prepare and submit structural modification design (VN1220).	2/13/20	96																							

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0041/WBS-041																						
RCC-300-296-07, "300-296 Failure of a Radiochemical Engineering Cells (REC) Cranes (B Cell, A Cell, A/D & Airlock, and/or CHA Cranes)"	Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$3,000K, 208 days	●	↔	<p>Risk Event: In August, the REC A/D Crane failed during operations.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Determine B Cell replacement crane options</td> <td>3/19/19</td> <td>100</td> </tr> <tr> <td>Award contract – B Cell 10T crane – 324 Building</td> <td>6/20/19</td> <td>100</td> </tr> <tr> <td>Perform follow-up A/D Crane investigation</td> <td>TBD</td> <td>0</td> </tr> <tr> <td>Procure/Fabricate A/D Crane parts</td> <td>TBD</td> <td>0</td> </tr> <tr> <td>Perform A/D Crane repair</td> <td>TBD</td> <td>0</td> </tr> </tbody> </table> <p>Recovery Assessment: No significant changes in January. A/D Crane survey and partial investigation completed in November. It is anticipated that decontamination of the A/D Crane will be necessary prior to performing repairs. Procurement and fabrication of decontamination equipment has been initiated to decrease further impacts to the project. Procurement of spare parts has been delayed due to additional verification of components and measurements that cannot be acquired at this time due to realization of risk RCC-300-296-36, "Contamination Experienced During REC Cell Operations." The forecasted completion date for completing crane investigation, procuring spare parts and performing crane repairs is subject to change, pending definition of revised practices and controls to minimize the potential of future radiological contamination.</p>	Recovery Action(s)	FC Date	%	Determine B Cell replacement crane options	3/19/19	100	Award contract – B Cell 10T crane – 324 Building	6/20/19	100	Perform follow-up A/D Crane investigation	TBD	0	Procure/Fabricate A/D Crane parts	TBD	0	Perform A/D Crane repair	TBD	0
Recovery Action(s)	FC Date	%																				
Determine B Cell replacement crane options	3/19/19	100																				
Award contract – B Cell 10T crane – 324 Building	6/20/19	100																				
Perform follow-up A/D Crane investigation	TBD	0																				
Procure/Fabricate A/D Crane parts	TBD	0																				
Perform A/D Crane repair	TBD	0																				
RCC-300-296-36, "Contamination Experienced During Radiochemical Engineering Cells Operations"	During REC cell cleanout (e.g., soil/debris removal, waste handling and facility modifications), the CHA, truck lock or other support area becomes contaminated or background dose is elevated to a level that operations cannot continue as currently planned. Significant cost and schedule impacts are incurred. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$225K, 70 days	●	↔	<p>Risk Event: On November 14, 2019, low-level contamination was detected on an individual after exiting radiological step off pad.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform CHA floor scabbling and apply epoxy floor coating</td> <td>7/17/19</td> <td>100</td> </tr> <tr> <td>Perform project resumption activities from 11/14 event</td> <td>3/9/20</td> <td>5</td> </tr> <tr> <td>Floor scabbling, when necessary</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Floor coating applications, where necessary</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Assessment: No significant change in January. CHPRC has continued with analysis of events and is developing the corrective actions necessary. Resuming work scope in radiologically controlled areas within the building is pending an acceptable control strategy moving forward. Recommendations and/or corrective actions are planned to be provided in the upcoming period.</p>	Recovery Action(s)	FC Date	%	Perform CHA floor scabbling and apply epoxy floor coating	7/17/19	100	Perform project resumption activities from 11/14 event	3/9/20	5	Floor scabbling, when necessary	Ongoing	N/A	Floor coating applications, where necessary	Ongoing	N/A			
Recovery Action(s)	FC Date	%																				
Perform CHA floor scabbling and apply epoxy floor coating	7/17/19	100																				
Perform project resumption activities from 11/14 event	3/9/20	5																				
Floor scabbling, when necessary	Ongoing	N/A																				
Floor coating applications, where necessary	Ongoing	N/A																				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)																						
No critical risks are identified in January.																						
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																						
RCC-300-296-31, "300-296 Elevated Contamination Encountered While Performing Structural Modifications"	To validate the assumptions supporting the 324 Building structural modification design, pilot holes will be drilled into the soil beneath B Cell to collect necessary data. If data result in contamination levels that are much higher or deeper or the material encountered is different than anticipated, an alternative approach will require the development and/or fabrication of equipment for contamination mitigation and control. These impacts will limit progress on fieldwork activities. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$3,318K, 256 days	●	↔	<p>Risk Event: Unexpected contamination found while performing structural modification activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>This risk is accepted with no planned mitigation actions identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. As low as reasonably achievable (ALARA) review evaluations for process improvements were completed in May. Increased personal protective equipment and additional control measures were successfully implemented. However, these controls have greatly reduced production rates than planned. This risk is currently accepted with no mitigation actions identified.</p>	Mitigation Action(s)	FC Date	%	This risk is accepted with no planned mitigation actions identified at this time.	N/A	N/A												
Mitigation Action(s)	FC Date	%																				
This risk is accepted with no planned mitigation actions identified at this time.	N/A	N/A																				

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0041/WBS-041													
100K-SR-02, "100K Soil Remediation Subcontractor Equipment Is Contaminated"	<p>Subcontractor equipment used for soil remediation activities is contaminated and is not able to be decontaminated to a suitable level so that it can be released.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very Likely (>90%) Worst Case Impacts: \$1,480K, 0 days</p>	●	↓	<p>Risk Event: If radiological contamination is found within the excavation boundaries, subcontractor equipment could become contaminated and be unable to be released back to the subcontractor after soil remediation activities are complete. This action would result in the government having to purchase the equipment, resulting in cost impacts to the project.</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>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: CHPRC will attempt to perform comprehensive radiological surveys to validate if equipment or components are not contaminated. However, the ability to validate with 100% certainty that no contamination exist on an excavator before its introduced back into the general public is very difficult.</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"	<p>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.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$294.5K, 128 days</p>	●	↔	<p>Risk Trigger Metric: Based on a similar event experienced on March 28, 2019, unexpected beta-gamma contamination was detected while performing clearance surveys at the 324 Building step-off pad. Sampling determined it to be beta contamination (suspected strontium-90) without a corresponding gamma component, resulting in project impacts.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. Follow-up contamination surveys were performed throughout the front side areas of the 324 Building using strontium controls (developed for Room 18) with no contamination detected. Based on the historical discovery of an elevated latent contamination level (CHPRC-1801178), this risk will be monitored continuously as routine preventive maintenance activities are in place to reduce the likelihood of occurrence.</p>	Mitigation Action(s)	FC Date	%	Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%											
Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities.	Ongoing	N/A											
RCC-300-296-08, "300-296 Failure of Cell Shield Door"	<p>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.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$460K, 96 days</p>	●	↔	<p>Risk Trigger Metric: Cell shield door fails, resulting in a shutdown of cleanout activities until repairs can be completed, similar to the event that occurred in September 2019.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>No discrete mitigation actions have been identified. However, preventive maintenance activities are being conducted to assure reliability of REC shield doors.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. 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											
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" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Mobilize and train second soil stabilization crew.</td> <td>12/19/19</td> <td>100</td> </tr> <tr> <td>Perform pilot hole drilling to aid as a mitigation action for micropile installation.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. Mitigation efforts have reduced the probability of risk occurrence from likely to medium. However, due to the uniqueness involved with work scope, there is potential for unexpected delays and additional pilot hole drilling efforts. Mobilizing and training of a second soil stabilization crew was completed on December 19, 2019.</p>	Mitigation Action(s)	FC Date	%	Mobilize and train second soil stabilization crew.	12/19/19	100	Perform pilot hole drilling to aid as a mitigation action for micropile installation.	Ongoing	N/A
Mitigation Action(s)	FC Date	%											
Mobilize and train second soil stabilization crew.	12/19/19	100											
Perform pilot hole drilling to aid as a mitigation action for micropile installation.	Ongoing	N/A											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0041/WBS-041																
RCC-300-296-06, "300-296 Remote Equipment Failure During Operations"	Failures of the following procured equipment, including the floor saw, master slave manipulators (MSMs) used in REC Cells, REAs, through supports, cell mams, transfer mechanism and cameras and lights. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$1,336K, 90 days	●	↔	<p>Risk Trigger Metric: Failure of remote equipment will result in schedule delays due to equipment replacement and repairs as a result of radiation damage to other equipment installed in the REC Cells. These factors may shorten the operational life of equipment and result in replacing damaged equipment or components.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure MSM manipulators and storage carts</td> <td>12/30/19</td> <td>90</td> </tr> <tr> <td>Procure universal cutting tool</td> <td>11/4/20</td> <td>5</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. Potential impacts continue to be monitored and assessed for mitigation as project evolutions continue. Estimate to complete is updated monthly to reflect potential impacts of risk being realized.</p>	Mitigation Action(s)	FC Date	%	Procure MSM manipulators and storage carts	12/30/19	90	Procure universal cutting tool	11/4/20	5			
Mitigation Action(s)	FC Date	%														
Procure MSM manipulators and storage carts	12/30/19	90														
Procure universal cutting tool	11/4/20	5														
RCC-300-296-33, "Increased Rad Exposure to Workers"	High dose in the airlock causes excessive radiation exposure to personnel, resulting in in-scope unplanned work impacts of cost and/or schedule. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$240K, 36 days	●	↔	<p>Risk Trigger Metric: During REC entries, background and present dose could cause workers to reach allowable dose limits sooner than anticipated, resulting in cost and schedule impacts.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continue use of increased shielding and ALARA controls</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procurement of specialized containers - GC/44" Bins</td> <td>4/27/20</td> <td>5</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. Mitigation efforts have reduced the probability of risk occurrence to low. Procurement of specialized waste containers, shield lids and decontamination efforts has significantly minimized dose potential; however, the uniqueness of work scope provides the potential for unexpected delays and/or cost impacts.</p>	Mitigation Action(s)	FC Date	%	Continue use of increased shielding and ALARA controls	Ongoing	N/A	Procurement of specialized containers - GC/44" Bins	4/27/20	5			
Mitigation Action(s)	FC Date	%														
Continue use of increased shielding and ALARA controls	Ongoing	N/A														
Procurement of specialized containers - GC/44" Bins	4/27/20	5														
RCC-300-296-03, "300-296 Mockup Testing and Qualification of Remote Equipment/ Process Identifies Major Modification Requirements"	Issues such as equipment interferences, differing as-found conditions than planned, equipment reliability, etc. arise prior to or during mockup testing, leading to redesign of equipment and resulting in cost and schedule delays. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$658.5K, 64 days	●	↔	<p>Risk Trigger Metric: During vendor factory acceptance test and/or mockup, testing, issues and conditions were identified with mockup equipment, resulting in additional redesign, materials and fabrication efforts greater than planned. Remote equipment procurements that have resulted in cost and/or schedule impacts include the REA system components (through supports and dummy post assemblies), transfer mechanism (electrical components) and floor saw (gear mechanism).</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install radiological assay system and perform construction acceptance test at mockup</td> <td>3/14/2019</td> <td>100</td> </tr> <tr> <td>Install floor saw and support system at mockup (VN1020)</td> <td>4/23/2019</td> <td>100</td> </tr> <tr> <td>Conduct proficiency training at the mockup (VN1700)</td> <td>10/7/2020</td> <td>78</td> </tr> </tbody> </table> <p>Mitigation Assessment: Integration with remotely operated equipment through testing and training at the mockup will continue with preparations for 324 Building equipment. The project anticipates that proficiency training will continue until corrective actions from the November 14, 2019, contamination event have been published and are ready to work and train to.</p>	Mitigation Action(s)	FC Date	%	Install radiological assay system and perform construction acceptance test at mockup	3/14/2019	100	Install floor saw and support system at mockup (VN1020)	4/23/2019	100	Conduct proficiency training at the mockup (VN1700)	10/7/2020	78
Mitigation Action(s)	FC Date	%														
Install radiological assay system and perform construction acceptance test at mockup	3/14/2019	100														
Install floor saw and support system at mockup (VN1020)	4/23/2019	100														
Conduct proficiency training at the mockup (VN1700)	10/7/2020	78														
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	●	↔	<p>Risk Trigger Metric: During soil excavation activities, different site conditions including underground utilities (i.e., wiring, fiber cable, pipes, asbestos, etc.), unknown construction material and greater than expected quantities of contamination could be encountered, resulting in increased volume of remediated soil. In addition, the overburden soil planned for backfill contains contaminates, resulting in the need to create a new clean-fill pit.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time (risk is accepted)</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: Accept</p>	Mitigation Action(s)	FC Date	%	None identified at this time (risk is accepted)	N/A	N/A						
Mitigation Action(s)	FC Date	%														
None identified at this time (risk is accepted)	N/A	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0041/WBS-041													
100K-SFGF-02, "105 KW SF & GF – Subcontractor Design Changes During Fab/Construction"	<p>During fabrication and installation, problems with design are encountered resulting in design changes, resulting in cost and schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$400K, 32 days</p>	●	↔	<p>Risk Trigger Metric: During installation of ECRTS tie-in equipment in support of VPC installation and the GMRS, design issues were identified that could not be determined during mockup testing at the MASF, resulting in design changes. This scenario would impact the firm fixed price construction contractor.</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>Integrated system testing/operator training in support of KW Basin garnet filter media removal.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>System constructability review and field walk downs will be implemented to reduce the risk.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in January. Integrated system testing and operator training is complete for the GFMRS. All currently identified mitigation actions have been completed. This risk will continue to be monitored for additional mitigation or changes to the risk posture.</p>	Mitigation Action(s)	FC Date	%	Integrated system testing/operator training in support of KW Basin garnet filter media removal.	Complete	100	System constructability review and field walk downs will be implemented to reduce the risk.	Complete	100
Mitigation Action(s)	FC Date	%											
Integrated system testing/operator training in support of KW Basin garnet filter media removal.	Complete	100											
System constructability review and field walk downs will be implemented to reduce the risk.	Complete	100											
Unassigned Risks (Pending ownership of identified risks/opportunities)													
No unassigned risks identified in January .													

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	6.6	7.2	10.8	0.6	8.9%	(3.6)	-49.4%

Numbers rounded to the nearest \$0.1 million.

CM Schedule Performance (+\$0.6M/+8.9%)

The CM positive schedule variance for 100K is due to replanning of FY 2020 scope as a result of impacts from the delay in authorization of the vertical pipe casing (VPC) fabrication; incorporating a change in approach in the Sand Filter Media Removal from staging and grouting in the north load-out pit to grouting in VPCs; revising installation of VPCs from plant forces to construction forces (PFWR PRC-020-19-A) and associated support from Project Technical Services (PTS); requiring additional time for training and mobilization of contractor personnel; and, due to complexities with Garnet Filter Media Removal, replanning debris disposition activities.

The 324 Building Disposition Project experienced an unfavorable variance due to a contamination event that occurred on November 14, 2019. CHPRC management suspended work beyond minimum safe activities pending implementation of revised strategies and controls to reduce the potential of future contaminations.

CM Cost Performance (-\$3.6M/-49.4%)

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

The negative cost variance for 100K is due to planning, testing and mockups to support 105KW debris waste disposition that have been more complex than planned. Higher than planned costs associated with mobilization and training costs for the GFMR and VPC installation and remediation subcontractor. CHPRC planning assumed that the subcontractor would provide partially trained staff, but the subcontractor did not. In addition, unplanned costs were incurred to rework the GFMR installation work package to resolve comments from the HRB.

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

WBS 041/ RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	728.9	712.1	697.9	(16.8)	-2.3%	14.2	2.0%	816.9	800.2	102.3	16.7

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$16.8M/-2.3%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance (+\$14.2M/+2.0%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$16.7M/+2.0%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0041 Nuclear Facility D&D – River Corridor	FY2020		Variance
	Projected Funding	Spending Forecast	
RL-0041 Spending Forecast	150.9	150.3	0.6

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

There was no change in the FY2020 expected funding of \$150.9 million from December. The spending forecast increased \$1.5 million from December, primarily due to a reallocation of fee from project breakdown structure (PBS) RL-0013, driven by scope changes required to accommodate a revised Integrated Priority List.

Critical Path Analysis

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
DOE Independent Design Review – Issue for Construction Structural Modification	2/14/2020	3/5/2020
RL Approval EPHA Final	2/20/2020	3/5/2020

Since the December 2019 Monthly report, the forecast CHPRC delivery date for the DOE independent design review submittal and the corresponding expected RL due date both slipped 45 calendar days from the previously reported dates of December 31, 2019, and January 20, 2020, respectively. The forecast CHPRC delivery date and corresponding expected RL due date for RL approval EPHA final both slipped 41 days from the previously reported dates of January 10, 2020, and January 24, 2020, respectively. The revised dates reflect the current estimate of the impacts from the 324 Building Disposition Project from the previously noted contamination event that occurred on November 14, 2019, and anticipated work resumption recovery actions.

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

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

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

KEY ACCOMPLISHMENTS

RL-0042 Accomplishments

- Completed FFTF and 400 Area annual surveillance.
- Completed the exterior inspection of the 400W water tank.

MAJOR ISSUES

Issue

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

Corrective Action

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

Status

Development of functional requirements for an engineering evaluation has been completed pending direction to proceed from the U.S. Department of Energy (DOE), Richland Operations Office (RL). Competing scope and budget limitations within the 400 Area have required the reallocation of resources. Additional efforts to address the aging diesel engine fire pump P-28 is pending further planning.

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	0.4	0.2	0.3	(0.1)	-36.7%	(0.1)	-33.4%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance: (-\$0.1M/-36.7%)

The CM schedule variance is within reporting thresholds.

CM Cost Performance: (-\$0.1M/-33.4%)

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	29.8	29.6	25.0	(0.1)	-0.4%	4.6	15.5%	32.9	28.6	3.5	4.3

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance: (-\$0.1M/-0.4%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$4.6M/+15.5%)

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: (+\$4.3M/+13.1%)

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	4.7	0.0
Numbers are rounded to the nearest \$0.1 million.			

Funds Analysis

Fiscal year (FY)2020 projected funding of \$4.8 million includes support for electrical component failures and configuration challenges, interest by regulators requiring additional inspections and a recent failure of the water system/water piping. The spending forecast is \$4.7 million based on the final FY2020 project management baseline annual update submitted to RL on September 11, 2019, with updates through January reflecting incorporation of Contracting Officer Representative direction for 400 Area's ISA drum treatment at Perma-Fix Northwest.

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



January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

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 / 12 / 23									
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) 2020 / 01 / 26									
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 549,145	d. TARGET PROFIT/FEE 278,070	e. TARGET PRICE 6,596,684	f. ESTIMATED PRICE 7,034,136	g. CONTRACT CEILING 6,596,684	h. ESTIMATED CONTRACT CEILING 7,034,136	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		6,707,701				c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)										
b. WORST CASE		6,795,895																	
c. MOST LIKELY		6,756,065	6,867,759	111,694															
8. PERFORMANCE DATA																			
CAPN.PBS																			
ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION					
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE					BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)			
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)						
RL-0011 Nuclear Mat Stab & Disp PFP	5,723	1,018	4,497	-4,705	-3,479	1,140,317	1,124,698	1,222,919	-15,619	-98,222	0	0	0	1,143,564	1,239,303	-95,739			
RL-0012 SNF Stabilization & Disp	0	0	-41	0	41	759,593	759,593	729,818	0	29,775	0	0	0	759,593	729,821	29,772			
RL-0013 Solid Waste Stab & Disp	15,712	14,647	15,390	-1,065	-743	1,536,896	1,527,066	1,443,764	-9,830	83,301	0	0	0	1,678,201	1,590,982	87,219			
RL-0030 Soil & Water Rem-Grndwtr/Vadose	8,811	8,507	8,433	-303	75	1,668,343	1,661,848	1,613,893	-6,494	47,955	0	0	0	1,764,085	1,709,941	54,144			
RL-0040 Nuc Fac D&D - Remainder Hanfrd	4,388	5,025	5,746	636	-721	582,867	576,542	559,946	-6,325	16,596	0	0	0	624,105	608,867	15,239			
RL-0041 Nuc Fac D&D - RC Closure Proj	6,619	7,206	10,768	587	-3,563	728,858	712,072	697,914	-16,786	14,158	0	0	0	816,947	800,218	16,730			
RL-0042 Nuc Fac D&D - FTF Proj	363	230	307	-133	-77	29,755	29,622	25,044	-133	4,578	0	0	0	32,868	28,571	4,297			
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	41,616	36,633	45,100	-4,983	-8,467	6,446,627	6,391,440	6,293,299	-55,187	98,141	0	0	0	6,819,363	6,707,701	111,662			
f. MANAGEMENT RESERVE	48,364																		
g. TOTAL	41,616	36,633	45,100	-4,983	-8,467	6,446,627	6,391,440	6,293,299	-55,187	98,141	0	0	0	6,867,727					
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																			
a. VARIANCE ADJUSTMENT																			
b. TOTAL CONTRACT VARIANCE													-55,187	98,141			6,867,727	6,707,701	160,026

*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 / 12 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2020 / 01 / 26	
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	1,486	841	1,215	-645	-374	104,872	101,586	95,490	-3,286	6,096	0	0	0	116,176	108,287	7,889
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	99	99	81	0	19	8,995	8,995	5,918	0	3,077	0	0	0	9,926	6,852	3,074
3B - PFP Closure Project	5,746	1,053	4,527	-4,693	-3,473	1,052,250	1,036,641	1,141,940	-15,609	-105,299	0	0	0	1,056,683	1,159,189	-102,505
3C - Waste & Fuels Management Project	11,754	11,154	12,309	-600	-1,154	1,352,081	1,344,284	1,265,354	-7,797	78,930	0	0	0	1,458,090	1,377,569	80,522
3D - Soil & Groundwater Remediation	7,300	7,642	7,197	342	445	1,461,669	1,458,461	1,410,647	-3,208	47,814	0	0	0	1,545,875	1,493,664	52,211
3G - K Basin Oper & Plateau Remediation Project	1,546	4,035	5,261	2,489	-1,227	1,124,533	1,120,494	1,066,450	-4,039	54,044	0	0	0	1,168,290	1,113,410	54,880
3H - River Risk Management Project	8,981	6,614	8,505	-2,367	-1,891	340,969	326,189	348,228	-14,780	-22,039	0	0	0	420,132	438,109	-17,977
3K - Central Plateau Risk Reduction	4,703	5,194	6,005	491	-811	523,269	516,802	505,185	-6,468	11,616	0	0	0	566,202	556,534	9,668
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)	41,616	36,633	45,100	-4,983	-8,467	6,446,627	6,391,440	6,293,299	-55,187	98,141	0	0	0	6,819,363	6,707,701	111,662
f. MANAGEMENT RESERVE														48,364		
g. TOTAL	41,616	36,633	45,100	-4,983	-8,467	6,446,627	6,391,440	6,293,299	-55,187	98,141	0	0	0	6,867,727		

CONTRACT PERFORMANCE REPORT																	Form Approved	
FORMAT 3 - BASELINE																	OMB No. 0704-0188	
DOLLARS IN THOUSANDS																		
1. CONTRACTOR CH2M HILL Plateau Remediation Company				2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009					4. REPORT PERIOD a. FROM: 2019/12/23 b. TO: 2020/01/26					
5. CONTRACT DATA				a. ORIGINAL NEGOTIATED COST \$4,312,366		b. NEGOTIATED CONTRACT CHANGE \$2,006,247		c. CURRENT NEGOTIATED COST (A + B) \$6,318,614		d. ESTIMATED COST AUTH UNPRICED WORK \$549,145		e. CONTRACT BUDGET BASE (C + D) \$6,867,759		f. TOTAL ALLOCATED BUDGET \$6,867,727		g. DIFFERENCE (E - F) \$32		
h. CONTRACT START DATE 6/19/2008				i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2020		k. CONT COMPLETION DATE 9/30/2020				l. EST COMPLETION DATE 9/30/2020						
6. PERFORMANCE DATA																		
BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)																		
SIX MONTH FORECAST																		
ITEM (1)																		
BCWS CUM TO DATE (2)																		
BCWS FOR REPORT PERIOD (3)																		
+1 Feb-20 (4)																		
+2 Mar-20 (5)																		
+3 Apr-20 (6)																		
+4 May-20 (7)																		
+5 Jun-20 (8)																		
+6 Jul-20 (9)																		
FY09-13 (10)																		
FY14 (11)																		
FY15 (12)																		
FY16 (13)																		
FY17 (14)																		
FY18 (15)																		
FY19 (16)																		
FY20 (17)																		
UNDISTRIB BUDGET (18)																		
TOTAL BUDGET (19)																		
a. PM BASELINE (BEGIN OF PERIOD)																		
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																		
BCR-013-20-002R0 - Revise W-135 Schedule Logic for Construction Technical Suppo																		
BCR-013-20-011R0 - W-135 Admin and Construction Trailers																		
BCR-030-20-007R0 - Re-Plan 200W P&T Preventative Maintenance Activities																		
BCR-030-20-009R0 - Re-PLAN 200-BP-5 IA RD-RAWP																		
BCR-040-20-001R0 - Remove 202-S REDOX Scope and Implement Infrastructure & Safe																		
BCR-041-20-004R0 - Modify FY2020 100K Soil Remediation																		
BCR-042-20-003R0 - Treatment of Na Contaminated Waste Stored on 400 Area ISA																		
BCRA-PRC-20-006R0 - HPIC Updates January FY2020																		
BCR-PRC-20-007R0 -																		
c. PM BASELINE (END OF PERIOD)																		
7. MANAGEMENT RESERVE																		
8. TOTAL																		

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2019 / 12 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2020 / 01 / 26	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group		ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)											AT COMPLETION (15)
ORGANIZATIONAL CATEGORY (1)	SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS								
	+1 FEB 2020 (4)			+2 MAR 2020 (5)	+3 APR 2020 (6)	+4 MAY 2020 (7)	+5 JUN 2020 (8)	+6 JUL 2020 (9)	AUG 2020 (10)	SEP 2020 (11)	OCT 2020 (12)	NOV 2020 (13)	ATCOMPLETE (14)		
300 - Office of the President	13	957	9	7	7	9	9	6	6	6	0	0	0	0	1,017
303 - Internal Audit	4	613	4	5	4	5	5	5	5	5	0	0	0	0	653
304 - General Counsel	4	564	4	4	4	4	4	4	4	4	0	0	0	0	593
31 - Communications	7	1,242	6	6	7	7	7	7	7	7	0	0	0	0	1,298
32 - Safety Health Security & Quality	64	8,704	60	60	60	60	60	60	60	60	0	0	0	0	9,182
34 - Env Program & Strategic Plng	44	5,971	42	42	41	41	44	45	44	39	8	6	12	0	6,337
35 - Business Services	54	8,292	55	57	60	64	65	65	64	64	0	0	0	0	8,788
36 - Prime Contract & Proj Integr	40	4,531	37	37	38	38	38	40	40	40	0	0	0	0	4,839
37 - Resource Mgmt & Strategic Intg	42	3,475	39	42	43	43	43	44	44	44	0	0	0	0	3,816
38 - Project Technical Services	39	6,566	39	40	41	41	41	41	41	41	0	0	0	0	6,890
3B - PFP Closure Project	190	54,435	177	160	128	94	4	1	1	1	0	0	0	0	55,002
3C - Waste & Fuels Management Project	430	59,800	415	414	414	408	408	394	392	386	7	5	90	0	63,134
3D - Soil & Groundwater Remediation	275	43,725	262	267	276	273	274	270	253	242	16	16	32	0	45,906
3G - K Basin Oper & Plateau Remediation Project	227	37,580	223	229	223	206	219	217	204	203	6	2	2	0	39,314
3H - River Risk Management Project	222	9,740	226	222	224	226	230	225	226	225	25	25	197	0	11,791
3K - Central Plateau Risk Reduction	256	20,878	230	231	245	243	246	244	245	244	41	30	15	0	22,893
g. TOTAL DIRECT	1,912	267,074	1,829	1,821	1,816	1,761	1,697	1,668	1,636	1,612	102	85	349	0	281,450

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) 2019/12/23	
b. LOCATION (Address and ZIP Code) Richland, WA 99354			b. NUMBER DE-AC06-08RL14788		b. PHASE Base		b. TO (YYYY/MM/DD) 2020/01/26		
			c. TYPE CPAF	d. SHARE RATIO		c. EVMS ACCEPTANCE 2009/09/18 NO YES X			
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI
Current:	41,616	36,633	45,100	(4,983)	-12.0%	(8,467)	-23.1%	0.88	0.81
Cumulative:	6,446,627	6,391,441	6,293,299	(55,187)	-0.9%	98,141	1.5%	0.99	1.02
	BAC	EAC	VAC in \$	VAC in %	TCPI				
At Complete:	6,819,364	6,707,701	111,662	1.6%	1.03				
Explanation of Variance/Description of Problem:									
<p>Current Period Schedule and Cost Variance: The current month (CM) negative cost variance is primarily due to the PFP Closure Project and RRMP. At PFP, high winds, tumbleweed accumulation, and a frozen waterline caused by equipment failure engaged crews with response actions while minimal loadout was completed. Additionally, at RRMP, the negative cost variance is primarily due to the November 14, 2019, contamination event at the 324 Facility resulting in a management stop work in radiologically contaminated areas. Meanwhile, resumption and corrective action plans are being worked, incurring costs without progress on planned scope.</p> <p>The CM negative schedule variance is primarily due to the PFP Closure Project. High winds, tumbleweed accumulation, and a frozen waterline caused by equipment failure engaged crews with response actions while minimal loadout was completed. Additionally, at RRMP, the negative schedule variance is primarily due to the November 14, 2019, contamination event at the 324 Facility resulting in a management stop work in radiologically contaminated areas. While resumption and corrective action plans are being worked, progress on planned scope is limited.</p> <p>Cumulative Schedule Variance: The variance is within reporting thresholds.</p> <p>Cumulative Cost Variance: The variance is within reporting thresholds.</p>									
Impact:									
<p>Current Period Schedule: The current month schedule variance is not expected to impact the overall contract schedule.</p> <p>Current Period Cost: Cost impacts are being estimated and will be incorporated in the project estimate to complete (ETC).</p> <p>Cumulative Schedule: N/A</p> <p>Cumulative Cost: N/A</p>									
Corrective Action:									
<p>Current Period Schedule: No corrective actions have been identified.</p> <p>Current Period Cost: No corrective actions necessary.</p> <p>Cumulative Schedule: N/A</p> <p>Cumulative Cost: N/A</p>									
Monthly Summary (to include technical causes of VARs, Impacts, and Corrective Action(s):									
<p>CHPRC continues to track completion of the contract within budget. Currently, a variance at completion (VAC) of \$111.7 million is projected, with an additional \$48.4 million of management reserve (MR), for a total positive variance of \$160 million. For January, the project was 12.0 percent behind schedule and 23.1 percent over planned cost. Contract to date: the project was 0.9 percent behind schedule and 1.5 percent under planned cost.</p> <p>There was no change between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of January. The \$31K delta is a result of rounding over time for implementation of multiple change order definitizations.</p> <p>Nine BCRs were implemented in the current period. They included:</p> <ul style="list-style-type: none"> • BCR-013-20-002R0, Revise W-135 Schedule Logic for Construction Technical Support • BCR-013-20-013R0, W-135 Admin and Construction Trailers • BCR-030-20-007R0 Re-Plan 200W P&T Preventative Maintenance Activities • BCR-030-20-009R0, Re-Plan 200-BP-5 IA RD-RAWP • BCR-040-20-001R0, Remove 202-S REDOX Scope • BCR-041-20-003R0, Modify FY2020 100K Deactivation Work Scope • BCR-041-20-004R0, Modify FY2020 100K Soil Remediation • BCR-042-20-003R0, Treatment of Na Contaminated Waste Stored on 400 Area ISA • BCRA-PRC-20-00R0, HPIC Updates January FY2020 									

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

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

Variance in Performance BAC and EAC: The VAC between the BAC and EAC this month is a +\$117 million, +1.6% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

CPS - In Process		
	Total Authorized Unpriced Work	\$549,145
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	Grand Total Adjustments	\$549,145

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

Undistributed Budget Activity

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

There was no change to UB in December.

Management Reserve Activity

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

There was no change in MR during December.

Fee Activity

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

There was no change to fee in December.

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

Prepared by: Project Control Staff	Date: 2/18/2020	Approved by:	Date:
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Appendix B

Project Services and Support (WBS 000)

CH2MHILL
Plateau Remediation Company



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

M. A. Wright
Vice President for
Project Technical
Services

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

D. J. Henderson
Director of
Communications

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

M. W. Wells
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

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

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

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

KEY ACCOMPLISHMENTS

RL-0011_C1 Accomplishments:

- Prepared the Confirmation of Completion Worksheet, which will provide documentation required for DOE-Headquarters' (HQ) approval of the completion of DOE Order 413.3B, "Program and Project Management for the Acquisition of Capital Assets," Critical Decision (CD)-4, "Project Completion for Project RL-0011.R1/C1, Plutonium Finishing Plant (PFP) Decontamination and Dismantlement". The worksheet will be sent with a letter to RL in early February.

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

CRITICAL PATH ANALYSIS

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

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	Due Date*	Forecast Date†	Status/ Comment
CAP.1	Removal of 174 gloveboxes from 234-5Z	July 2020	03/23/2020	The current CAP 1 project forecast completion date is March 23, 2020, to allow completion of documentation and approval from DOE-HQ.

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Nothing to report at this time.

DOE ACTIONS/DECISIONS

Working with RL to complete CD-4 closure actions.

Appendix C.1

RL-0011.C1 – PFP D&D

(Removal of 174 Gloveboxes from 234-5Z)

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

January 2020
CHPRC-2020-01, 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 / 12 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2020 / 01 / 26	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18	

5. CONTRACT DATA								
a. QUANTITY 1	b. NEGOTIATED COST 330,987	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 9,878	e. TARGET PRICE 340,865	f. ESTIMATED PRICE 344,858	g. CONTRACT CEILING 340,865	h. ESTIMATED CONTRACT CEILING 344,858	i. DATE OF OTB/OTS (YYYYMMDD)

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

CAPN.PBS Control Account.PARS 2 WBS (2) ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)						
RL-0011 Nuclear Mat Stab & Disp PFP																
RL_0011_C1.02 Maintain Safe & Compliant PFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RL_0011_C1.05 Disposition PFP Facility	0	0	0	0	0	235,514	235,514	259,800	0	-24,286	0	0	235,514	259,800	-24,286	
RL_0011_C1.06 Project Management & Support	0	0	0	0	0	11,990	11,990	12,477	0	-487	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	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	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	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	315,152	332,587	0	-17,435	0	0	315,152	332,587	-17,435	
f. MANAGEMENT RESERVE	2,393															
g. TOTAL	0	0	0	0	0	315,152	315,152	332,587	0	-17,435	0	0	317,545	332,587	-15,042	
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																
a. VARIANCE ADJUSTMENT	0															
b. TOTAL CONTRACT VARIANCE	0															

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

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM			4. REPORT PERIOD		
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)			a. FROM (YYYYMMDD) 2019 / 12 / 23		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2020 / 01 / 26		
		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	254,725	280,007	0	-25,282	0	0	0	254,725	280,007	-25,282
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET														0	0	0
e. SUBTOTAL (Performance Measurement Baseline)	0	0	0	0	0	315,152	315,152	332,587	0	-17,435	0	0	0	315,152	332,587	-17,435
f. MANAGEMENT RESERVE														2,393		
g. TOTAL	0	0	0	0	0	315,152	315,152	332,587	0	-17,435	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: 2019/12/23 b. TO: 2020/01/26									
5. CONTRACT DATA																			
a. ORIGINAL NEGOTIATED COST \$330,987				b. NEGOTIATED CONTRACT CHANGE \$0		c. CURRENT NEGOTIATED COST (A + B) \$330,987		d. ESTIMATED COST AUTH UNPRICED WORK \$0		e. CONTRACT BUDGET BASE (C + D) \$330,987		f. TOTAL ALLOCATED BUDGET \$317,545			g. DIFFERENCE (E - F) \$13,442				
h. CONTRACT START DATE 6/19/2008				i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2020		k. CONT COMPLETION DATE 9/30/2020			l. EST COMPLETION DATE 9/30/2020								
6. PERFORMANCE DATA																			
BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)																			
ITEM (1)		BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)	FY20 (17)	UNDISTRIB BUDGET (18)	
				+1 Feb-20 (4)	+2 Mar-20 (5)	+3 Apr-20 (6)	+4 May-20 (7)	+5 Jun-20 (8)	+6 Jul-20 (9)										
a. PM BASELINE (BEGIN OF PERIOD)		315,152	0	0	0	0	0	0	0	302,288	4,109	7,749	890	116	0	0	0		
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 / 12 / 23		b. TO (YYYYMMDD) 2020 / 01 / 26		
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 FEB 2020 (4)	+2 MAR 2020 (5)	+3 APR 2020 (6)	+4 MAY 2020 (7)	+5 JUN 2020 (8)	+6 JUL 2020 (9)	AUG 2020 (10)	SEP 2020 (11)	OCT 2020 (12)	NOV 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	15,442	0	0	0	0	0	0	0	0	0	0	0	0	15,442
g. TOTAL DIRECT	0	15,459	0	0	0	0	0	0	0	0	0	0	0	0	15,459

Appendix C.2

Capital Asset Project

RL-0011.C2 - Demolition of PFP Facilities



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

January 2020
CHPRC-2020-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In January, the Plutonium Finishing Plant's (PFP) Closure Project team worked on mobilizing and preparing the loadout area for Plutonium Reclamation Facility (PRF) rubble disposition. Preparations included grooming traveling paths, placing berms to control water flow, and gravel and dirt placement to allow smooth loading and unloading of PRF debris. Loadout of the remaining Remote Mechanical A line debris was on hold due to wind and cold weather impacts. Sixteen containers of final phase demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal.

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

KEY ACCOMPLISHMENTS

RL-0011_C2 Accomplishments:

- Crews worked on mobilizing and preparing the loadout area for PRF rubble disposition. Preparations included grooming traveling paths, installing berms to control water flow, and placing gravel and dirt.
- Work crews built side shields for roll on/roll off truck loading.
- Completed setup and test run for PRF can lining process.
- Carpenters built platforms for the 212-Z lag yard ERDF can lining station.
- Completed setup of scaffold structure for closing bags after PRF debris loadout.
- Shipped sixteen containers of final phase demolition debris to ERDF.

MAJOR ISSUES

Issue

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

Corrective Action

Resolve funding shortfall.

Status

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

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- Increased Confidence
- No Change
- Decreased Confidence

	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0011/WBS-011.OA										
Explanation of major changes to the project monthly stoplight chart:										
There are no major changes to the stoplight chart in January .										
Realized Risks (Risks that are currently impacting project cost/schedule)										
No realized risks identified in January .										
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)										
No critical risks identified in January .										
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
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: Low (10% to 25%) 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 head count changes weekly to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: Based on current project status, this risk is no longer considered to have a high threat value. As such, it will be removed from the stoplight chart prior to February reporting. 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 head count changes weekly to ensure adequate resource profiles.	Ongoing	N/A
Mitigation Action(s)	FC Date	%								
Review RCT and D&D head count changes weekly to ensure adequate resource profiles.	Ongoing	N/A								

	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0011/WBS-011.OA													
<p>PFPP-P-014: “Bump and Roll, Labor Assets Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit Employees Affecting Productivity”</p>	<p>PFPP Hanford Atomic Metal Trades Council (HAMTC) labor resources are not available or are unqualified due to the bump and roll, LAMP, or other job postings.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%)</p> <p>Worst Case Impacts: \$0, 96 days</p>	●	↔	<p>Risk Trigger: Other projects and/or contractors on the Hanford Site request bargaining unit employees. The PFPP workforce is affected through loss of employees or is required to train new employees to backfill HAMTC resources affected by the bump and roll, LAMP, or taking a position with a different contractor or project.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communicate with other entities to reduce impact of the bump-and-roll process.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Review RCT and D&D headcount changes weekly to ensure adequate resource profiles.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: Based on current project status, this risk is no longer considered to have a high threat value. As such, it will be removed from the stoplight chart prior to February reporting. The project continues to review staffing levels on a weekly basis to reduce the probability of this risk occurring.</p>	Mitigation Action(s)	FC Date	%	Communicate with other entities to reduce impact of the 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 the 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													
<p>PFPP-P3-003: “Weather Impacts During 234-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: Low (10% to 25%)</p> <p>Worst Case Impacts: \$0, 8 days</p>	●	↔	<p>Risk Trigger: High winds and cold weather may impact the project in the fall/winter seasons. Average winds above 15 miles per hour (mph) shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and therefore shuts down fieldwork activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install heat trace & installation on fixative tanks.</td> <td>1/16/20</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. A winter preparedness plan was developed for PFPP to mitigate impacts from cold weather. Heated fixative tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. Installation of heat trace and insulation on the fixative tanks completed in January. Wind events heavily impacted the project in January, including four days with work control zone restrictions due to high winds. Additionally, resources were diverted to wind-caused tumbleweed cleanup for multiple days, impacting debris reduction, loadout, and 236-Z mobilization efforts. Cold temperatures and equipment malfunction resulted in the water line freezing at the end of the month, resulting in three days of schedule impacts.</p>	Mitigation Action(s)	FC Date	%	Install heat trace & installation on fixative tanks.	1/16/20	100			
Mitigation Action(s)	FC Date	%											
Install heat trace & installation on fixative tanks.	1/16/20	100											
<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: Low (10% to 25%)</p> <p>Worst Case Impacts: \$0, 30 days</p>	●	↔	<p>Risk Trigger: High winds and cold weather may impact the project in the fall and winter seasons. Average winds above 15 mph shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and therefore shuts down fieldwork activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install heat trace and installation on fixative tanks.</td> <td>1/16/20</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in January. A winter preparedness plan was developed for PFPP to mitigate impacts from cold weather. Heated tanks have been purchased and installed to ensure that a ready supply of fixative is always available in the demolition zone. Installation of heat trace and insulation on the fixative tanks completed in January. Wind events heavily impacted the project in January, including four days with work control zone restrictions due to high winds. Additionally, resources were diverted to wind-caused tumbleweed clean-up for multiple days, impacting debris reduction, loadout, and 236-Z mobilization efforts. Cold temperatures and equipment malfunction resulted in the water line freezing at the end of the month, resulting in three days of schedule impacts.</p>	Mitigation Action(s)	FC Date	%	Install heat trace and installation on fixative tanks.	1/16/20	100			
Mitigation Action(s)	FC Date	%											
Install heat trace and installation on fixative tanks.	1/16/20	100											

Unmitigated Risk Impacts	Assessment		Comments															
	Month	Trend																
RL-0011/WBS-011.OA																		
PFP-P-004: “Stop Work From Concerned Workers” 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. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 16 days			Risk Trigger: During PFP demolition activities, an increase in stop works could result in delays. <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in <i>January</i> . 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.	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>January</i> .																		

CRITICAL PATH ANALYSIS

The PFP critical path schedule begins with the start of 236-Z Canyon loadout, which is anticipated to be completed by April 6, 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 June 23, 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	06/23/2020	The project completed structural demolition of 234-5Z in December, and plans to complete 236-Z Canyon in April.

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

Appendix C.2

RL-0011.C2 - Demolition of PFP Facilities

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

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

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 / 12 / 23								
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2020 / 01 / 26												
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18												
5. CONTRACT DATA																		
a. QUANTITY 1	b. NEGOTIATED COST 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 180,074	g. CONTRACT CEILING 119,414	h. ESTIMATED CONTRACT CEILING 180,074	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		174,501			c. SIGNATURE						d. DATE SIGNED (YYYYMMDD)							
b. WORST CASE		180,039																
c. MOST LIKELY		175,074	139,278	-35,796														
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		ADJUSTMENTS			BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
		WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)				
RL-0011 Nuclear Mat Stab & Disp PFP																		
RL_0011_C2.05 Disposition PFP Facility		4,738	33	3,669	-4,705	-3,635	136,124	120,650	160,922	-15,474	-40,272	0	0	0	138,704	174,501	-35,797	
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		4,738	33	3,669	-4,705	-3,635	136,124	120,650	160,922	-15,474	-40,272	0	0	0	138,704	174,501	-35,797	
f. MANAGEMENT RESERVE															573			
g. TOTAL		4,738	33	3,669	-4,705	-3,635	136,124	120,650	160,922	-15,474	-40,272	0	0	0	139,278	174,501	-35,797	
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																		
a. VARIANCE ADJUSTMENT																		
b. TOTAL CONTRACT VARIANCE																		
													-15,474	-40,272		139,278	174,501	-35,223

**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 / 12 / 23		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2020 / 01 / 26		
		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	4,738	33	3,669	-4,705	-3,635	136,124	120,650	160,922	-15,474	-40,272	0	0	0	138,704	174,501	-35,797
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)	4,738	33	3,669	-4,705	-3,635	136,124	120,650	160,922	-15,474	-40,272	0	0	0	138,704	174,501	-35,797
f. MANAGEMENT RESERVE														573		
g. TOTAL	4,738	33	3,669	-4,705	-3,635	136,124	120,650	160,922	-15,474	-40,272	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: 2019/12/22 b. TO: 2020/01/26							
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)
a. PM BASELINE (BEGIN OF PERIOD)	131,386	5,090	2,526	54	0	0	0	0	0	6,090	29,182	19,407	628	66,598	16,800	0	138,704
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																	
None at this time															0	0	0
c. PM BASELINE (END OF PERIOD)	136,124	4,739	2,526	54	0	0	0	0	0	6,090	29,182	19,407	628	66,598	16,800	0	138,704
7. MANAGEMENT RESERVE																	573
8. TOTAL																	139,278

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

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

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2019 / 12 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2020 / 01 / 26	
		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 FEB 2020 (4)	+2 MAR 2020 (5)	+3 APR 2020 (6)	+4 MAY 2020 (7)	+5 JUN 2020 (8)	+6 JUL 2020 (9)	AUG 2020 (10)	SEP 2020 (11)	OCT 2020 (12)	NOV 2020 (13)	ATCOMPLETE (14)		
3B - PFP Closure Project	149	4,674	146	129	92	72	0	0	0	0	0	0	0	0	5,113
g. TOTAL DIRECT	149	4,674	146	129	92	72	0	0	0	0	0	0	0	0	5,113

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) 2019/12/23		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788			b. PHASE			b. TO (YYYYMMDD) 2020/01/26		
		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:		4,738.5	33.4	3,668.7	-4,705.1	-99.3%	-3,635.3	-10888.3%	0.01	0.01
Cumulative:		136,123.9	120,650.0	160,922.0	-15,474.0	-11.4%	-40,272.0	-33.4%	0.89	0.75
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		138,704.4	174,500.9	-35,796.6	-25.8%	0	1.33			
Explanation of Variance/Description of Problem:										
Current Month:										
Schedule Variance: The unfavorable schedule variance is due to delays to the project caused by weather. The project experienced advisory level winds that closed the PFP work control zone for multiple days in January. The advisory level winds also led to tumbleweed accumulation response actions, which tied up crews for additional 4 days. In the last week of the month, cold temperatures and equipment failure resulted in the water line freezing, causing an additional 4 days where no load out was possible. Any current performance is offset by BCWS based on progress on Plutonium Reclamation Facility rubble disposition, slab sampling and demobilization activities, which have been pushed by delays, and PRF is now scheduled to begin in February 2020.										
Cost Variance: The unfavorable cost variance is due to the delayed mentioned in the schedule variance above. Work crews worked on wind and water line response actions, and were unable to complete critical path activities. The project incurred average monthly material and labor costs.										
Cumulative to Date:										
Schedule Variance: The cumulative to date schedule variance is within thresholds.										
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 June 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 April 6, 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 December.										
The following items are addressed, as applicable:										
1. Schedule Margin Analysis: No drawdowns of schedule margin were made in the month of January.										
2. Data dictionary Changes: No change in the month of January.										
3. Forecast Schedule with No Baseline: No change in the month of January.										
4. UB Balance: No change in the month of January.										
5. Negative Actual Cost of Work Performed (ACWP): No change in the month of January.										
6. Earned Actual Cost (EAC) Analysis: Best Case = \$171,501; Most Likely = \$175,074; Worst Case = \$180,039. 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 January.										
8. Management Reserve Transactions: No change in the month of January.										
9. Freeze Period Changes: No change in the month of January.										
10. Retroactive Changes: No change in the month of January.										
11. Earned Value Type Changes: No change in the month of January.										
Prepared by: Jason Knowlton		Date: 2/11/2020			Approved by:			Date:		