

Monthly Performance Report

July 2019

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

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

CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

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APPROVED

By Janis D. Aardal at 3:40 pm, Aug 22, 2019

Release Approval

Date

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CH2MHILL
Plateau Remediation Company



L. Ty Blackford
President and Chief
Executive Officer

Monthly Performance Report

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July 2019
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EXECUTIVE SUMMARY

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

- Plutonium Finishing Plant (PFP) Closure Project:** The PFP Closure Project team completed demolition and debris disposition of 234-5Z Core Stability Zone (CSZ) 3 and tunnels 1, 2, 3, and 6. Demolition started on Zone 4 and the second floor/duct levels of Zones 5 and 6. A new Material Balance Area was established following the installation of updated postings and security requirements. Fifty-seven containers of low-risk demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal.
- Waste and Fuels Management Project:** At the Waste Encapsulation Storage Facility (WESF), the W-135 Management of the Cesium (Cs) and Strontium (Sr) Capsules Project team is conducting final design closeout activities for the associated required WESF modifications. The scope of work and final design media was provided to the CHPRC Supply Chain organization for development of the request for proposal (RFP) for the subcontract to construct the capsule storage area. The contract for construction of the Maintenance and Storage Facility Cs/Sr capsule handling mockup facility was awarded. At WESF, crews completed replacement of Panel A (heating, ventilation, and air condition electrical panel) and completed threading and reeving wire rope through the main load block and onto the drum in support of the 15-ton canyon crane work activities. The sludge receipt team continued to receive sludge transport and storage containers (STSCs) from the 100K West Reactor Basin for interim storage at T Plant. STSC 16 was received on June 25, 2019, and STSC 17 was received on July 18, 2019.
- Soil and Groundwater Remediation Project:** Operations crews completed cleaning (“pigging”) the YJ5 injection well feed line on July 1, 2019, fulfilling the fiscal year (FY) 2019 target of cleaning more than 75 percent of injection well lines. The project continued operating two temporary systems installed to disinfect groundwater at the 200 West Pump and Treat (P&T) prior to transport to injection wells. While these systems have been in operation, the ability to inject treated groundwater at 200 West Area wells has more than doubled compared to historical capability. Safe and compliant P&T operations continued in July, exceeding two billion gallons of contaminated groundwater treated fiscal year-to-date. Drilling crews completed two monitoring wells and one dual purpose well in July. After a first-of-its-kind U.S. Environmental Protection Agency (EPA) Headquarters (HQ) review, the 100-BC-5 Proposed Plan was authorized for release for public review without comment, setting the stage for the success of future EPA HQ proposed plan reviews.
- K Basins Operations:** In the Sludge Removal Project, preventive maintenance and calibrations on both engineered container retrieval and transfer system and annex utility system components were performed. STSC 16 was filled with sludge from the 105KW fuel storage basin and shipped to T Plant on June 25, 2019, for placement into interim storage. STSC 17 was filled with basin sludge and was shipped to T Plant on July 18, 2019, for interim storage. At the 100K Closure Project, the RFP for the soil excavation contract was issued, and the system design for preparing remote-handled transuranic (TRU) waste material from the basin



Ironworkers recently installed new wire rope for the crane that will support the eventual transfer of the 1,936 Cs and Sr capsules to safer dry storage.

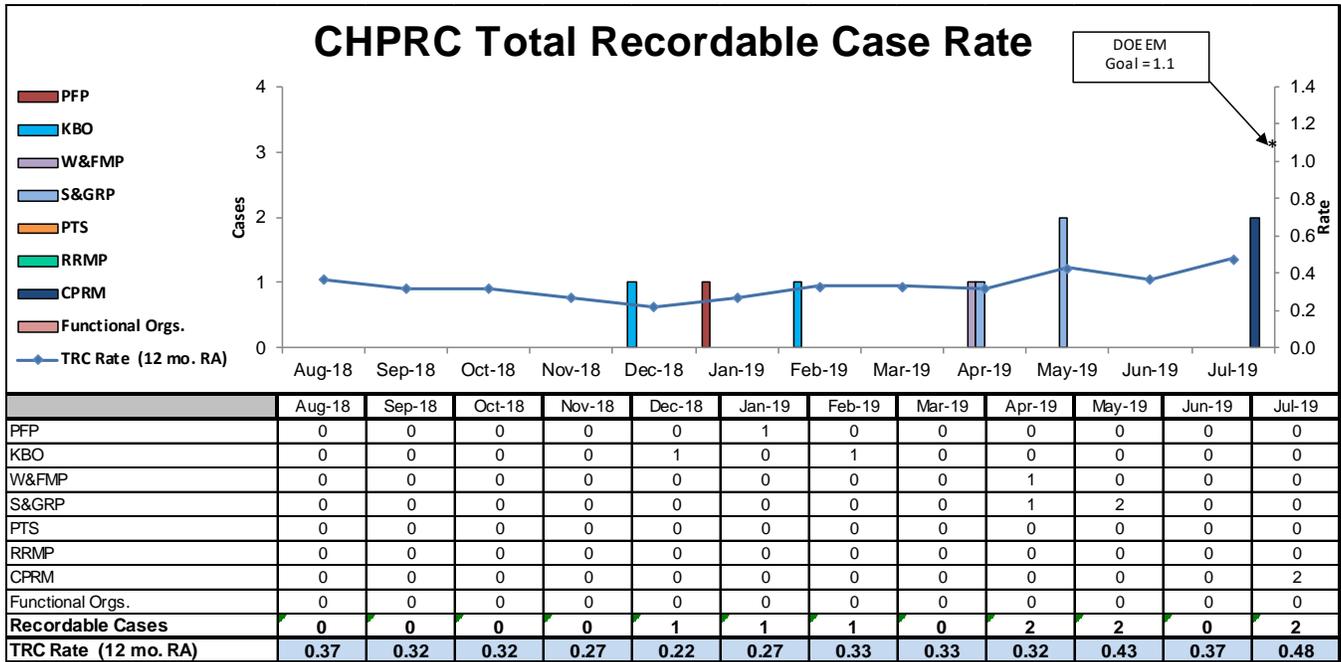
for both sampling and as a check source for the gamma camera was completed. Loadout of the debris following the demolition of buildings 1724K, 1724JKA, and 167K was completed.

- **River Risk Management Project:** Preparation continued for the start of remote soil operations associated with remediation of the 324 Facility Complex. The remote soil excavation operations readiness self-assessment was successfully completed. Equipment procurement and fabrication continued with the receipt of the D Cell snorkel offset tool, and the kickoff meeting for the procurement of the B Cell 10-ton crane was held. Design and fabrication continued on the following systems: shielded cradle supporting waste loadout, waste box shielding, waste bins, waste containers, the universal cutting tool for the remote excavator arm, and the dams for 324 Facility hot cells. Facility preparations completed this period included Cask Handling Area (CHA) floor scarification and epoxy of the CHA floor, the replacement of three aging personnel contamination monitors (PCMs) with three state-of-the-art PCMs, and installation of the truck scale. In support of structural modifications, the construction micropile design was received from the vendor and is in CHPRC review. Crews commenced construction of the north shoring to support future soil stabilization grout injections under the 324 Building. The first B Cell debris waste bin was shipped to ERDF for disposal, and B Cell debris size reduction and waste bin loadout continued. Removal of the grout layer previously poured over the liner in B Cell was initiated. At the mockup, the modified Transfer Mechanism Factory Acceptance Testing began, and crews continued debris loadout operator proficiency training.
- **Central Plateau Risk Management (CPRM) Project:** CPRM personnel returned to combustible removal for areas previously cleared of mercury hazards in the Reduction-Oxidation (REDOX) facility. In addition, CPRM personnel worked with the subcontractor to initiate construction of the ERDF haul road and container transfer area to support future work scope within REDOX. Asbestos insulation abatement and piping removal of the 200 West steam lines continued with crews now eclipsing over 10,600 linear feet of piping removed this fiscal year. Personnel completed all electrical and mechanical isolations of the 242-B/BL facility to make the facility ready for demolition. Additionally, the crew prepared the 242-B/BL demolition boundary, set up all air monitoring equipment, and due to co-location of 242-B/BL and B Farms worked with Washington River Protection Services (WRPS) to help prepare their employees for the initiation of demolition activities adjacent to WRPS management facilities in late July.

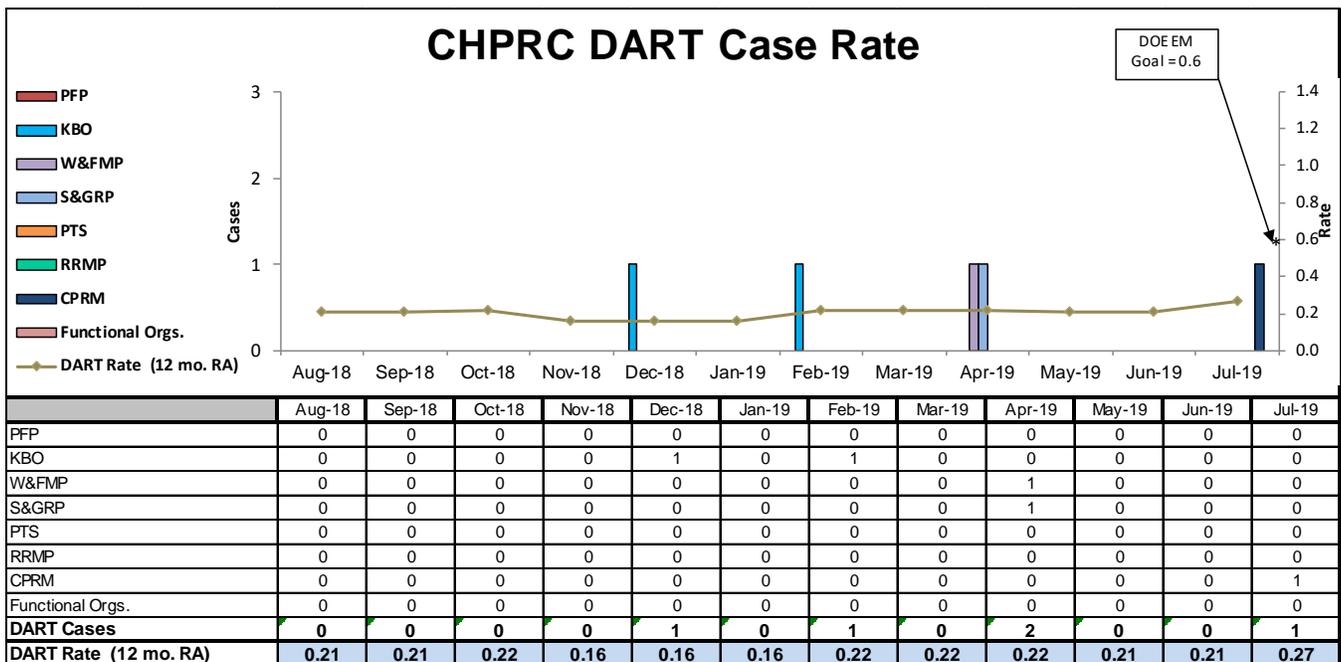
- The President's Zero Accident Council (PZAC) meeting for July was hosted by Safety, Health, Security & Quality. The three main ideas were:
 - o SAFETY is everyone's responsibility.
 - o SECURITY is everyone's job.
 - o QUALITY is everyone's goal.
- Five "Thinking Target Zero" bulletins were published to convey important occupational, safety, health, and environmental messages:
 - o Firework Safety – tips for a safe and happy holiday.
 - o Creepy Crawlers – be on the lookout to avoid pests.
 - o Protection from UV Rays – cover up in the sun to keep skin safe.
 - o DOE-VPP and Contract Changes.
 - o Universal Waste – What is it, and what should you do with it?
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
 - o Five Lessons Learned: OPEXShare: 2019-BNL-I-1385 Observe and Mitigate Adverse Conditions during Work Planning; OPEXShare: 2019-INL-MILL-Event Manual Material Handling Event – A Near Miss that Came Much Too Close; OPEXShare: INL-2019-0028 Unexpected Positive in Drum During Lid Removal; OPEXShare: NREL-FY19-S-002-JUL Mislabeled Gas Cylinders Pose Potential Hazards; OPEXShare: 2019-WFMP-006 Confirmation Bias – Influencing Error Detection.
 - o Injuries.
 - o Weekly ethics moments.
 - o Vehicle events.
 - o Independence Day.
 - o Industrial hygiene.
 - o Fireworks and your safety.
 - o Return to work SAFELY.
 - o Heat stress reminder.
 - o Don't leave it in your car.
 - o Summer Safety 2019.
 - o Return to Work process.
 - o Zero Waste reminder.
 - o Backing up safely.
 - o Safety in motion - Ergonomics.

TARGET ZERO PERFORMANCE

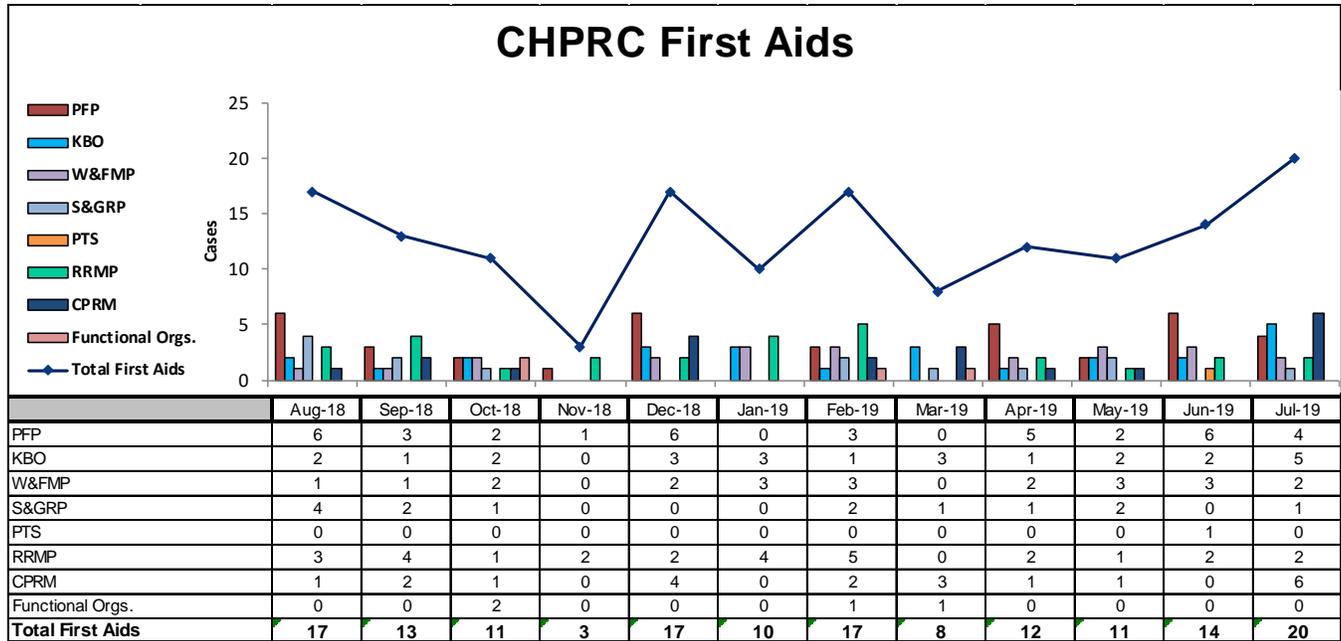
CHPRC continued to focus on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.48 is based on a total of nine recordable injuries. July had two reported recordable cases.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.27 is based upon a total of five days away cases. July had one reported DART case.



First Aid Case Summary: CHPRC reported 20 First Aid cases in July. The contributors were seven insect bites, six miscellaneous (burns, rashes, repetitive motion, etc.), five sprains/strains/pains, one abrasion/bruise/contusion, and one undescribed/precautionary injury. There were 10 self-treat cases reported in July.

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 (which is reported quarterly). For specific project support, refer to Sections A through G and Appendix C of this report.

MAJOR ISSUES

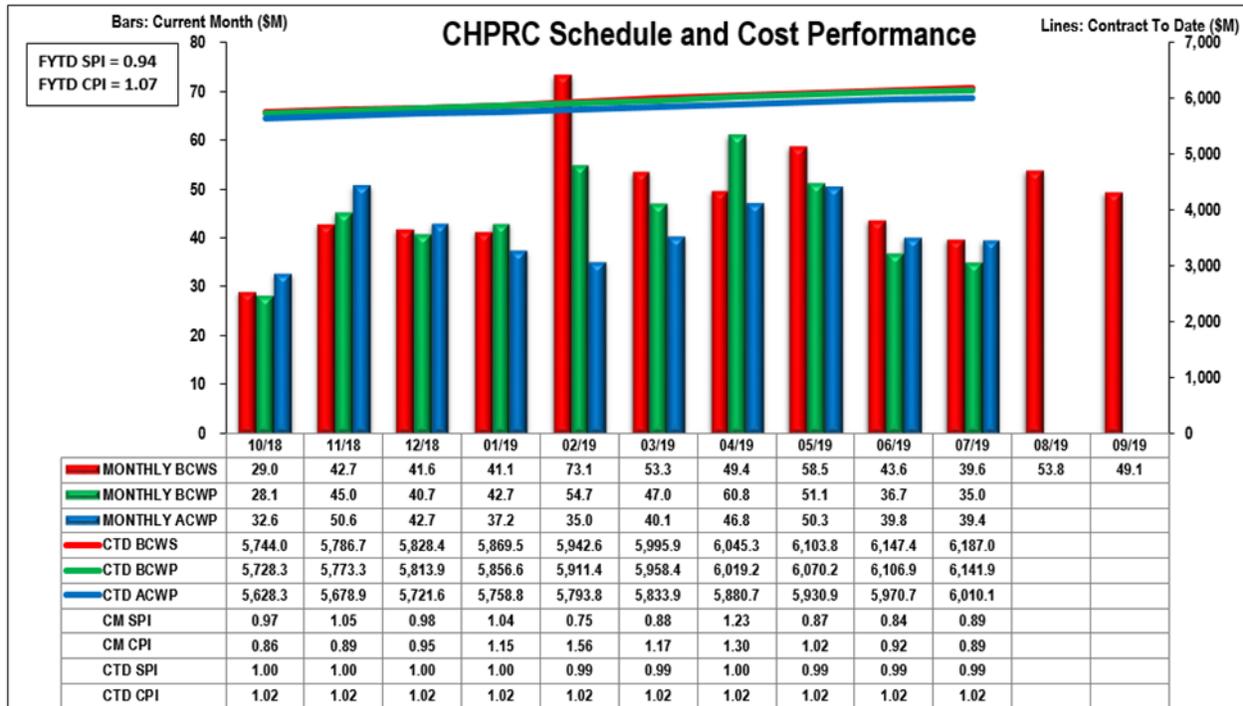
Projects

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

Project Services and Support

- No major issues to report for July.

EARNED VALUE MANAGEMENT



	\$M					\$M					\$M			
	Current Period					Contract to Date					Contract Period			
	Budgeted Cost		Actual Cost	Variance		Budgeted Cost		Actual Cost	Variance		BAC	EAC	Variance	
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost				
RL-0011 - Nuclear Materials Stab & Disp PFP	3.4	1.4	4.4	(1.9)	(3.0)	1104.4	1089.3	1190.6	(15.1)	(101.3)	1,122.9	1,227.0	(104.1)	
RL-0012 - SNF Stabilization & Disposition	1.4	1.3	1.3	(0.1)	0.0	757.6	756.9	727.2	(0.7)	29.7	761.1	730.1	31.0	
RL-0013 - Solid Waste Stab & Disposition	12.3	11.6	11.1	(0.7)	0.5	1455.4	1451.3	1360.0	(4.0)	91.4	1,485.6	1,392.1	93.5	
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	10.2	9.9	7.8	(0.2)	2.1	1622.8	1618.8	1559.8	(3.9)	59.1	1,646.7	1,583.3	63.3	
RL-0040 - Nuc Fac D&D - Remainder	2.9	2.5	4.6	(0.4)	(2.1)	547.5	540.7	524.2	(6.9)	16.5	555.8	543.8	12.1	
RL-0041 - Nuc Fac D&D - RC Closure Project	9.3	8.1	9.9	(1.2)	(1.9)	671.5	657.1	625.1	(14.4)	32.0	696.9	659.1	37.8	
RL-0042 - Nuc Fac D&D - FFTF Project	0.1	0.1	0.1	0.0	(0.0)	27.8	27.8	23.4	0.0	4.4	28.1	24.0	4.2	
(Values are rounded to the nearest \$0.1M)	Total	39.6	35.0	39.4	(4.5)	(4.3)	6,187.0	6,141.9	6,010.1	(45.1)	131.8	6,297.1	6,159.4	137.7
(Values do not have UB breakout)														

Performance Summary

CHPRC continues to track completion of the contract within budget and is currently projecting a variance at completion of \$137.7 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$201.0 million. For July, the project was 11.5 percent behind schedule and 12.4 percent over planned cost. For the contract to date, the project was 0.7 percent behind schedule and 2.1 percent under planned cost.

The current month's negative schedule variance (SV) is primarily due to project breakdown structure (PBS) RL-0011 project's deliberate rate of demolition and warm weather impacts. The PFP team completed CSZ 3 and tunnels 1, 2, 3, and 6 but did not complete zones 3, 4, and 7 or CSZs 4.1 and 4.2. The schedule variance is also an artifact of the April Baseline Change Request (BCR) to incorporate the impact of stop works, demolition and decontamination (D&D) Labor Asset Management Program movement, and unexpected winter weather, which added a hotel load for 3.5 months in which all performance was taken up front.

Also contributing to the negative SV is PBS RL-0041 related to latent beta contamination issues in the 324 Building that continued to hinder the pilot hole scope and the downstream effect it is having on all follow-on work (specifically, converting pilot holes to micropiles and the associated apportioned activity for 324 Facility structural modification operations support). In addition, installation of temporary shoring was delayed due to resource availability of qualified waste loadout personnel.

The current month's negative cost variance (CV) is primarily due to PBS RL-0011 attributed to labor and subcontract costs for lagging performance on demolition activities. Demolition of the remaining PFP structures has been slower than planned due to warm weather impacts and a deliberate rate of demolition and debris loadout. The deliberate rate of demolition is appropriate to allow for the proper sequencing and critical consideration of activities for safe performance. Lagging demolition performance has necessitated the extension of level of effort demolition support activities beyond the budgeted baseline.

Also contributing to the negative CV is PBS RL-0040 due to an increase in labor resources (D&D workers and insulators) needed to support the removal of the 200 West steam lines. Also, the discovery of mercury on the seventh floor of the REDOX silo gallery continues to halt progress as air sampling continues and worker safety documentation is updated to account for the presence of mercury.

Additionally, PBS RL-0041 contributed to the negative CV related to latent beta contamination issues in the 324 Building that continued to hinder the pilot hole scope. Additional support and oversight is required as a result of the alpha contamination (latent conditions) being discovered at the 324 Building.

The negative CV is partially offset by PBS RL-0030 groundwater modeling team supporting the 200-ZP-1 record of decision modification has become more efficient in the second year of this project and identified a suitable modeling run earlier than expected to support conversations with EPA and the State of Washington, Department of Ecology.

FUNDING ANALYSIS

Fiscal Year (FY) 2019 Funds vs. Fiscal Year Spend Forecast (\$M)

PBS	Project	FY2019		Variance
		Projected Funding	Spending Forecast	
Estimate at Complete				
RL-0011	Nuclear Materials Stabilization and Disposition	70.0	63.7	6.3
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	16.8	3.3
RL-0012	15-D-401 Sludge Retrieval Project	0.0	0.0	0.0
RL-0013	Waste and Fuels Management Project	178.4	147.0	31.5
RL-0013	Management of Cesium and Strontium Capsules	3.8	3.7	0.1
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	112.0	20.9
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	73.2	8.6
RL-0041	Nuclear Facility D&D, River Corridor	148.3	126.6	21.8
RL-0042	Fast Flux Test Facility Closure	3.3	1.9	1.4
Total Estimate at Complete		638.7	544.9	93.8
Scope Pending Change Management				
RL-0013	Waste and Fuels Management Project	0.0	2.3	(2.3)
RL-0030	Soil, Groundwater and Vadose Zone Remediation	0.0	0.3	(0.3)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	0.0	0.0
RL-0041	Nuclear Facility D&D, River Corridor	0.0	0.6	(0.6)
Total Incremental Work Scope		0.0	3.2	(3.2)
Total Fiscal Year Spend Forecast				
RL-0011	Nuclear Materials Stabilization and Disposition	70.0	63.7	6.3
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	16.8	3.3
RL-0012	15-D-401 Sludge Retrieval Project	0.0	0.0	0.0
RL-0013	Waste and Fuels Management Project	178.4	149.2	29.2
RL-0013	Management of Cesium and Strontium Capsules	3.8	3.7	0.1
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	112.3	20.6
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	73.2	8.6
RL-0041	Nuclear Facility D&D, River Corridor	148.3	127.2	21.1
RL-0042	Fast Flux Test Facility Closure	3.3	1.9	1.4
Total		638.7	548.0	90.7

Funds/Variance Analysis

For July, overall FY2019 projected funding increased from \$637.6 million to \$638.7 million. The additional funding includes \$4.9 million for Certificate of Compliance in RL-0013, offset by decreases where funding will be held by RL and re-obligated in FY2020. The spending forecast decreased a total of \$12.3 million, primarily due to a thorough review by the projects resulting in adjustments for current year trends and scope pushing into FY2020.

BASELINE CHANGE REQUESTS

In July, CHPRC approved and implemented two BCRs into the performance measurement baseline (PMB) budget. These BCRs did not impact the PMB. Each change request is identified in the tables below:

Change Request #	Title	PBS	Summary of Change
BCR-011C-19-002R1	<i>Allocation of PBS RL-0011 CAP 2 Project DOE Contingency</i>	RL-0011	This BCR is a correction to BCR-011C-19-002R0 implemented in April 2019. The following activities were incorrectly marked as BCR change type HP, with an incorrect change explanation of BCWS=BCWP: 11.05.C3.01.600, 11.05.C3.01.200, 11.05.C3.04.200, and 11.05.C3.04.210. This revision to the BCR corrects the activity coding to reflect a change type of M and an explanation of “[s]plits the BCWS remaining to new activity.” This BCR did not change the PMB value.
BCRA-PRC-19-017R0	<i>HPIC Updates July 2019</i>	000s RL-0013, RL-0030, RL-0040	This BCR incorporated July FY2019 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

There was no change to allocated (distributed) budget in July.

Undistributed Budget (UB) Activity

BCR Number	Title	PBS	Fiscal Year	UB
N/A	N/A	N/A	2019	\$0

There was no change to UB in July.

Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
N/A	N/A	N/A	2019	\$0

There was no change to MR in July.

Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2019	\$0

There was no change to fee in July.

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

July 2019 Summary of Changes (\$M)

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	FY2020	Contract Period Total	Total PMB
June 2019 Estimate											
PMB	3,391.48	391.65	471.32	504.83	485.03	470.65	2,323.48	574.87	7.32	6,297.14	6,297.14
MR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.28	0.00	63.28	63.28
Fee	155.50	14.32	14.50	27.80	10.61	18.86	86.10	13.17	0.00	254.77	254.77
Total	3,546.98	405.98	485.82	532.63	495.64	489.51	2,409.58	651.31	7.32	6,615.19	6,615.19
July 2019 Change											
PMB											
Change to PMB	0	0	0	0	0	0	0	0	0	0	0
MR											
Change to MR	0	0	0	0	0	0	0	0	0	0	0
Fee											
Change to Fee	0	0	0	0	0	0	0	0	0	0	0
Total Change	0	0	0	0	0	0	0	0	0	0	0
July 2019 Estimate											
PMB	3,391.48	391.65	471.32	504.83	485.03	470.65	2,323.48	574.87	7.32	6,297.14	6,297.14
MR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.28	0.00	63.28	63.28
Fee	155.50	14.32	14.50	27.80	10.61	18.86	86.10	13.17	0.00	254.77	254.77
Total	3,546.98	405.98	485.82	532.63	495.64	489.51	2,409.58	651.31	7.32	6,615.19	6,615.19

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

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	FY2019	Total
June 2019 MR Totals									
RL-0011	0	0	0	0	0	0	0	15.93	15.93
RL-0012	0	0	0	0	0	0	0	8.16	8.16
RL-0013	0	0	0	0	0	0	0	6.18	6.18
RL-0030	0	0	0	0	0	0	0	7.76	7.76
RL-0040	0	0	0	0	0	0	0	8.70	8.70
RL-0041	0	0	0	0	0	0	0	16.35	16.35
RL-0042	0	0	0	0	0	0	0	0.19	0.19
Total	0	0	0	0	0	0	0	63.28	63.28
July 2019 MR Changes/Utilization									
RL-0011	0	0	0	0	0	0	0	0	0
RL-0012	0	0	0	0	0	0	0	0	0
RL-0013	0	0	0	0	0	0	0	0	0
RL-0030	0	0	0	0	0	0	0	0	0
RL-0040	0	0	0	0	0	0	0	0	0
RL-0041	0	0	0	0	0	0	0	0	0
RL-0042	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
July 2019 MR Totals									
RL-0011	0	0	0	0	0	0	0	15.93	15.93
RL-0012	0	0	0	0	0	0	0	8.16	8.16
RL-0013	0	0	0	0	0	0	0	6.18	6.18
RL-0030	0	0	0	0	0	0	0	7.76	7.76
RL-0040	0	0	0	0	0	0	0	8.70	8.70
RL-0041	0	0	0	0	0	0	0	16.35	16.35
RL-0042	0	0	0	0	0	0	0	0.19	0.19
Total	0	0	0	0	0	0	0	63.28	63.28

SELF-PERFORMED WORK

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

Contract-to-Date Actual Awards & Mods (\$M) 10/1/2008 - 7/31/2019					
Reporting Category					
	\$ Value	%	Goal %		
SB	\$1,614.85	55.96%	49.3%	PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
SDB	\$293.40	10.17%	8.2%		
SWOB	\$297.44	10.31%	7.5%	CHPRC Contract Value:	\$6,596.68
HUB	\$92.07	3.19%	2.2%	SB actual:	\$1,614.85
VOSB	\$245.39	8.50%	3.5%	SB Performed %:	24.48%
SDVO	\$154.40	5.35%	1.3%	PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed	
NAB	\$82.27	2.85%	N/A	CHPRC Contract Value:	\$6,596.68
Large	\$768.95	26.65%	N/A	CHPRC Self Performed:	\$4,000.84
GOVT	\$5.22	0.18%	N/A	CHPRC Self Performed %:	60.65%
GOVT CONT	\$483.22	16.75%	N/A		
EDUCATION	\$0.17	0.01%	N/A		
NONPROFIT_	\$4.39	0.15%	N/A		
FOREIGN	\$8.75	0.30%	N/A		
Total	\$2,885.54	100.00%	N/A		

Notes:

1. Since the contract award in October 2008, CHPRC has subcontracted more than \$2.8 billion in goods and services, with more than 55 percent going to small businesses. All subcontracting goals have been exceeded.
2. Approximately 91 percent of the total dollars arise from service and staffing contracts and contract amendments, with six percent of the remaining expenditures arising from PCard purchases and three percent from the balance in purchase orders for materials and equipment.
3. Data 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	<p>PBS-11, <i>Plutonium Finishing Plant Closure Project</i></p> <p>PBS-13, <i>Solid and Liquid Waste Treatment and Disposal</i></p>	<p>Offsite Transportation of Radioactive Material: U.S. Department of Energy (DOE), Richland Operations Office (RL) provides equipment and government drivers to transport transuranic (TRU) materials outbound/inbound between the Hanford Site and Perma-Fix Northwest locations. RL is the authorized shipper, acts as signatory on the shipping papers and ensures compliance with DOE Manual 460.2-1. RL arranges for Commercial Motor Vehicle Safety Alliance Level VI Vehicle Inspections and verifies that the government drivers meet the applicable 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.</p>	Ongoing.
J.12/C.2.3.6	PBS-13, <i>Transuranic Waste Certification</i>	<p>Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico: Provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable and the number of shipments is controlled by DOE-Headquarters on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office.</p>	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



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

July 2019
CHPRC-2019-07, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In July, the Plutonium Finishing Plant (PFP) team completed demolition and debris disposition of Core Stability Zone (CSZ) 3 and tunnels 1, 2, 3 and 6. Article 32's stop work was verbally lifted, and documentation has been drafted for signature. Demolition began in Zone 4 as well as the duct level down to the second floor in zones 5 and 6. The new material balance area (MBA) established in June was implemented following the installation of updated postings, security requirements, and project notifications. Fifty-seven (57) containers of low-risk demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal. Efficiency efforts to expand the ERDF container loading area progressed through the month.

Key Metrics

<i>Key Performance Indicators</i>	<i>Current Month</i>	<i>Contract To Date</i>
COMPLETE Glovebox/Hood Removed or Dispositioned in Place	0	232 gloveboxes/hoods
COMPLETE KPP Rooms/Areas Ready for Demo	0	72 rooms/areas
COMPLETE Asbestos/Asbestos Containing Material Removed	0	35,827
COMPLETE Process Vacuum Piping Dispositioned	0	7,231 feet
COMPLETE Process Transfer Line Dispositioned	0	1,525 feet
COMPLETE Pencil Tank Units Removed (Shipped)	0	196 pencil tank units
COMPLETE Buildings Ready for Demo	0	68 structures
Buildings Demolished or Removed	0	63 structures
Non-radioactive Waste Shipped	0	89.8 m ³
Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped	0	5,014 m ³
LLW/MLLW Shipped	399 m ³	19,965 m ³

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-PFP-OBJI-P1	Improve compliance, Environmental Management System (EMS) awareness, employee involvement	A minimum of four EMS presentations; involve one to two employees in compliance review; facility walk-downs	9/30/19	100%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	4	39	<p>7/3/2019 – Employee missed a step and struck the right knee against the forklift body and twisted the same knee stepping down from the forklift onto uneven ground. The employee was taken to HPM Corporation (HPMC) and diagnosed with a contusion of the right knee, administered treatment, and released back to work with no restrictions. On 7/8/2019, the employee reported that the knee was still bothersome and was taken to HPMC. The employee was not released back to work but instructed to see the personal doctor for further evaluation. (25239)</p> <p>7/16/2019 – Three employees reported a headache after Mission Support Alliance, LLC applied herbicide spray upwind while the employees were surveying a shipment of roll-on/roll-off containers. The employees were taken to HPMC for evaluation and were released without restriction. (25253, 25254, and 25255)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments:

- Completed demolition and debris loadout of CSZ 3 and tunnels 1, 2, 3, and 6.
- Started demolition on Zone 4, as well as the duct level down to the second floor in Zones 5 and 6.
- Established the new MBA, which frees up resources for demolition support.
- Continued work to expand ERDF container area to allow more efficient demolition waste loading and shipping.
- Shipped 57 containers of low-level debris to ERDF.

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

Unmitigated Risk Impacts	Assessment		Comments															
	Month	Trend																
RL-0011/WBS-011.OA																		
Explanation of major changes to the project monthly stoplight chart:																		
Risk PFP-P3-003, <i>Weather Impacts During 234-5Z Demolition</i> , was realized in July. Risk PFP-P-007, <i>Demolition Equipment Reliability and Modification</i> , was added as a risk trigger in July.																		
Realized Risks (Risks that are currently impacting project cost/schedule)																		
PFP-P3-003: <i>Weather Impacts During 234-5Z Demolition</i>	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms, will result in in-scope unplanned work and schedule impacts to the project. Risk Handling Strategy: Control Probability: Very Likely (>90%) Worst Case Impacts: \$0, 20 days	● ↓	Risk Event: Summer weather brought high temperatures and wind speeds greater than 30 miles per hour (mph) with gusts above 40 mph that limited outside fieldwork. These events impacted demolition status, and the project moved to a tropical shift schedule to reduce potential impacts. Productivity has been impacted by the weather events and resulting shift change. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="width: 80%;">Risk Recovery Action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>Move workforce to "tropical" shift schedule</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> Risk Action Assessment: This risk was realized in July. Although wind impacted demolition progress, surveys are now conducted more efficiently, resulting in less recovery time and allowing work to resume sooner following an event. The tropical shift allows work crews to make early morning zone entry to avoid heat impact.	Risk Recovery Action(s)	FC Date	%	Move workforce to "tropical" shift schedule	Complete	100									
Risk Recovery Action(s)	FC Date	%																
Move workforce to "tropical" shift schedule	Complete	100																
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)																		
No critical risks identified in July.																		
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																		
No high risk threat values identified in July.																		
FY2019 Risk Triggers (Risk could be realized in FY2019)																		
PFP-P-004: <i>Stop Work From Concerned Workers</i>	Concerned workers result in a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 52 days	● ↑	Risk Trigger: During PFP demolition activities, an increase in stop works could result in delays. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="width: 80%;">Mitigation action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>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: In July, the risk occurrence probability level was decreased from very likely to likely, and the confidence trend increased as the ongoing mitigation actions are improving morale and worker understanding of the scope of work. Increased communication and worker involvement to avoid confusion and concern in an effort 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																

<p>PPF-P-007: <i>Demolition Equipment Reliability and Modification</i></p>	<p>Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment impact the demolition of PFP. Equipment modification, leasing, or replacement will be required, resulting in cost and schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very Likely (>90%) Worst Case Impacts: \$1.0M, 48 days</p>			<p>Risk Trigger: Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment impact the demolition of PFP. Equipment modification, leasing, or replacement would be required, resulting in cost and schedule impacts.</p> <table border="1" data-bbox="894 317 1565 365"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Negotiate buy-out of leased equipment</td> <td>11/30/19</td> <td>33%</td> </tr> </tbody> </table> <p>Mitigation Assessment: This item was added to the stoplight chart as a risk trigger in July. Additional leased equipment that was contaminated in the December 2017 event has been identified. Procurement is working with the leasing vendors to establish buy-out agreements.</p>	Mitigation Action(s)	FC Date	%	Negotiate buy-out of leased equipment	11/30/19	33%			
Mitigation Action(s)	FC Date	%											
Negotiate buy-out of leased equipment	11/30/19	33%											
<p>PPF-P5-006: <i>Additional Soil Removal is Required</i></p>	<p>Prior to the placement of the cover cap, the additional soil added for contamination control is required to be dispositioned, resulting in cost and schedule delays to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$0, 54 days</p>			<p>Risk Trigger: Additional soil above planned value is required to be removed due to contamination or regulatory concerns.</p> <table border="1" data-bbox="894 558 1565 674"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Engage early with the U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Collect and provide radiological mapping data to RL.</td> <td>TBD</td> <td>TBD</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in July. There has been continued communication with RL on required soil removal. No additional soil above the planned quantity is required at this time. RL has requested radiological data to help determine that no additional soil disposition is required.</p>	Mitigation action(s)	FC Date	%	Engage early with the U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.	Complete	100	Collect and provide radiological mapping data to RL.	TBD	TBD
Mitigation action(s)	FC Date	%											
Engage early with the U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.	Complete	100											
Collect and provide radiological mapping data to RL.	TBD	TBD											
<p>Unassigned Risks (Pending ownership of identified threats/opportunities)</p>													
<p>No unassigned risks identified in July.</p>													

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	3.4	1.4	4.4	(1.9)	-57.6%	(3.0)	-208.9%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Variance: (-\$1.9M/-57.6%)

The CM negative schedule variance is due to a deliberate rate of demolition and warm weather impacts. The PFP team completed CSZ 3 and tunnels 1, 2, 3, and 6 but did not complete zones 3, 4, and 7 or CSZs 4.1 and 4.2. The schedule variance is also an artifact of the April Baseline Change Request (BCR) to incorporate the impact of stop works, demolition and decontamination (D&D) Labor Asset Management Program movement, and unexpected winter weather, which added a hotel load for 3.5 months in which all performance was taken up front.

CM Cost Variance: (-\$3.0M/-208.9%)

The CM negative cost variance is attributed to labor and subcontract costs for lagging performance on demolition activities. Demolition of the remaining PFP structures has been slower than planned due to warm weather impacts and a deliberate rate of demolition and debris loadout. The deliberate rate of demolition is appropriate to allow for the proper sequencing and critical consideration of activities so that they may be performed safely. Lagging demolition performance has necessitated the extension of level of effort demolition support activities beyond the budgeted baseline.

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	1,104.4	1,089.3	1,190.6	(15.1)	-1.4%	(101.3)	-9.3%	1,122.9	1,227.0	36.5	(104.1)

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Variance: (-\$15.1M/-1.4%)

The CTD schedule variance is within threshold.

CTD Cost Variance: (-\$101.3M/-9.3%)

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 radiological control technicians (RCTs) and D&D workers; additional resources to recover schedule from asbestos removal activities and support the unplanned asbestos removal (about 10,000 feet); unplanned shipping materials (waste shipping containers TL-1800s, SLB2s, IP-1 bags, etc.) required to support loadout activities for transuranic (TRU) waste disposition efforts; and unplanned work to reconfigure the high-density polyethylene (HDPE) water loop to support the new radiological boundaries.

Contributors to the negative cost variance include resumption actions associated with the December 2017 contamination event encompassing fixative applications, performing radiological surveys, revising radiological postings, infrastructure modifications, and stabilization activities. Reassignment of CHPRC personnel to support the radiological control area and programmatic assessments also contributed to the variance.

After resumption activities were completed, a deliberate 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 is partially offset by the use of fewer breathing air suits (three per day versus five) and fewer hoses than originally planned for 242-Z entries. These reductions were the result of fewer fieldwork team members required to perform hands-on work in 242-Z due to the confined space.

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

Variance at Completion (VAC): (-\$104.1M/-9.3%)

The unfavorable VAC reflects extended hotel load and field resource costs due to delays in demo-ready and demolition activities.

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.

After the December 2017 contamination event, the EAC and VAC were adjusted to reflect a projected date of October 2019 to reach slab-on-grade at PFP.

In February 2019, BCR-011C-18-005R2 was issued to implement the RL-approved revised scope, cost, and schedule baseline for RL-0011.C2 project completion. The BCR set the remaining historical budgeted cost of work scheduled equal to the budgeted cost of work performed as of June 24, 2018, consistent with DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, and the U.S. Department of Energy, Richland Operations Office (RL) approving authorities' determination to establish a new performance baseline as documented in 18-AMRP-0062, *Performance Baseline Deviation Notification of Plutonium Finishing Plant (PFP) Demolition Project – RL-0011.C2*, dated February 27, 2018.

In March 2019, BCR-PRC-19-012R0 was issued to implement the Global Settlement, which incorporated the impacts to the performance measurement baseline from the RL/CHPRC agreement on the settlement of pending Plateau Remediation Contractor (PRC) changes such as change proposals and request for equitable adjustments through September 30, 2018, as documented in PRC Modification 684, dated January 9, 2019.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	FY2019		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	70.0	63.7	6.3
RL-0011 - Total	70.0	63.7	6.3

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

Fiscal year 2019 spending forecast for project baseline summary RL-0011 is \$63.7 million for the continuation of demolition activities to achieve slab-on-grade. Projected funding is \$70.0 million.

Critical Path Analysis

The PFP critical path schedule begins with demolition completion of the second floor and duct levels of zones 5 and 6. The 234-5Z demolition is projected for completion by October 15, 2019. After completion of 234-5Z low-risk demolition and the associated formal post-job and lessons learned,

activities will begin for remote mechanical C and A process lines demolition and debris disposition, as well as loadout of glovebox HA-46. The 236-Z canyon demolition will also resume with completion anticipated by December 17, 2019, 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 mid-March 2020.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-083-00A	“Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities”	9/30/2017		12/17/2019	Demolition on 234-5Z is progressing.

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</i> . RL arranges for Commercial Motor Vehicle Safety Alliance Level VI vehicle inspections and verifies that the government drivers meet the applicable U.S. Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or transportation safety document requirements.	Ongoing

DOE ACTIONS/DECISIONS

DOE activities supporting the approval of ancillary facility status change forms are complete to date. Upcoming DOE approval for the completion of 234-5Z will initiate a new facility status change form.

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

July 2019
CHPRC-2019-07, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In July, Sludge Transport and Storage Container (STSC) 16 was filled with engineered container (EC) sludge from the 105KW fuel storage basin and shipped to T Plant on June 25, 2019. STSC 17 was filled with EC sludge from the 105KW fuel storage basin and shipped to T Plant on July 18, 2019. STSC 18 is forecasted to be shipped to T Plant on August 5, 2019.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	4	19	<p>7/10/2019 – Employee experienced bug bite to left hand. Evaluated at HPMC Corporation (HPMC), given over-the-counter medicine, and returned to work without restriction. (25244)</p> <p>7/11/2019 – Employee experienced bug bite to left arm. Evaluated at HPMC, given over-the-counter medicine, and returned to work without restriction. (25247)</p> <p>7/17/2019 – Employee experienced left knee strain after stepping in slot grating. Evaluated at HPMC, given over-the-counter medicine, and returned to work without restriction. (25256)</p> <p>7/23/2019 – Employee experienced left knee strain while walking into a chair. Evaluated at HPMC and returned to work without restriction. (25264)</p>
Near Misses	0	1	N/A

KEY ACCOMPLISHMENTS

KW Basin Sludge Removal

- The 100K Area operations group performed preventive maintenance and calibrations on both engineered container retrieval and transfer system (ECRTS) and annex utility system components.
- STSC 16 was filled with sludge from the 105KW fuel storage basin and shipped to T Plant for placement into interim storage on June 25, 2019.

- STSC 17 was filled with sludge from the 105KW fuel storage basin and shipped to T Plant for placement into interim storage on July 18, 2019.

MAJOR ISSUES

Issue

Discovered sludge densities may require procurement/processing/storage of additional STSCs beyond the baseline assumption of 22.

EC sludge mass is likely greater than assumed in the baseline. The material-balance calculations that forecast the total number of STSCs required to execute the Sludge Removal Project (SRP) may have used sludge density values that do not accurately characterize the sludge stored in the 105KW ECs. If the actual sludge mass in the ECs (mass = density \times volume = $\rho \times V$) is greater than the mass currently projected in source documents, additional STSCs may be required to remove and store the remaining sludge.

Corrective Action

Video inspections to estimate current volumes of each of the sludge ECs are complete. Engineering personnel completed evaluations of settled density values in EC-250 and KE sludge and provided final recommendations on the estimated number of STSCs (20 to 25 vessels) to complete the sludge campaign.

Status

The 100K engineering personnel believe that the sludge density is between the design basis density and the average archived sample density established in PNNL-27704. White paper PRC-STP-01119, *Estimated Range of Sludge Transport and Storage Containers Required for KW Basin Sludge and Filter Media Retrieval*, details the current engineering knowledge from the first 12 STSCs and makes projections for the number of STSCs (20 to 25 vessels) that may be required to complete the sludge campaign. Sludge retrieval through STSC 17 continues to support the completion of bulk sludge retrieval in 22 STSCs. There is confidence that sludge removal to end point criteria will be achieved with the STSCs currently on hand. The procurement of two additional STSCs has been placed on hold (as of July 21, 2019) pending analysis of sludge in EC-240. This issue is closed.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- ↑ Increased Confidence
- ↔ No Change
- ↓ Decreased Confidence

	Unmitigated Risk Impacts	Assessment		Comments																					
		Month	Trend																						
RL-0012/WBS-012																									
Explanation of major changes to the project monthly stoplight chart:																									
Risks STP-153: <i>Sludge Engineered Container End Point Criteria</i> will be moved from the realized risk section and placed in the fiscal year (FY) 2019 risk trigger section in the next reporting period, as the majority of risk recovery actions have been completed and the risk is no longer realized. Based on the re-evaluation of risks STP-152: <i>Attrition, Acquisition, & Retention of Qualified Employees</i> , STP-156: <i>Sludge Removal Campaign Impacted by Variations in Engineered Container Sludge Density/Volume</i> and STP-156-C: <i>Sludge Removal Campaign Extended Due to Discovery of High Dose Material</i> , these risks will be removed from the risk stoplight charts, as they have been re-characterized as low probability.																									
Realized Risks (Risks that are currently impacting project cost/schedule)																									
<p>STP-152: <i>Attrition, Acquisition, & Retention of Qualified Employees</i></p>	<p>Improving job markets/funding uncertainties or site wide priorities results in competition for key resources, resulting in schedule delays to the project. Additionally, higher-than-anticipated attrition impacts project baseline costs.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Low (10% to 25%)</p> <p>Worst Case Impacts: \$0, 3 days</p>	●	↑	<p>Risk Event: Due to the current job market, K Basin Operations (KBO) personnel have left the project to pursue other opportunities.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk Recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Monitor employee job satisfaction to evaluate/maintain morale.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Actively pursue filling open positions and train/qualify personnel.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Establish enhanced work schedule. (KWD7442)</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Recovery Assessment: Both operations and radiation protection management have backfilled open positions. Training and qualification of new personnel is complete. Staffing levels appear to be adequate to support the remainder of the sludge retrieval mission; therefore, this risk is no longer considered a key project risk and will be removed from the stoplight chart next reporting period.</p>	Risk Recovery action(s)	FC Date	%	Monitor employee job satisfaction to evaluate/maintain morale.	Ongoing	N/A	Actively pursue filling open positions and train/qualify personnel.	Complete	100	Establish enhanced work schedule. (KWD7442)	Complete	100									
Risk Recovery action(s)	FC Date	%																							
Monitor employee job satisfaction to evaluate/maintain morale.	Ongoing	N/A																							
Actively pursue filling open positions and train/qualify personnel.	Complete	100																							
Establish enhanced work schedule. (KWD7442)	Complete	100																							
<p>STP-153: <i>Sludge Engineered Container End Point Criteria</i></p>	<p>ECF-100KR2-12-0040, <i>Calculation for 105-KW Basin Substructure Demolition Rubble ERDF Compliance</i>, specifies the volume of residual sludge that is acceptable to leave in ECs following sludge removal operations. It is possible that the end point criteria cannot be achieved without extensive cost and schedule implications.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$200K, 64 days</p>	●	↑	<p>Risk Triggers: During execution of the sludge removal campaign, personnel understand that standard methods of sludge removal are unable to achieve EC sludge end point criteria efficiently.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk Recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Perform periodic video camera inspections throughout the sludge removal campaign to plan retrieval strategies.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Develop and submit Documented Safety Analysis/Technical Safety Requirement revisions that facilitate layering KW sludge (SCS-CON-210/220) with KE sludge (SCS-CON-240/250/260).</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Consider sampling heels in ECs to facilitate achieving end point criteria using more accurate source term.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Use EC-250 as proof of process to ensure that end point criteria can be achieved.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Update and submit a revised Environmental Restoration Disposal Facility (ERDF) compliance calculation.</td> <td>9/30/19</td> <td>0</td> </tr> </tbody> </table> <p>Risk Recovery Assessment: The majority of the identified risk recovery actions have been completed. Continued discussion between 100K Closure, U.S. Department of Energy, Richland Operations Office (RL), and the U.S. Environmental Protection Agency are ongoing to confirm the end point criteria for the ECs in the basin. An updated ERDF compliance calculation will be required to document the revision of the end point criteria to perform final validation. This risk will be removed from the realized risk section and placed in the FY2019 risk trigger section during the next reporting period.</p>	Risk Recovery action(s)	FC Date	%	Perform periodic video camera inspections throughout the sludge removal campaign to plan retrieval strategies.	Ongoing	N/A	Develop and submit Documented Safety Analysis/Technical Safety Requirement revisions that facilitate layering KW sludge (SCS-CON-210/220) with KE sludge (SCS-CON-240/250/260).	Complete	100	Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)	Complete	100	Consider sampling heels in ECs to facilitate achieving end point criteria using more accurate source term.	Complete	100	Use EC-250 as proof of process to ensure that end point criteria can be achieved.	Complete	100	Update and submit a revised Environmental Restoration Disposal Facility (ERDF) compliance calculation.	9/30/19	0
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Unmitigated Risk Impacts	Assessment		Comments																		
	Month	Trend																			
RL-0012/WBS-012																					
<p>STP-156: <i>Sludge Removal Campaign Impacted by Variations in Engineered Container Sludge Density/Volume</i></p> <p>The actual mass of sludge stored in the 105KW Basin ECs is not consistent with the mass assumed in the SRP technical basis, resulting in cost and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$0, 24 days</p>	●	↑	<p>Risk Triggers: The actual sludge mass in the ECs (mass = density × volume = ρ*V) is greater than the mass currently projected in source documents, resulting in the need for additional STSCs to remove and store the remaining sludge.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Complete visual inspections of sludge stored in ECs SCS-CON-210/220/230 (at a minimum) to assess volume information specified in technical basis documents.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Evaluate and implement feasible opportunities to more efficiently disposition remaining EC sludge. (KWD7442)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Complete bulk sludge removal from EC-250, which will facilitate establishment of KE Basin sludge density. (KWD6580)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Revisit Sludge Removal Project Basis Document HNF-SD-SNF-TI-015 R28, <i>Spent Nuclear Fuel Project Technical Databook, Volume 2, Sludge</i>, and HNF-41051 R13, <i>STP Container and Settler Sludge Process Description and Material Balance</i>, based on PNNL-27769, <i>STP K Basin Sludge Sample Archive Status FY2018</i>. Determine if document revisions are required to complete sludge removal campaign. (KWD9010)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Issue final sludge density evaluation, establishing total number of STSC necessary to complete sludge removal.(KWD9010)</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Recovery Assessment: Sludge density evaluations are continually being performed throughout the campaign. Based on the July processing activities, the evaluation did not change the need for additional STSCs; therefore, this risk has been reduced and will be removed from the stoplight chart in the next reporting period.</p>	Risk Recovery action(s)	FC Date	%	Complete visual inspections of sludge stored in ECs SCS-CON-210/220/230 (at a minimum) to assess volume information specified in technical basis documents.	Complete	100	Evaluate and implement feasible opportunities to more efficiently disposition remaining EC sludge. (KWD7442)	Complete	100	Complete bulk sludge removal from EC-250, which will facilitate establishment of KE Basin sludge density. (KWD6580)	Complete	100	Revisit Sludge Removal Project Basis Document HNF-SD-SNF-TI-015 R28, <i>Spent Nuclear Fuel Project Technical Databook, Volume 2, Sludge</i> , and HNF-41051 R13, <i>STP Container and Settler Sludge Process Description and Material Balance</i> , based on PNNL-27769, <i>STP K Basin Sludge Sample Archive Status FY2018</i> . Determine if document revisions are required to complete sludge removal campaign. (KWD9010)	Complete	100	Issue final sludge density evaluation, establishing total number of STSC necessary to complete sludge removal.(KWD9010)	Complete	100
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<p>STP-156-C: <i>Sludge Removal Campaign Extended Due to Discovery of High Dose Material</i></p> <p>Additional high-dose “sludge-like” material is discovered on the 105KW Basin floor during 100K Closure project characterization activities that is best dispositioned with the EC sludge waste stream. Adding this additional “sludge-like” material to the SRP campaign negatively impacts existing SRP cost and/or the schedule baseline.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$0, 24 days</p>	●	↑	<p>Risk Triggers: Additional sludge may be discovered that must be placed into ECs and processed with the balance of the EC sludge as 100K Closure Project personnel conduct characterization efforts in the 105KW Basin.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continue to monitor conditions identified by the baseline characterization efforts.</td> <td>Complete</td> <td>N/A</td> </tr> <tr> <td>Collect and quantify the volume and weight of the high-dose material in the 105 KW Basin. (KWD90111)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90276)</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Recovery Assessment: During May, 100K Closure personnel added high-dose material collected from the center bay into EC-230 to be removed from the 105KW Basin via STSCs. Processing of EC-230 has progressed to the point where sludge additions to EC-230 are no longer practical. An alternative disposition path will be developed if additional material is identified. All risk recovery actions have been completed, and the risk posture has been reduced; therefore, this risk will be removed from the stoplight chart next reporting period.</p>	Risk Recovery action(s)	FC Date	%	Continue to monitor conditions identified by the baseline characterization efforts.	Complete	N/A	Collect and quantify the volume and weight of the high-dose material in the 105 KW Basin. (KWD90111)	Complete	100	Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90276)	Complete	100						
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Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																					
No critical risks identified in July.																					
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																					
No high threat value risks identified in July.																					
FY2019 Risk Triggers (Risk could be realized in FY2019)																					

Unmitigated Risk Impacts	Assessment		Comments																		
	Month	Trend																			
RL-0012/WBS-012																					
<p>STP-073-C: <i>Processing Efficiency - Retrieval & Shipping</i></p> <p>The realized processing efficiency associated with sludge retrieval and shipping operations does not match the baseline plan.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$0, 54 days</p>	●	↑	<p>Risk Triggers: Actual processing efficiency associated with sludge retrieval and shipping operations does not match baseline assumptions. This risk will continue in FY2019 during operations campaign.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish a production control center to facilitate maximum efficiency integrating SRP operations and maintenance activities.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Review operations and maintenance activities required to produce each sludge STSC and establish a "typical" schedule integrating all activities in the most efficient sequence possible.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Revise plan to establish the appropriate campaign schedule.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in July. Project personnel completed a revised plan to establish the appropriate campaign schedule and accounting for ion exchange module (IXM) change outs and preventive maintenance activities performance. Additionally, KBO put the sludge removal campaign personnel on a five-day work week (minimum), effective February 2019. The team continues to transfer material from EC-260, and the material handling is different from previous ECs. The team will continue monitoring the efficiency associated with the sludge retrieval process.</p>	Mitigation action(s)	FC Date	%	Establish a production control center to facilitate maximum efficiency integrating SRP operations and maintenance activities.	Complete	100	Review operations and maintenance activities required to produce each sludge STSC and establish a "typical" schedule integrating all activities in the most efficient sequence possible.	Complete	100	Revise plan to establish the appropriate campaign schedule.	Complete	100						
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<p>STP-108: <i>STP Annex Equipment and ECRTS/Ancillary System Reliability</i></p> <p>Required corrective maintenance on the STP annex and the ECRTS equipment is higher than planned due to unique system design or sludge characteristics, resulting in cost and schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%)</p> <p>Worst Case Impacts: \$400K, 66 days</p>	●	↑	<p>Risk Triggers: Required corrective maintenance on the SRP and ancillary equipment is higher than planned.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct full-scale testing at the Maintenance and Storage Facility to determine baseline for Corrective Maintenance and Preventative Maintenance program.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>The project will provide spare parts for critical or long-lead components.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Develop PM activities prior to construction completion to optimize maintenance costs.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform reliability, availability, and maintainability analysis.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Modifications to skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90076, 86, and 91)</td> <td>8/15/19</td> <td>75</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in July. Due to IXM system challenges (potential unavailability), an alternate water supply modification has been generated and hardware fabricated. Plans have been developed to install this modification in the future if necessary to mitigate any major issues encountered. The facility IXM system continues to be reliable and modification will impact processing efficiency; therefore, field work is suspended pending a major system failure.</p>	Mitigation action(s)	FC Date	%	Conduct full-scale testing at the Maintenance and Storage Facility to determine baseline for Corrective Maintenance and Preventative Maintenance program.	Complete	100	The project will provide spare parts for critical or long-lead components.	Complete	100	Develop PM activities prior to construction completion to optimize maintenance costs.	Complete	100	Perform reliability, availability, and maintainability analysis.	Complete	100	Modifications to skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90076, 86, and 91)	8/15/19	75
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Modifications to skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90076, 86, and 91)	8/15/19	75																			
Unassigned Risks (Pending ownership of identified threats/opportunities)																					
No unassigned risks identified in July.																					

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	1.4	1.3	1.3	(0.1)	-3.6%	0.0	1.1%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$0.1M/-3.6%)

The variance is within reporting thresholds.

CM Cost Performance (+\$0.0M/+1.1%)

The variance is within reporting thresholds.

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	757.6	756.9	727.2	(0.7)	-0.1%	29.7	3.9%	761.1	730.1	3.0	31.0

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$0.7M/-0.1%)

The variance is within reporting thresholds.

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

The variance is within reporting thresholds.

Variance at Completion (+\$31.0M/+4.1%)

The variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2019		Variance
	Projected Funding	Spending Forecast	
Expense – Spending Forecast	20.1	16.8	3.3
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0012 – Total	20.1	16.8	3.3
Numbers are rounded to the nearest \$0.1 million.			

Funds/Variance Analysis

FY2019 funding for project breakdown structure (PBS) RL-0012 is \$20.1 million. FY2019 funding aligns with the RL Integrated Priority List.

Critical Path Analysis

The project critical path schedule runs through completion of retrieval operations, including the filling of STSCs with sludge and their transporting to the T Plant canyon for interim storage. The project is on schedule to complete *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Milestone M-016-176, “Complete Sludge Removal from 105-KW Fuel Storage Basin,” on or ahead of the December 31, 2019, due date.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/Comment
M-016-176	Complete Sludge Removal	12/31/2019		09/30/2019	On Schedule.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

None currently identified.

Section C

Solid Waste Stabilization and Disposition (RL-0013)

CH2MHILL
Plateau Remediation Company



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

July 2019
CHPRC-2019-07, 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

In July reporting period (June 24 – July 21, 2019), the Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. The River Risk Management Project operated the Environmental Restoration Disposal Facility (ERDF) and continued document preparation for the Integrated Disposal Facility (IDF) permits.

The following items were accomplished this month:

- At the Waste Encapsulation Storage Facility (WESF), the W-135 Management of the Cesium (Cs) and Strontium (Sr) Capsules project team is conducting final design closeout activities for the WESF modifications. The scope of work and final design media has been transmitted to CH2M HILL Plateau Remediation Company (CHPRC) procurement for development of the request for proposal (RFP) for construction of the capsule storage area (CSA) subcontract. The RFP is planned to be issued in early August. The contract for construction of the Maintenance and Storage Facility (MASF) Cs/Sr capsule handling mockup facility was awarded.
- The sludge receipt team continues to receive sludge transport and storage containers (STSC) from the 100K West Reactor Basin for interim storage at T Plant. STSC 16 was received on June 25, 2019, and STSC 17 was received on July 18, 2019.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-WFMP-OBJ1-P1	Receive 10 STSC sludge shipments at T Plant.	T Plant Complex will receive 10 STSC sludge shipments.	9/30/2019	100%
19-EMS-WFMP-OBJ2-P1	Complete and issue the Preoperational Environmental CSA.	Perform sampling and analysis, if needed, as determined by U.S. Department of Energy (DOE) to support the preparation and issuance of the preoperational environmental survey for the CSA. Complete and issue the Preoperational Environmental Survey Report for the CSA.	9/30/2019	100%
19-EMS-WFMP-OBJ3-P1	Complete the Canister Storage Building Programmable Logic Controller (PLC) Upgrade project to avoid exceedance of the air operating permit limits.	Complete PLC Upgrade project fieldwork, test report, and final documentation.	9/30/2019	100%
19-ERDF-OBJ1-P1	Track maintenance recycling activities at ERDF.	Monitor and evaluate ERDF maintenance recycling activities for compliance with CHPRC procedures and complete annual review of recycling activities.	9/30/2019	60%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred (DART)	0	1*	*1 DART, PTS in support of RL-0013.
Total Recordable Injuries	0	1*	*1 Recordable Injury, PTS in support of RL-0013.
First Aid Cases	3	29	7/1/2019 – Employee was bit on left leg by an ant. Employee was evaluated at HPM Corporation (HPMC), given over the counter medicine, and released to work without restrictions. (25234) 7/29/2019 – Employee was stung several times by wasps when moving tent structures. Employee was evaluated at HPMC and released to work without restrictions. (25273) 7/31/2019 – Employee felt a pop in the left arm while operating a pneumatic hand tool. Employee was evaluated at HPMC and released to work without restrictions. (25277)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- Revised the Building Emergency Plans (BEP) for T Plant, Central Waste Complex (CWC), Waste Receiving and Processing (WRAP), and Low-Level Burial Grounds (LLBG) to meet the Revision 9 template. Distributed the draft BEPs for joint DOE, Richland Operations Office (RL) and CHPRC review on June 25, 2019.
- Incorporated RL and CHPRC comments into the LLBG Green Islands Closure Plan addendum.

13.02 Capsule Storage and Disposition

- Completed two operational drills and one full up emergency preparedness drill at WESF.
- Continued canyon entries in support of the W-135 project. Completed threading and reeving wire rope through main load block and onto the drum. Performed functional testing and annual preventative maintenance (PM), which is necessary for the critical engineered lift that will remove the truckport cover block and replace with the new truckport ventilation boundary plate.
- Completed 33 PM packages.

13.03 Canister Storage Building (CSB)

- Completed one operational drill at CSB.
- Performed periodic inspection, testing, and maintenance items.
- Completed 18 PM packages.

13.06 Transuranic (TRU) Repackaging

- Completed repackaging of 63.9 m³ of transuranic mixed (TRUM) and TRU waste in July, for a total of 430.3 m³ fiscal year to date (FYTD).

13.07 Waste Receiving and Processing (WRAP)

- Completed fire suppression system surveillance and facility lay-up inspections.
- Completed 246 surveillances and eight PM packages.

13.08 T Plant

- Completed 45-ton crane wire rope inspection.
- Completed 486 surveillances and 27 PM packages.

Sludge Receipt

- Received STSC 16 on June 25, 2019, and STSC 17 on July 18, 2019, from 105KW and placed into interim storage in the T Plant Canyon.

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

- Completed 254 surveillances and 21 PM packages.
- Received 13 standard waste boxes from Perma-Fix Northwest (PFNW) into CWC in three shipments.
- Shipped one Super 7A from CWC to PFNW in one shipment.
- Shipped one drum from CWC to ERDF in one shipment.

13.15 TRU Disposition

- Continued enhancement of acceptable knowledge on TRU waste streams. The sixth waste stream is at 95 percent complete.

13.16 Offsite Spent Nuclear Fuel Disposition

- Maintained coordination of offsite spent nuclear fuel disposition.

13.21 Mixed Waste Disposal Trenches

- Completed 122 surveillances.
- Received five boxes from PFNW into Mixed Waste Trench 31 in three shipments.

13.24 Management of Cesium and Strontium Capsules Project

- Conducting final design closeout activities for the WESF modifications.
- Contract awarded for construction of the MASF Cs/Sr capsule handling mockup facility.

13.25 Capsules Interim Storage Operations

- Transmitted the scope of work and final design media to CHPRC procurement for development of the RFP for construction of the CSA construction subcontract.

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

- Received 14,921 tons of waste for disposal in July.
- Received 116,910 tons of waste for disposal FYTD. Any corrections in previous months are reflected in this total.
- Received 62 shipments (903 tons) of Plutonium Finishing Plant (PFP) waste using the new enhanced radiological controls during disposal operations.

13.12 Integrated Disposal Facility (IDF)

- Care and Custody
 - Completed July routine monthly inspections.
 - Completed four significant storm event inspections.
- IDF Operational Readiness
 - Initiated development of the construction procurement packages.
 - Provided the Final Hazard Classification document to RL for review.
 - Began incorporating comments for the final design.
- Resource Conservation and Recovery Act (RCRA) Permit Modifications.

- Provided the following draft RCRA Permit Addenda to the State of Washington, Department of Ecology (Ecology) for review: Addendum A, Part A; Addendum B, Waste Analysis Plan; Addendum C, Process Information; Addendum D, Groundwater Monitoring Plan; Addendum F, Preparedness and Prevention; Addendum G, Training; Addendum H, Closure Plan; Addendum I, Inspection; and Addendum K, Post-Closure.
- Provided revised addendum with comment resolution to Ecology to confirm comment incorporation for Addendum E, Security.

Project Technical Services Support

- W135 – Construction
 - RFP drafted and finalized for CSA bids, on hold pending resolution of CSA site location to Underground Radioactive Material Area sites.
 - Mobilizing fabrication contractor for the mockup structure.
- T Plant – West Face Exterior Stairs and Firestop Wall Repair
 - Completed repairs at door H-1.
 - Completed the installation of landing and stair structure for H-7 door.
 - Commenced grouting and anchor bolt installation for landings at H-3, H-5, and H-7.
 - Prepared H-3 door area for the installation of ecological block retaining wall.
- CWC/WRAP and T Plant Roof Repair
 - Completed roof repairs at 2402WB.
 - Commenced roof repairs at 2403WB.
- WESF Metal Shed and Kitchen Remodel
 - Awarded contract . Mobilization scheduled for August 14, 2019.
 - Commenced with premobilization activities.
- Integrated Disposal Facility (IDF) Infrastructure
 - Completed drafting of procurement packages for the mobile office trailers.
 - Completed draft scope of work (SOW) for earthworks scope. Issued for functional subject matter expert review.
 - Commenced draft of balance of work SOW.
 - Commenced field survey staking and site ground-penetrating radar scans.

MAJOR ISSUES

Issue

Ecology has indicated that they may require the 90 percent design package for the CSA prior to issuing the permit for public comment.

Corrective Action

Work with Ecology to issue the permit with the design information that is available at the time of permit issuance.

Status

The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information as agreed in the permitting plan. Ecology's completeness review for the WESF permit modification request was received on February 5, 2018. Ecology's completeness review for the Capsule Interim Storage permit application was received on February 13, 2018. Ecology concluded that the permit applications were incomplete. Additional information to address the completeness review was transmitted to Ecology on May 8, 2018, and on January 31, 2019, Ecology issued a completeness determination for the CSA permit application and determined the permit application is complete. In conjunction with the letter, Ecology provided formal copies of the technical comments on the addenda.

W&FMP resolved the technical comments and prepared the revised documents. The *Capsule Storage Area Final Design Report* was provided to Ecology on May 2, 2019. Ecology has tentatively approved the comment responses, and CHPRC anticipates that additional design detail will not be needed to support issuance of the draft permit for public comment.

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 Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico. The configuration would also mitigate/eliminate the risk and additional cost for long-term management of these containers.

Status

Continuing to use the best-demonstrated available technology to provide adequate configuration and minimize the potential for contamination spread during long-term storage (i.e., protecting boxes with tarps or protective shoring; over-packing drums). Streamlined and consolidated container management procedures. RL authorized additional FY2019 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue throughout the year.

Issue

It was determined by dynamometer that the WESF truckport cover block is 30,900 pounds, three percent higher than the historical baseline documents. This weight exceeds the rated capacity of the WESF Canyon crane by 900 pounds (three percent).

Corrective Action

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

Status

A contract was placed with a recognized crane vendor, and additional discussions have occurred, resulting in the vendor suggesting a visual inspection of the gearbox, final drive, and pinion gears. On June 11, 2019, the recommended visual inspection was conducted by CHPRC and the vendor representative. The inspection identified some minor wear and pitting on the final drive gear, which was expected due to the age of the crane. Considering the inspection results, the vendor concurred that placing the crane back in service after completion of the other in-progress maintenance activities would be appropriate. The crane has been reassembled, new wire rope installed, annual inspection completed, and is ready to perform the load test using the truckport cover block and new ventilation cover. Upon satisfactory completion of crane rail anchor bolt inspections, the cover block lifts will be scheduled.

Issue

On August 14, 2018, notification was received (18-AMRP-0151) informing CHPRC that RL supports enhancing the operating margin for the Cs salt-metal interface temperature by increasing the number of casks (as appropriate, up to 24 casks) to reduce the heat load in each individual cask to bound the range of uncertainty.

Corrective Action

CHPRC transmitted a response letter to RL in October 2018. CHPRC will revise the Hastelloy emissivity for the strontium cask and evaluate increasing the operating margin for the Cs casks. Results of the emissivity change will be incorporated into the final design and analysis of increasing the operating margin will be completed after the Cask Storage System (CSS) final design has been approved.

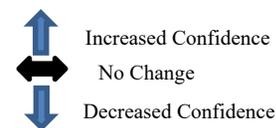
Status

Analysis of the Hastelloy emissivity has been completed and resulted in one additional strontium cask. Analysis for increasing the Cs thermal storage margin indicates three additional Cs casks will be required to reduce the salt-metal interface temperature to 269 degrees F. CHPRC submitted a letter to RL on June 20, 2019, with the preliminary results and requested direction to implement the new operating temperature.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0013/WBS-013										
Explanation of major changes to the project monthly stoplight chart:										
Risk WSD-CSS-011: <i>Greater Than Expected Comments on CSS Design are Received</i> was closed in the risk database and removed from the risk stoplight chart.										
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: Accept 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>Incorporating changes to respond to comments.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in July. 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	%	Incorporating changes to respond to comments.	Ongoing	N/A
Risk Recovery Action(s)	FC Date	%								
Incorporating changes to respond to comments.	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: Accept 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>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in July. Select appropriate staff are prepared to respond to comments when they are received. 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	%	None identified at this time.	N/A	N/A
Risk Recovery Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
WSD-138: Regulatory document (closure plan with Ecology) results in significant comments from the regulator	Significant comments from the regulator on closure plans submitted for approval results in non-approval of the permit or rework, causing schedule impacts to the project. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$0, 96 days			<p>Risk Event: Eight closure plans were formally resubmitted to Ecology in August 2018 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>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in July. 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	%	None identified at this time.	N/A	N/A
Risk Recovery 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																
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in July.																
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																
WSD-013B: TRU Waste Volumes or Characteristics - Processing	TRU waste not identified in records or higher-than-planned volumes due to inaccurate records or unexpected soil contamination impacts TRU processing. This waste is derived from retrieval of waste; non-compliant newly generated waste received from generators; TRU waste that is determined to be low-level and requires further treatment; or more waste is generated than in the plan, resulting in unplanned in-scope cost impacts. Risk Handling Strategy: Accept Probability: Low (10% to 25%) Worst Case Impacts: \$500K, 0 days	●	↔	<p>Risk Trigger Metric: A significant volume of newly generated waste is received or nonconforming waste results in the need for new capabilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in July. The destruction of two drums with oil from large box shipment TC158 was not performed at the offsite processing facility due to backlog. An exception to 0063 and a waste profile were approved to store the waste temporarily at CWC until the offsite facility is ready to treat the waste.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A						
Mitigation Action(s)	FC Date	%														
None identified at this time.	N/A	N/A														
WSD-097: Major Equipment Failure – T Plant	T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$3M, 96 days	●	↔	<p>Risk Trigger Metric: During planned facility operation activities, a suspected system component is discovered that requires attention or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC contract.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Identify and procure critical spare parts for the T Plant crane.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Implement aggressive CM/PM program.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in July. The project has put into place mitigating strategies (i.e., aggressive surveillance and maintenance activities) to help reduce this risk. Mechanical maintenance on the canyon crane was completed in November. The annual electrical crane maintenance, including the camera cable, was completed in February. The canyon crane is currently operational, and spare parts have been procured for most critical spares.</p>	Mitigation Action(s)	FC Date	%	Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A	Implement aggressive CM/PM program.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%														
Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A														
Implement aggressive CM/PM program.	Ongoing	N/A														
WSD-136: CWC/WRAP Components Fail	CWC facilities and components may reach their end of life. These items will need to be replaced and/or repaired outside of planned funding profiles, resulting in cost impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$2M, 0 days	●	↔	<p>Risk Trigger Metric: Maintenance activities at CWC increase due to aging facilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.</td> <td>Ongoing</td> <td>50%</td> </tr> <tr> <td>Conduct fieldwork for 2727W deactivation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Conducting doorframe replacements and electrical equipment repairs as necessary.</td> <td>Ongoing</td> <td>50%</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in July. 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 through FY2021, pending weather conditions. The MDSA container stacking requirements are complete. Maintenance work at CWC will be scheduled based on facility work priorities. Additional fire alarm control unit spare parts were obtained from the deactivation of 2727W.</p>	Mitigation Action(s)	FC Date	%	Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	50%	Conduct fieldwork for 2727W deactivation.	Complete	100	Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	50%
Mitigation Action(s)	FC Date	%														
Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	50%														
Conduct fieldwork for 2727W deactivation.	Complete	100														
Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	50%														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0013/WBS-013																						
<p>WSD-CSA-006: Ecology Temporary Authorization contingent on 90% Design for CSA RCRA Permit Application</p>	<p>As a pre-condition to approve the temporary authorization (TA) for CSA construction, Ecology will require that the CSA 90 percent detailed design package be incorporated into the CSA RCRA permit application (to issue for public comment), thereby delaying the TA and impacting the CSA construction schedule.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very Likely (>90%) Worst Case Impacts: \$0, 96 days</p>	●	↔	<p>Risk Trigger Metric: Ecology requires the 90 percent design package for the CSA to be completed prior to issuing the permit for public comment.</p> <table border="1"> <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 July. The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. The project received a determination of incompleteness on February 13, 2018, primarily associated with the need for additional design information. CHPRC/RL submitted supplemental design information for the WESF modifications and CSA to RL in May 2018. Ecology has determined that the permit application is now complete. Ecology is reviewing the 90 percent design package that was submitted on May 2, 2019. CHPRC is currently resolving Ecology comments on the Part B permit application. CHPRC is preparing the TA to begin CSA construction ahead of the full permit approval because it will not be issued before planned start of CSA construction.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A												
Mitigation Action(s)	FC Date	%																				
None identified at this time.	N/A	N/A																				
FY2019 Risk Triggers (Risk could be realized in FY2019)																						
<p>WSD-125: Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues</p>	<p>A pause in waste processing results in an unexpected container degradation within Solid Waste Operations Complex (SWOC) (excluding TRU retrieval activities) and requires additional resources to respond.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$3M, 0 days</p>	●	↑	<p>Risk Trigger Metric: Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a “watch list” of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procuring stainless steel 85-gallon over-packs for alternative storage of containers that show signs of degradation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>FY2019 over-packs planned: 200</td> <td>9/25/2019</td> <td>53</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in July. The project continued to perform container surveillances in July to identify container and container cover abnormalities. RL authorized additional FY2019 TRU commercial repacking, allowing shipments to PFNW for repackaging to continue. The remaining containers will continue to require surveillance and enhanced monitoring.</p>	Mitigation Action(s)	FC Date	%	Perform daily/weekly waste container surveillances to identify container abnormalities.	Ongoing	N/A	Manage a “watch list” of waste containers that have shown signs of degradation or are associated with degraded containers.	Ongoing	N/A	Process waste packages at a rate funded by RL.	Ongoing	N/A	Procuring stainless steel 85-gallon over-packs for alternative storage of containers that show signs of degradation.	Complete	100	FY2019 over-packs planned: 200	9/25/2019	53
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Procuring stainless steel 85-gallon over-packs for alternative storage of containers that show signs of degradation.	Complete	100																				
FY2019 over-packs planned: 200	9/25/2019	53																				
<p>WSD-W135-19: Unexpected Contamination is Found in the WESF Facility</p>	<p>More contamination is found at WESF, resulting in the need to clean it up to reduce worker exposure or requiring more worker protection.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$2K, 32 days</p>	●	↑	<p>Risk Trigger Metric: During WESF preparations for equipment installation (in the G Cell, the canyon, or the truckport) contamination is found that requires decontamination. During equipment installation, contamination is encountered that requires cleanup (e.g., anchoring of equipment inside WESF causes release of contamination).</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Implement lessons learned.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Continuously utilize respiratory protection.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in July. Waste packaging in the canyon is substantially complete; however, waste removal is impacted by WESF canyon crane and truckport cover block weight issues. To date, no excessive contamination has been discovered in the canyon. Decontamination efforts in G Cell are complete.</p>	Mitigation Action(s)	FC Date	%	Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.	Ongoing	N/A	Implement lessons learned.	Ongoing	N/A	Continuously utilize respiratory protection.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%																				
Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.	Ongoing	N/A																				
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Continuously utilize respiratory protection.	Ongoing	N/A																				

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0013/WBS-013																			
WSD-W135-31: Canyon Crane non-functional/not Serviceable	<p>The 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>Procure new crane hook and block.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform preventive/corrective maintenance procedures (i.e., replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.</td> <td>9/30/19</td> <td>75</td> </tr> <tr> <td>Refurbish current crane block.</td> <td>9/30/20</td> <td>0</td> </tr> <tr> <td>Procure critical spares.</td> <td>9/30/21</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: Performance of the full annual preventive maintenance package is complete. As part of mitigation actions for the canyon crane capacity issue, the manufacturer was consulted to gain insight on any issues with this make/model of crane. Manufacturer does not have data on the WESF crane but recommended inspection of the gears for stress fractures. A contract was placed for technical support for the inspections. Inspection of the crane gear box is complete and found no evidence of stress fractures. Wire rope removal is complete; installation of the new wire rope is complete. After completion of the truckport coverblock lift, a post-lift engineering inspection will be performed. If full refurbishment of the crane is unsuccessful, replacement of the canyon crane as a like-for-like is not possible, as the original manufacturer is no longer in business. A similar replacement hook and block have been procured.</p>	Mitigation Action(s)	FC Date	%	Procure new crane hook and block.	Complete	100	Perform preventive/corrective maintenance procedures (i.e., replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.	9/30/19	75	Refurbish current crane block.	9/30/20	0	Procure critical spares.	9/30/21	0
Mitigation Action(s)	FC Date	%																	
Procure new crane hook and block.	Complete	100																	
Perform preventive/corrective maintenance procedures (i.e., replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.	9/30/19	75																	
Refurbish current crane block.	9/30/20	0																	
Procure critical spares.	9/30/21	0																	
WSD-CSS-002: Subcontractor Change Orders and Claims	<p>The CSS construction contractor submits excessive change orders and claims, resulting in schedule delays and increased subcontractor cost.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$2.9K, 24 days</p>	●	↔	<p>Risk Event: The CSS construction contractor will fabricate CSS equipment under a fixed price contract. If changes to the design are found to be necessary during fabrication, change orders may be submitted by the fabricator.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contract award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure that scope is understood and estimated correctly.</td> <td>Complete</td> <td>100</td> </tr> <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 July. CSS final design has been issued. The contractor has obtained fixed price bids for fabrication and has submitted a proposal for fabrication and variance analysis currently under CHPRC review. Contract award for CSS equipment fabrication will require CHPRC technical review, independent third party audit, and RL consent. Submittal of consent package to DOE is planned for September. Fabrication of CSS equipment is not planned until FY2020.</p>	Mitigation Action(s)	FC Date	%	Contract award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure that scope is understood and estimated correctly.	Complete	100	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	%																	
Contract award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure that scope is understood and estimated correctly.	Complete	100																	
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																	
WSD-CSA-015: PDSA Comments Result in Schedule Delays	<p>Comments on the Preliminary Documented Safety Analysis (PDSA) received from RL are not able to be resolved within the allotted time frame provided in the baseline schedule or impact design aspects of the CSS, resulting in cost and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$200K, 48 days</p>	●	↔	<p>Risk Trigger Metric: CHPRC receives DOE comments on the CSA PDSA that requires additional analysis to the CSS final design. Depending on the results of the analysis, the CSS final design may need to be modified.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct working meetings with RL to work through CSA PDSA comments quickly and identify needs for additional analysis early.</td> <td>9/30/19</td> <td>50</td> </tr> <tr> <td>Work with RL to resolve critical comments to CSA PDSA such that approval, which allows completion of additional analysis prior to submittal of final Documented Safety Analysis (DSA), can be provided.</td> <td>9/30/19</td> <td>50</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in July. The project team has been participating in regular meetings with RL and EA-31 nuclear safety to understand comments and agree on a path forward.</p>	Mitigation Action(s)	FC Date	%	Conduct working meetings with RL to work through CSA PDSA comments quickly and identify needs for additional analysis early.	9/30/19	50	Work with RL to resolve critical comments to CSA PDSA such that approval, which allows completion of additional analysis prior to submittal of final Documented Safety Analysis (DSA), can be provided.	9/30/19	50						
Mitigation Action(s)	FC Date	%																	
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Work with RL to resolve critical comments to CSA PDSA such that approval, which allows completion of additional analysis prior to submittal of final Documented Safety Analysis (DSA), can be provided.	9/30/19	50																	
Unassigned Risks (Pending ownership of identified risks/opportunities)																			
No unassigned risks identified in July.																			

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	12.3	11.6	11.1	(0.7)	-5.4%	0.5	4.4%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$0.7M/-5.4%)

The CM negative schedule variance is a result of the following:

- PFP 1800TLs originally scheduled for this current period were shipped, processed, and returned in prior periods.
- Delays in completing the crane wire rope replacement (due to additional information from crane manufacturers and the need to perform detailed inspections of the crane gear box because of concerns about the crane usage over the facility life to lift the overweight truckport coverblock).
- Delayed work on three planned Phase 1 Closure documents due to permitting delays from Ecology, RCRA Permit due to delay in feedback from Ecology and Site Wide Transportation Safety document due to issue resolution on special packaging authorization needed for inclusion in the document.
- Performance taken in prior periods for IDF modifications work scheduled in the current period.

CM Cost Performance (+\$0.5M/+4.4%)

The CM positive cost variance is within threshold.

Contract-to-Date (CTD)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,455.4	1,451.3	1,360.0	(4.0)	-0.3%	91.4	6.3%	1,485.6	1,392.1	32.1	93.5

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$4.0M/-0.3%)

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$91.4M/+6.3%)

The CTD favorable cost variance is a result of realizing efficiencies such as organizational flattening and streamlining; right-sizing capabilities for planned scope; optimizing resources with reorganization and consolidation of engineering capabilities across W&FMP; combined administrative/records functions across WESF and CSB; removing waste from building(s) and reducing the need for inspections/surveillances; reducing the size and number of radioactive areas/radioactive material (RAM) and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of PM activities; increasing shared resources across all of SWOC; reducing dedicated resources for the Corrective Action System (CAS) and using project-wide support; optimizing maintenance scheduling and execution reducing operations fieldwork supervision; increasing emphasis on managing planned absence coverage within existing resources; simplifying and optimizing acquisition and procurement management

within W&FMP; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and the Solid Waste Inventory Tracking System (SWITS).

Variance at Completion (+\$93.5M/+6.3%)

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

Contract Performance Report Formats are provided in Appendix A

FUNDS vs. SPEND FORECAST (\$M)

WBS 013/RL-0013	FY2019		Variance
	Projected Funding	Spending Forecast	
Waste Stabilization and Disposition	178.4	147.0	31.5
Management of Cesium and Strontium Capsules (Line Item)	3.8	3.7	0.1
Incremental Scope Pending Change Management	0.0	2.3	(2.3)
RL-0013 – Total	182.2	152.9	29.3

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The FY2019 projected funding level for project breakdown structure (PBS) RL-0013 was increased based on the RL integrated priority list and additional funding for Certificate of Compliance scope. This increase was offset by a reduction of \$2.8 million in projected funding for the Management of Cesium and Strontium Capsules (Line Item). The total project funding increased \$2.1 million from June. The FY spending forecast of \$152.9 million reflects FYTD efficiencies and the current cost projection as of July for work to be completed in FY2019.

Critical Path Analysis

Critical path analysis will be provided upon request.

MILESTONE STATUS

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	6/30/2019		TBD	In abeyance.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
J.12/C.2.2, C.2.3	PBS-RL-0011, Plutonium Finishing Plant Closure Project PBS-RL-0013, Solid and Liquid Waste Treatment and Disposal	Offsite transportation of radioactive material: RL provides equipment and government drivers to transport TRU materials outbound/inbound between the Hanford Site and northwest locations. RL is the authorized shipper and acts as signatory on the shipping papers and ensures compliance with DOE Manual 460.2-1. RL arranges for Commercial Motor Vehicle Safety Alliance 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, Transuranic Waste Certification	WIPP provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable, and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office.	No WIPP shipments are planned within the remaining contract period of performance.

DOE ACTIONS/DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
CSB – Obtain RL DSA Approval	1/31/2018 (A)	6/24/2019 (A)
CSA CD2/3 – RL: Review/Approve PDSA (1 st FY)	5/16/2019 (A)	9/12/2019
RL Review IDF DSA	7/19/2019 (A)	11/25/2019
RL Final IDF DSA Review and Safety Evaluation Report (SER) Prep	12/10/2019	12/30/2019

Section D

Soil and Groundwater Remediation Project (RL-0030)

CH2MHILL
Plateau Remediation Company



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

M. A. Wright
Vice President for
Project Technical
Services

July 2019
CHPRC-2019-07, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

PROJECT SUMMARY

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

Treatment Facility	Million Gallons Treated		Chrome (kg)		Carbon Tet (kg)		Tech-99 (pCi)		Uranium (kg)	
	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD
DX P&T	33.00	269.6	2.2	23.0						
HX P&T	23.2	221.6	2.2	21.0						
KR-4 P&T	11.5	111.6	0.1	1.4						
KW P&T	10.5	120.3	3.8	14.7						
KX P&T	40.7	390.2	2.2	22.4						
200 West P&T	103.3	910.4	8.5	75.0	178	1,660	1.49×10 ¹¹	1.73×10 ¹²	8.1	72.3
Combined	221.8	2,023.5	19.1	157.5	178	1,660	1.49×10¹¹	1.73×10¹²	8.1	72.3
FY2019 KPG	--	1,800.0	--	N/A	--	N/A	--	N/A	--	N/A

Well Drilling Completion by Area*	Fiscal Year (FY)2019 Planned	Current Calendar Month	FY2019 Cumulative
100-KR-4	2	0	2
100-HR-3	10	0	10
200-BP-5	4	1	1
200-UP-1	3	0	1
200-ZP-1	5	0	3
M-24 Milestone	7	1	2
100-F/IU	6	2	2
Total Wells	37	4	21
Site Wide Boreholes	9	0	9

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

EMS Objectives and Target Status

Objective Action Plan #	Objective	Due Date	Status
19-EMS-SGRP-OBJ1-P1	Reduce adverse environmental impact to health and the environment by monitoring and confirming low-carbon tetrachloride emissions at the 200 West P&T Facility. Evaluate treated off-gas analytical results from compliance sampling and process sampling each quarter.	7/31/2019	100%
19-EMS-SGRP-OBJ2-P1	Installation and testing of a high-density polyethylene (HDPE) pipeline between Modular Storage Units (MSU) and the 200 West P&T. Objective will eliminate the need to truck the MSU water to the P&T thereby reducing greenhouse gas emissions and other waste production from vehicle use.	12/31/2018	100%
19-EMS-SGRP-OBJ3-P1	Use of electronically completed Groundwater Sampling Reports (GSR) in Field Logging & Electronic Data Gathering FLEDG 3.0. This will lead to a reduction in paper use and waste through completion and record storage of GSRs electronically.	9/30/2019	90%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	2	N/A
First Aid Cases	1	14	7/1/2019 -A Soil & Groundwater Remediation Project employee was performing rounds at the BIO Venting Connex near N-Reactor when an insect was felt on the back of the neck. The employee brushed the insect from the neck and did not believe a bite had occurred. On 7/3/2019, employee had swelling and irritation to the same area of the neck and reported it to the manager. Employee was taken to 200 West first aid for evaluation. Employee returned to work with no restriction. (25238)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Environmental Integration

- As part of continuous improvement for document quality, a lead author-training course was conducted on July 15, 2019, for representatives from various CHPRC projects and functions. The course covered the topics of document planning, writing, and finalization, along with reviewing the resources and tools that are available to support authors.
- Completed Cumulative Impact Evaluation (CIE) vadose zone demonstration model runs for the “action case” waste site disposition scenario, one of two (the other being “no further action”) that will be used to demonstrate CIE toolset capabilities at an informational briefing to the U.S. Department of Energy, Richland Operations Office (RL) in September 2019.

River Corridor

300-FF-5 Operable Unit (OU)

- Completed Stage B soil extraction and leach testing and initiated preparation of reporting for these tests.
- Initiated drilling of Atomic Energy Act Well 699-S6-E3B at the former 618-10 Burial Ground on July 15, 2019, and completed drilling on July 16, 2019.

100-BC-5 OU

- Received concurrence from the regional U.S. Environmental Protection Agency (EPA) administrator to release the 100-BC-5 Proposed Plan (PP) for public comment.
- Met with RL and EPA on July 10, 2019, to discuss the planning and logistics for the upcoming public review of the PP, tentatively scheduled to begin August 26, 2019.

100-FR-3 OU

- Initiated drilling on July 18, 2019, for the installation of six groundwater monitoring wells. Five boreholes have been drilled and construction has been completed on two of the wells.

100-HR-3 OU

- Provided responses to state of Washington, Department of Ecology (Ecology) comments on DOE/RL-2019-15, *Well Installation Sampling and Analysis Plan for 100-HR-3 Groundwater Operable Unit*, to RL on July 16, 2019.

100-KR-4 OU

- Continuing the K West soil flushing treatability test. Provided the recommendations for the soil flushing approach to RL on July 8, 2019, and discussed the recommendations for the soil flushing with EPA on July 19, 2019. Awaiting EPA's response.
- Met with EPA, Ecology, U.S. Geological Survey (USGS), and RL on July 17, 2019, to discuss the modeling for the Technical Impracticability (TI) Waiver associated with the Strontium-90 contamination; as a result, will present the pros/cons of a TI waiver versus monitored natural attenuation (MNA) to the Hanford Advisory Board/River and Plateau (RAP) committee in October.

100-NR-2 OU

- Submitted the Bioventing Characterization Sampling Analysis Plan (SAP) to RL for review on June 25, 2019.

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

- Completed construction for monitoring well 299-E28-34 on July 18, 2019, and completed drilling for monitoring Well 299-E27-137B, two of the four wells required for the 200-BP-5 Removal Action.
- Completed review of the 200-BP-5/200-PO-1 Feasibility Study revised draft Revision 0 with Ecology and RL on July 15, 2019. Concurrence was received, and the document is being finalized.

200-UP-1 OU

- Provided the Draft Revision 0, DOE/RL-2017-60, *Remedial Design Investigation Report for the 200-UP-1 Operable Unit Southeast Chromium Plume*, to RL on July 18, 2019, to forward to EPA for checking.
- Completed drilling for monitoring Well 299-W20-1 on July 23, 2019. This is one of the two wells planned to characterize the uranium plume in the groundwater near U Plant.

200-WA-1 OU

- Completed all planning activities associated with the installation and operation of an electrical resistance tomography (ERT) geophysical survey near the 216-U-5 and 216-U-6 sites.

TPA-M-24-00 Well Drilling

- Completed construction of monitoring well 299-E17-57.

Central Plateau Closure Plans

- Received Independent Qualified Registered Professional Engineer certification that the 24-hour 25-year storm water calculation for the nonradioactive dangerous waste landfill closure plan meets the Washington Administration Code requirements for landfill closure on July 10, 2019.
- Submitted the 216-B-63 Trench Closure Plan to RL and Ecology on June 25, 2019, for concurrent review.

Project Technical Services Support

- Training and Procedures
 - Updated three operating procedures to add Well 199-H3-29 (HE15), which is now in service.
 - Teamed with facility subject matter experts to develop a River Corridor continuing training that covers HACH 2800 analysis, 100K West infiltration test results, and operator rounds.
- Operations Program conducted Controlling Organization Administrator qualification interview.
- Readiness and Preparedness issued a revision to the Soil and Groundwater Facility Response Plan, bringing the document up to date with physical arrangements and facility ownership of Central and Satellite Accumulation Areas.
- Project Delivery
 - 100-HR3 Wells
 - Completed greenfield work on final tie-in and obtained approval of Construction Completion Document for 199-H3-22.
 - Commenced layout and bonding of high-density polyethylene (HDPE) and completed setting of mechanical racks and ecological blocks at 699-97-47C and 199-H1-12.
 - Completed installation of splice boxes and layout of Belden wire for 699-97-47C and 199-H1-12.
 - 200-ZP-1 Wells 699-48-70 /699-47-78B
 - Well 699-48-70
 - Completed bonding of HDPE line and installation of spool piece in Extraction Transfer Building-1.
 - Finalizing planning and logistics for transformer installation.
 - Well 699-47-78B
 - Continued with electrical and mechanical work on racks for 699-48-70.
 - Commenced layout installation of conduit inside Injection Transfer Building (ITB)-2 for Belden wire 699-47-78B.
 - Commenced Belden wire pull into ITB2; completed wire up to final tie-in of 699-47-78B.
 - Completed HDPE line flush from 699-48-70 to 699-47-78B.

Groundwater P&T Facilities

200 West P&T

- Operated the 200 West P&T at an average of 2,307 gallons per minute (gpm) in July 2019.

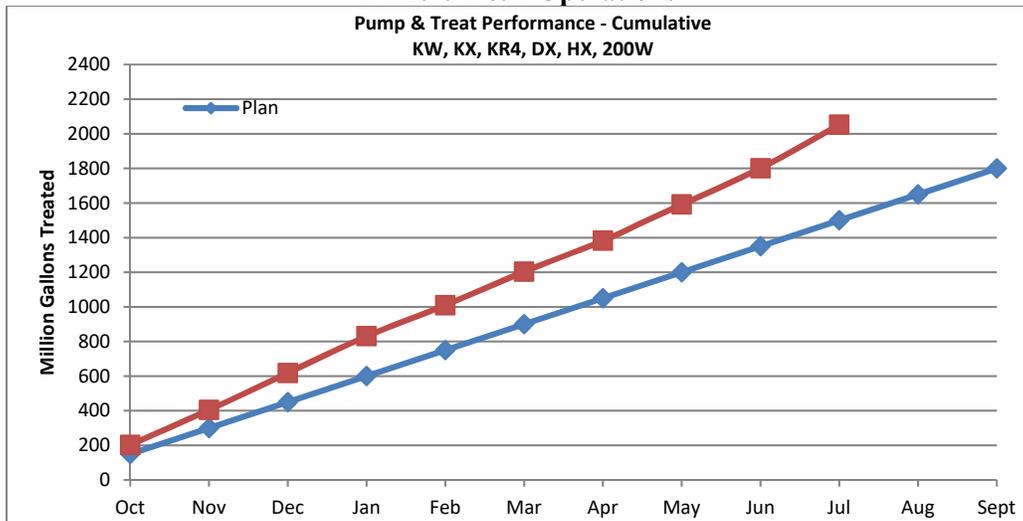
100 Area P&Ts

- Operated the DX P&T at 739, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 257 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 234 gpm, below the facility capacity of 330 gpm. Continued operation of the soil infiltration gallery.
- Operated the KX P&T at 912 gpm, above the facility capacity of 900 gpm.
- Operated the HX P&T at 519 gpm, below the facility capacity of 900 gpm. Completed construction and operations acceptance testing of new extraction wells 199-H3-22 and 199-H3-21.

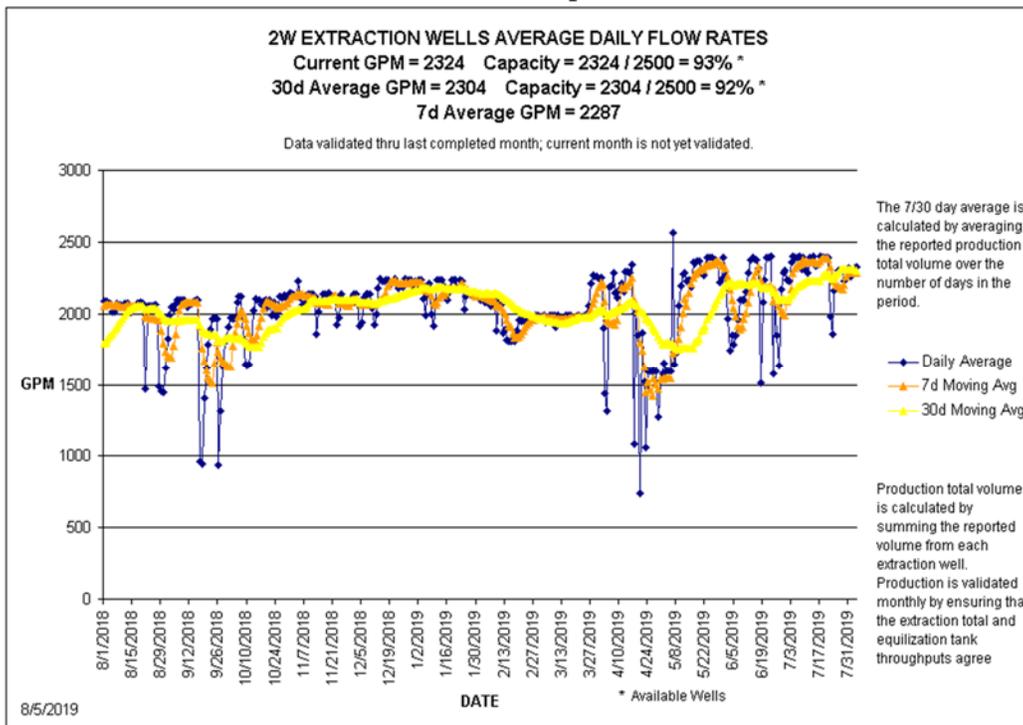
Groundwater P&T Facilities

Overall, the P&T systems operated above the targets as depicted in the following P&T performance graphs.

FY2019 P&T Operations



200 West P&T Operations



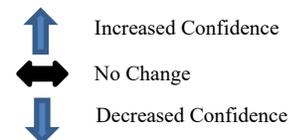
MAJOR ISSUES

No major issues identified.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
Explanation of major changes to the project monthly spotlight chart: Risk <i>SGW-BC5-06DOE: BC – Regulator Delays Impact KPG</i> was removed from the spotlight chart.										
Realized Risks (Risks that are currently impacting project cost/schedule)										
No realized risks identified in July.										
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No critical risk identified in July.										
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
SGW-BC5-01: <i>BC5 – Greater Than Expected Comments from RL or Regulators</i>	Comments from RL and/or regulators on CERCLA documents submitted for review/approval are excessive, need multiple rounds of comment resolution, and are global in nature, causing both cost and schedule impacts to the project. Risk Handling Strategy: Accept Probability: Very Likely (>90%) Worst Case Impacts: \$30K, 64 days		Risk Triggers: Additional rounds of comments are required to support completion of CERCLA documentation. <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>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: Received concurrence from the regional EPA administrator on July 17, 2019, to release the 100-BC-5 PP for public review. This risk has been mitigated. As a result, this risk will be removed from the spotlight chart next reporting period.	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A	
Mitigation Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
FY2019 Risk Triggers (Risk could be realized in FY2019)										
No FY2019 risk triggers identified in July.										
Unassigned Risks (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in July.										

PROJECT BASELINE PERFORMANCE

Current Month (CM)
 (\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	10.2	9.9	7.8	(0.2)	(2.2%)	2.1	21.4%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$0.2M/-2.2%)

The current period schedule variance is within reporting threshold.

CM Cost Performance (+\$2.1M/+21.4%)

Primary drivers of the current period positive cost variance include:

- The implemented 200 West hypochlorite injection system design was much less sophisticated than was assumed in the baseline, which was prepared without final design and required less labor, material, and subcontract support than was planned.
- 200 West P&T Facility operations and preventative and corrective maintenance are realizing a return on prior year investments in facility improvements, resulting in decreased costs.
- 100-HR-3 realignments were planned prior to the determination of final well locations, which were determined closer than assumed in the baseline, requiring less labor, material, and subcontractor costs for the connections and eliminating the need for road crossings.
- The groundwater modeling team supporting the 200-ZP-1 ROD modification has become more efficient in their second year of this project and identified a suitable modeling run earlier than expected to support conversations with EPA and Ecology, generating a positive cost variance.

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	1,622.8	1,618.8	1,559.8	(3.9)	(0.2%)	59.1	3.6%	1,646.7	1,583.3	23.6	63.3

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$3.9M/-0.2%)

The CTD negative schedule variance is within reporting thresholds.

CTD Cost Performance (+\$59.1M/+3.6%)

The CTD positive cost variance is within reporting thresholds.

Variance at Completion (+\$63.3M/+3.8%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0030 Soil and Groundwater Remediation	FY2019		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	132.9	112.0	20.9
Incremental Scope Change Pending Change Management	0.0	0.3	(0.3)
RL-0030 - Total	132.9	112.3	20.6

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

The FY2019 projected funding for project breakdown structure (PBS) RL-0030 is \$132.9 million. Spending forecast value includes cost and fee.

Critical Path Analysis

Critical path analysis will be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/Comment
Milestones at Risk					
M-015-93C	Initiate Characterization Field Work for 200-SW-2 Operable Unit Landfills	9/30/2018		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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS*

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review 200-BP-5 Groundwater Monitoring Plan Revision 1 Decisional Draft	4/12/2019 (A)	8/11/2019
RL Transmit 200-UP-1 Performance Monitoring Plan (PMP) Draft A Revision 1 to Regulators for Review	6/7/2019 (A)	8/31/2019
RL Transmit 200-UP-1 Cr Remedy Remedial Design Investigation Report Draft Revision 0 to Regulators for Check Review	7/18/2019 (A)	8/1/2019
RL Transmit Ringold A DQO/SAP Draft A to Regulators for Review	8/15/2019	8/22/2019
RL Submit Revision 0 100-BC-5 Proposed Plan to Regulators	8/15/2019	8/29/2019
RL Forward 100-HR-3 RD/RAWP Draft Revision 0 to Regulators for Review	8/21/2019	8/21/2019
RL Transmit 200-ZP-1 PMP Second Draft A to EPA for Review	8/23/2019	9/5/2019
RL Transmit 200-EA-1-RI/FS Work Plan Draft Revision 0 to Regulators for Check Review or for Approval	9/4/2019	9/11/2019
RL Transmit 200-BP-5 Proposed Plan Draft Revision 0 to Regulator for Approval	9/20/2019	9/22/2019
RL Transmit IDF Groundwater Monitoring Plan Revision 0 to Ecology	9/21/2019	9/23/2019
RL Transmit 200-DV-1 Treatability Test Evaluation Report Revision 0 to Ecology	9/23/2019	9/26/2019

*This table identifies key DOE actions/decisions only.

Section E

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

CH2MHILL
Plateau Remediation Company



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

July 2019
CHPRC-2019-07, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Central Plateau Risk Management (CPRM) personnel returned to removing combustibles from areas previously cleared of mercury hazards in the Reduction-Oxidation (REDOX) facility. In addition, CPRM worked with the subcontractor to initiate construction of the Environmental Restoration Disposal Facility (ERDF) haul road and container transfer area to support future workscope within REDOX. Asbestos insulation abatement and piping removal of the 200 West steam lines continued with crews now eclipsing more than 10,600 linear feet of piping removed this fiscal year (FY). Personnel completed all electrical and mechanical isolations of the 242-B/BL Facility to ready the facility for demolition. Additionally, the crew prepared the 242-B/BL demolition boundary, set up all air monitoring equipment, and due to co-location of 242-B/BL and B-Farms, prepared Washington River Protection Services (WRPS) employees for demolition in late July.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-CPRM-OBJ-P1	Increase Environmental Management System (EMS) awareness	Present or facilitate a discussion of EMS topics to personnel on a minimum of four different occasions in FY2019 and recruit personnel (other than environmental) to participate in at least two compliance review/programmatic walk downs.	9/30/2019	100%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	1	1	7/8/19 – A Crane Operator was pulling steam line stanchions while a Heavy Equipment Operator (HEO) loaded the stanchions into the back of a dump truck with the driver of the dump truck in the driver’s seat. As the HEO was loading a stanchion with a large amount of concrete, it slipped from the bucket and into the back of the dump truck. The driver bounced up in the seat and jarred the lower back. The following morning, the driver began to experience discomfort and was taken to HPMC. Employee returned to work with restrictions. (25240)
Total Recordable Injuries	1	1	7/15/19 – Employee was reaching for gloves in an overhead console and struck the head on factory-installed switches, which caused an abrasion. Prescription medication was given for treatment. (25251)
First Aid Cases	6	21	7/2/19 – An employee received a bug bite on the right forearm. A hot/cold compress was given as treatment. (25237) 7/22/19 – An employee supporting the demolition of 242-B/BL had a headache due to heat stress after performing surveys in extreme temperatures. Employee was examined and received no restrictions. (25266, 25267, 25268)

	Current Month	Rolling 12 Month	Comment
			7/31/19 – An employee felt knee pain when walking down the steps of MO-6114. Employee was examined and received no restrictions. (25276)
			7/31/19 – An employee suffered from eye and face burning, sneezing, and breathing issues when a janitor was cleaning the bathroom. Employee was examined and received no restrictions. (25280)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0040 Accomplishments

CPRM Surveillance and Maintenance

- Completed annual preventative maintenance on the B Plant exhaust fans.
- Supported job hazards analysis (JHA)/work instruction review for work package to pump liquid from the Plutonium Uranium Extraction Plant (PUREX) exhaust stack condensate tank (216-A-TK-2).
- Began planning for the project to cap Gable Pond.

REDOX Canyon Risk Mitigation

- Completed mercury monitoring in accessible areas of REDOX.
- Continued recovery of items from contamination area in REDOX.
- Completed JHA for asbestos removal work package.
- Drafted work package for applying fixative to area near plutonium removal cage.
- Repackaged suspect mercury containers from seventh floor sample gallery and covered drains suspected of being mercury contaminated.
- Packaged waste for removal from seventh floor sample gallery.
- Completed beryllium sampling in seventh floor and shipped samples for analysis.
- Supported four-wide trailer and restroom trailer installation north of REDOX fence line.
- Began releasing site wide non-destructive assay procedures to support sample gallery installation.
- Completed revision of transuranic waste handling procedures and held JHAs.
- Completed design for waste ingress/egress penetration planned for REDOX north sample gallery.
- Completed ground scans in preparation for mechanical cold and dark isolations for 202-A.
- Approved excavation permit for review to support mechanical isolation.

242-B/BL Demo Preparation

- Completed mobilization for demolition of 242-B/BL.
- Initiated building demolition of 242-B.

Steam Line Removal

- Completed asbestos insulation abatement of 200 West sections four and six.
- Completed final processing and load out of debris for 200 West sections one, two, and three.

MAJOR ISSUES

Issue

Upon initial entry into the seventh floor of the REDOX silo, vials of mercury were found on a maintenance cart. Within that same time period, monitoring readings above the worker protection “step back” value for mercury (based on the personal protection equipment [PPE] in use) was observed at the floor drain of the seventh floor.

Corrective Action

Develop a detailed monitoring plan, including adjustment of the PPE and the use of personal sampling. In addition, develop a plan to remove the vials for future disposition as well as isolate the floor drain to address the mercury concerns at that location, and perform mercury sampling throughout REDOX. Based on both direct reading and time-weighted average mercury monitoring on the seventh floor sample gallery, a mercury remediation strategy will need to be developed.

Status

The vials have been placed in secondary containment and the floor drain isolated. Several revised “step back” levels have been developed on a graded approach that considered the PPE in use to ensure that controls were properly instituted. In mid-June, levels above “step back” were detected at the containment tent on the north side of REDOX. Direct readings were taken six inches above the ground surface outside the containment tent, with the highest reading being 0.027 mg/m³. Late in June, direct readings were taken around the facility, with all except two being non-detectable. The detectable readings were taken inside two manhole covers associated with an inactive REDOX sanitary sewer line, one north and one south of the 202-S Building.

To date, 32 personal samples have been analyzed, and only three were above laboratory detection limits, the highest being 0.0004 mg/m³ 8-hour Time Weighted Average. Moving forward, monitoring will occur where the temperature could potentially cause increased mercury vapors. Monitoring will also occur where the workers are present and at the boundary during work evolutions. Periodic monitoring will be evaluated in upcoming work areas and corporate reach back will analyze lessons learned.

Issue

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

Corrective Action

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

1. Perform a records search to determine when the white powder was first identified.
2. During upcoming entries as part of the annual surveillance, obtain and evaluate data (photos and description of surroundings) to determine if the evidence is sufficient to support designation based on process knowledge.
3. Use actual cost information associated with sampling and analysis of the white powder at PUREX to develop a cost estimate for sampling and analysis of the white powder at B Plant.

4. Revise the PUREX sample analysis plan to support sampling and analysis of the B Plant white powder in the event that it is determined as part of item number two that process knowledge is not sufficient to support designation.
5. If sampling is required to support designation, determine if designation can be accomplished in the required 90-day period, and notify RL if an extension is needed.

Status

CHPRC received contracting officer direction to remedy environmental and regulatory documents. RL indicated that although the May deadline for cleanup was not met, the powder will be cleaned up within FY2019.

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

Issue

On September 25, 2018, an entry into the REDOX canyon was performed for the first time since 1997. During the entry, significant combustible loading (liquid and solid) was discovered throughout the canyon.

Corrective Action

Fire Protection Engineering will evaluate as-found condition against National Fire Protection Association (NFPA) requirements for combustible material loading. Fire Protection Engineering determined the hazardous combustible materials required packaging and removal from the REDOX Canyon in order to comply with current NFPA standards.

Status

Entries into the REDOX Canyon have been performed, and more hazardous combustible material has been discovered. Waste loadout continues and a work package is in development for large items requiring size reduction. There is a high likelihood of further discoveries of combustible material in the east end of the canyon once further entries are performed.

Issue

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

Corrective Action

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

Status

A draft structural integrity analysis indicates that a 24-foot heavy equipment standoff is required that will complicate the effort to seal the filter housing. The project continues to track the water level in a catch tank; current water level tracks are consistent with rainfall.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- Increased Confidence
- No Change
- Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0040/WBS-040																
Explanation of major changes to the project monthly stoplight chart: Risk PRXT-S2-009, <i>Resources Unavailable</i> , was closed and removed from the Risk Trigger section of the stoplight chart in July.																
Realized Risks (Risks that are currently impacting project cost/schedule)																
REDOX-01: Resource Availability	Higher CHPRC priority work results in reallocation of resources. Improving job markets result in competition for key resources. In addition, higher-than-anticipated attrition impacts project cost. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$90K, 48 days	●	↑	Risk Event: Other Hanford contractors (OHC) and higher CHPRC priority work has impacted the resource availability for REDOX. OHCs impacted work through the labor asset management program taking skilled and trained decontamination and decommissioning (D&D) workers. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Identify and hire temporary employees (D&D, asbestos workers, Radiological Control Technicians) early in the fiscal year.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Meet with other CHPRC projects in attempts to spread resources appropriately between projects.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct ongoing full time equivalent analyses to ensure staffing is adequate.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Risk Action Assessment: No major changes in July. D&D workers were hired in late January and completed the required training at the HAMMER Federal Training Center in Richland. Currently, the D&D workers are gaining field experience .	Risk Recovery Action(s)	FC Date	%	Identify and hire temporary employees (D&D, asbestos workers, Radiological Control Technicians) early in the fiscal year.	Complete	100	Meet with other CHPRC projects in attempts to spread resources appropriately between projects.	Ongoing	N/A	Conduct ongoing full time equivalent analyses to ensure staffing is adequate.	Ongoing	N/A
Risk Recovery Action(s)	FC Date	%														
Identify and hire temporary employees (D&D, asbestos workers, Radiological Control Technicians) early in the fiscal year.	Complete	100														
Meet with other CHPRC projects in attempts to spread resources appropriately between projects.	Ongoing	N/A														
Conduct ongoing full time equivalent analyses to ensure staffing is adequate.	Ongoing	N/A														
REDOX-06: Impacted by OHC (Other Hanford Contractors) or Other CHPRC Projects	Delays by OHCs or other CHPRC projects impacts the schedule and technical approach due to inconsistencies with CHPRC execution, resulting in recovery actions and causing unplanned, in-scope work and impacting the schedule. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$100K, 24 days	●	↓	Risk Event: Impacts from OHC would impact the ability for work to progress at REDOX due to conflicts with close neighbors (222-S Lab). <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communication plan and outreach efforts will be developed and executed throughout the project.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Establish north side road parking lot and trailer access to avoid interferences with Mission Support Alliance and WRPS work to the south.</td> <td>Aug 2019</td> <td>80</td> </tr> </tbody> </table> Risk Action Assessment: No major changes in July. Construction of an access road connecting the north side of REDOX to Beloit Avenue will reduce the interaction between REDOX and 222-S Lab. Additionally, a four-wide trailer is in the process of being procured to move personnel from MO409 to the north side of REDOX, reducing the number of personnel interacting with 222-S Lab.	Risk Recovery Action(s)	FC Date	%	Communication plan and outreach efforts will be developed and executed throughout the project.	Ongoing	N/A	Establish north side road parking lot and trailer access to avoid interferences with Mission Support Alliance and WRPS work to the south.	Aug 2019	80			
Risk Recovery Action(s)	FC Date	%														
Communication plan and outreach efforts will be developed and executed throughout the project.	Ongoing	N/A														
Establish north side road parking lot and trailer access to avoid interferences with Mission Support Alliance and WRPS work to the south.	Aug 2019	80														
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, personnel at REDOX have not been able to access the west end of the North Sample Gallery. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Spray roof with engineered roofing sealant prior to the rainy season in an effort to minimize leaks.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Patch existing roof vulnerabilities.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> Risk Action Assessment: No major changes in July. Work plans are underway to allow appropriate personnel to enter the North Sample Gallery to collect samples of the accumulated water. Work packages are being modified and hazard identifications are being worked to address the water issue.	Risk Recovery Action(s)	FC Date	%	Spray roof with engineered roofing sealant prior to the rainy season in an effort to minimize leaks.	Complete	100	Patch existing roof vulnerabilities.	Complete	100			
Risk Recovery Action(s)	FC Date	%														
Spray roof with engineered roofing sealant prior to the rainy season in an effort to minimize leaks.	Complete	100														
Patch existing roof vulnerabilities.	Complete	100														
REDOX-11: Unexpected Discovery - Hazmat	Unexpected or late discovery of hazardous material is discovered during deactivation and decommissioning of 202-S REDOX. Risk Handling Strategy: Control	●	↓	Risk Event: During deactivation and decommissioning activities, there is an unexpected discovery of hazardous material.												

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																	
		Month	Trend																		
RL-0040/WBS-040																					
	<p>Probability: Likely (75% to 90%) Worst Case Impacts: \$11K, 48 days</p>			<table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform investigative entries into silo, North Sample Gallery, and canyon.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Characterization in progress.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Innovative methods (i.e., robots) to further understand conditions.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in July. Investigative entries and characterizations are furthering the understanding of the current conditions of REDOX.</p>	Risk Recovery Action(s)	FC Date	%	Perform investigative entries into silo, North Sample Gallery, and canyon.	Ongoing	N/A	Characterization in progress.	Ongoing	N/A	Innovative methods (i.e., robots) to further understand conditions.	Ongoing	N/A					
Risk Recovery Action(s)	FC Date	%																			
Perform investigative entries into silo, North Sample Gallery, and canyon.	Ongoing	N/A																			
Characterization in progress.	Ongoing	N/A																			
Innovative methods (i.e., robots) to further understand conditions.	Ongoing	N/A																			
<p>REDOX-16: Facility Integrity</p> <p>Problems with aging building systems/components such as roofing and overall structure result in inoperability or require unscheduled maintenance/outages impacting planned D&D activities, resulting in schedule delays and cost impacts.</p> <p>Risk Handling Strategy: Transfer</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 0 day</p>	●	↔	<p>Risk Event: Leaking roof results in unsafe working conditions for personnel.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform cold and dark activities to shut off building power.</td> <td>Sept 2019</td> <td>35</td> </tr> <tr> <td>Repair minor roof defects.</td> <td>Sept 2019</td> <td>50</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in July. 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. Minor repairs to leaking parts of the roof can significantly reduce water intrusion.</p>	Risk Recovery Action(s)	FC Date	%	Perform cold and dark activities to shut off building power.	Sept 2019	35	Repair minor roof defects.	Sept 2019	50									
Risk Recovery Action(s)	FC Date	%																			
Perform cold and dark activities to shut off building power.	Sept 2019	35																			
Repair minor roof defects.	Sept 2019	50																			
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 for waste loadout, steam lines) and building age and structural integrity, the project experiences a collapse of a sand filter, 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 for waste loadout, steam lines) and building age and structural integrity, the project experiences a collapse of a sand filter.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish project boundary.</td> <td>Sept 2019</td> <td>50%</td> </tr> <tr> <td>Use bracing when digging.</td> <td>Not yet digging</td> <td>N/A</td> </tr> <tr> <td>Implement communication plan between OHC and other CHPRC projects.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Engineering to conduct structural integrity and equipment stand-off evaluations.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Follow the critical lift process, and hoisting and rigging manual.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in July. The project is working to ensure that the steam line removal efforts consider sand filters while planning. There is continued project communication with the 222-S Labs about future work scope at REDOX. Engineering has also been involved in structural evaluations, which will establish an equipment stand-off distance. Additionally, there are ongoing discussions for initial planning of the critical lift process.</p>	Mitigation Action(s)	FC Date	%	Establish project boundary.	Sept 2019	50%	Use bracing when digging.	Not yet digging	N/A	Implement communication plan between OHC and other CHPRC projects.	Ongoing	N/A	Engineering to conduct structural integrity and equipment stand-off evaluations.	Ongoing	N/A	Follow the critical lift process, and hoisting and rigging manual.	Ongoing	N/A
Mitigation Action(s)	FC Date	%																			
Establish project boundary.	Sept 2019	50%																			
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Engineering to conduct structural integrity and equipment stand-off evaluations.	Ongoing	N/A																			
Follow the critical lift process, and hoisting and rigging manual.	Ongoing	N/A																			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																					
No high-risk threat value risks in July.																					
FY2019 Risk Triggers (Risk could be realized in FY2019)																					
No FY2019 risk triggers in July.																					
Unassigned Risks (Pending ownership of identified risks/opportunities)																					
No unassigned risks identified in July.																					

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	2.9	2.5	4.6	(0.4)	-14.1%	(2.1)	-85.6%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance: (-\$0.4M/-14.1%)

The current month negative schedule variance is primarily due to the discovery of mercury on the seventh floor of the REDOX silo gallery, which continues to cause delays as air sampling continues and worker safety documentation is updated to account for the presence of mercury. The incorporation of industrial hygiene controls allowing the use of additional size reduction tools has slowed progress of combustible removals from the REDOX canyon.

Another contributing factor to the negative variance is due to steam line removal delays. Weather impacts such as heat and wind increased the amount of down time for labor resources. Additionally, work associated with 242-B/BL is being performed that is not currently in the baseline. This project is well ahead of schedule, and all scope in the baseline implemented at the start of FY2019 has been performed. The authorized scope will be added in an August baseline change request (BCR) which, once implemented, will enable the performance to be claimed.

CM Cost Performance: (-\$2.1M/-85.6%)

The current month negative cost variance can be partially attributed to performing authorized work scope that is not included in the current performance measurement baseline (PMB), but will be added with a BCR in August. A risk evaluation of the aging structures on the Central Plateau is not currently in the baseline and has seen extensive change orders as the work scope grows based on initial findings and reports provided by the contractor. Additionally, 242-B/BL work scope is well ahead of schedule, and all scope in the PMB has been performed. This scope will be added to the PMB in an August BCR which, once implemented, will enable performance to be claimed.

Furthermore, the unfavorable variance is due to an increase in labor resources (D&D workers and insulators) needed to support the removal of the 200 West steam lines. The resources were underestimated in the original plan, and the increase is necessary to complete required scope in FY2019. As mentioned above, significant weather impacts reduced the efficiencies for 200 West steam line removals from increased rest for workers.

The discovery of mercury on the seventh floor of the REDOX silo gallery continues to halt progress as air sampling continues and worker safety documentation is updated to account for the presence of mercury. The incorporation of industrial hygiene controls allowing the use of additional size reduction tools has slowed progress of combustible removals from the REDOX canyon, while additional support has been necessary to update and release the work package. These issues have resulted in increased cost without the ability to claim performance in much of REDOX.

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	547.5	540.7	524.1	(6.9)	-1.3%	16.5	3.1%	555.8	543.7	19.6	12.1

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance: (-\$6.9M/-1.3%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$16.5M/+3.1%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$12.1M/+2.2%)

The VAC is within reporting thresholds.

Contract performance report formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 040/RL-0040 Nuclear Facility D&D	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0040 Spending Forecast	81.8	73.2	8.6
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0040 – Total	81.8	73.2	8.6

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

FY2019 funding for project breakdown structure (PBS) RL-0040 is \$81.8 million. FY2019 funding aligns with the RL integrated priority list (IPL).

Critical Path Analysis

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-256	Complete Removal of All Waste Sites for FY2019 as Updated/Modified in M-16-17-01.	9/30/2019		TBD	In dispute resolution. In negotiation with RL to adjust schedule to FY2020.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review 224-B (B Plant) Removal Action Work Plan (2017-34)	8/16/2017 (A)	8/30/2019
202-A PUREX (2016-15) Draft B Engineering Evaluation/Cost Analysis Public Review	12/11/2017 (A)	8/30/2019

Section F

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



R. M. Geimer
Vice President for
K Basin Operations

July 2019
CHPRC-2019-07, 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 July, the 100-K Closure project worked on the fiscal year (FY) 2020 - FY2022 Performance Measurement Baseline annual update due to RL mid-July. This includes the critical path schedule to complete 105K West fuel storage basin dewatering and deactivation. 100-K Soil Remediation and CH2M HILL Plateau Remediation Company (CHPRC) Supply Chain Management issued a request for proposal (RFP) for the new soil remediation excavation contract. 100-K engineering and the basin deactivation team completed the system design that prepares fuel specimens (remote-handled transuranic waste [RH TRU]) material for sampling and use as a check source for the gamma camera. 100-K deactivation and demolition workers completed loadout of the debris following the demolition of buildings 1724K, 1724JKA, and 167K. Preparations were completed for K East Reactor asbestos removal in preparation for safe storage enclosure construction.

River Risk Management Project (RRMP):

Preparation continues for the start of remote soil operations associated with the 300-296 waste site beneath the 324 Facility, which was demonstrated by the completion of the remote soil excavation operations readiness self-assessment. Equipment procurement and fabrication continues with the receipt of the D Cell snorkel offset tool, and the kickoff meeting for the procurement of the B Cell 10-ton crane procurement. Design and fabrication continues on the following systems: shielded cradle supporting 324 Facility waste loadout, waste box shielding, waste bins, waste containers, universal cutting tool for the remote excavator arm (REA) and the cell dams. Facility preparations completed include cask handling area (CHA) floor scarification and epoxy, reconfiguring the step-off pad (SOP) in room 123 with the removal of three personal contamination monitors (PCM) 1Bs and installing three iPCM – 12s, and the truck-scale installation.

In support of structural modifications of the 324 Facility required prior to accessing the 300-296 waste site, the micropile design was received from the vendor and is in CHPRC review. Crews initiated construction of the north shoring to support future soil stabilization grout injections under the 324 Facility. The first box of B Cell debris waste bins was shipped to the Environmental Restoration Disposal Facility (ERDF), and B Cell debris size reduction and waste bin loadout continued. Chipping and removing the grout layer previously poured over the liner in B Cell was also initiated. At the mockup, the modified transfer mechanism factory acceptance testing commenced, and crews continued debris loadout operator proficiency training. The mockup location was available for tours with CHPRC Environmental Management System (EMS) personnel.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-RRMP-OBJ1-P1	Increase (EMS) awareness	Present or facilitate a discussion of EMS topics to 324 Building disposition project personnel on a minimum of five different occasions in FY2019 and recruit personnel from the 324 Building disposition project organizations (other than environmental) to participate in at least five compliance review/programmatic walkdowns.	9/30/2019	100%
19-EMS-KBOPR-OBJ1-P1	Improve compliance/pollution and spill prevention	Monitor and evaluate universal waste and recycling accumulation areas for compliance with CHPRC procedures. Survey spill prevention measures.	9/30/2019	80%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	2	23	<p>7/1/2019 – Employee entering a door hurt the right wrist as another employee was exiting the door at the same time. The employee exiting had hands full and used the shoulder, resulting in extra force. The injured employee was evaluated at HPM Corporation (HPMC), provided over-the-counter medicine, and released back to work without restriction. (25233)</p> <p>7/17/2019 – Employee experienced two bug bites on the left wrist. Employee was evaluated at HPMC and released back to work without restriction. (25260)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

K Basin Operations

- 100K Closure Project:
 - o The RFP for the excavation contract scope of work (SOW) for FY2020 and FY2021 was issued by the CHPRC Supply Chain Group.
 - o K West Basin Deactivation
 - Completed fabrication of more specialized clamshell tools for EC230 cleanout.
 - Completed the design of the air hammer RH TRU crushing system.
 - o Ancillary Facility D&D completed loadout of debris from the 1724K, 1724KA, and 167K Buildings demolition.
 - o K East Reactor ISS
 - Mobilized asbestos abatement contractor equipment and personnel.
 - Finished installation of exterior stair tower and doorway on the east side of the building to allow increase in personnel allowed in building at any given time.
 - Finished installing negative air enclosure around the glycol tank at the 66-foot level and started installing glove-bags on asbestos covered lines in preparation for removal activities.

RRMP, 324 Building Disposition Project

- Completed the remote soil excavation operations readiness self-assessment.
- Equipment Procurement and Fabrication:
 - o Received the D Cell snorkel offset tool onsite at Acquisition Verification Services.
 - o Conducted the kickoff meeting for the B Cell 10-ton crane contract.
 - o Continued design and fabrication of the following systems:
 - Shielded cradle supporting 324 Facility waste loadout.
 - Waste box shielding, waste bins, and waste containers for the 324 Facility.
 - B Cell 10-ton crane.

- Universal cutting tool for the REAs.
 - Transfer mechanism modifications.
 - Cell dams.
- Facility Preparations:
 - o Continued C Cell penetration sealing.
 - o Completed CHA floor scarification and epoxy.
 - o Reconfigured 324 Facility SOP in room 123, removed three PCM 1Bs and installed three iPCM – 12s.
 - o Completed truck scale installation.
- Structural Modifications:
 - o Conducted don/doff training on new personal protective equipment with pilot hole crew for room 18.
 - o Continued demobilization of Pit 6.
 - o Received micropile issued for construction design from vendor and initiated CHPRC review.
 - o Initiated north shoring gravel deliveries to the 324 Building to support future soil stabilization grout injections.
- Cell Cleanout:
 - o Shipped first box of B Cell debris waste bins to ERDF.
 - o Continued B Cell debris size reduction and waste bin loadout.
 - o Initiated removal of chipped grout in waste bins for staging in D Cell.
 - o Loaded second waste box with B Cell debris waste bins and removed from airlock.
 - o Loaded third waste box with B Cell debris waste bins.
- Mockup:
 - o Initiated modified transfer mechanism factory acceptance testing.
 - o Continued debris loadout operator proficiency training.
 - o Conducted an operational drill involving a simulated injury in the airlock and subsequent response to the injured person.
 - o Uninstalled and shipped the transfer mechanism and associated control panels back to vendor for troubleshooting and repairs.
- Tours:
 - o Hosted a tour for CHPRC EMS external auditors.
 - o Hosted a tour for legislative aides for U.S. senator.
 - o Hosted a tour for the DNFSB chairman and staff.
 - o Hosted a tour for U.S. Department of Energy (DOE) acting EM-1 and staff.

Project Technical Support

- Training and Procedures :
 - o Teamed with facility subject matter experts to refine the 324 Training and Qualification Plan for B Cell Remote Soil Excavation Operations. Integrated comments from operations, training, readiness personnel, and various other interested parties in support of Pre-Readiness Review Board (PRRB) activities.
 - o Published nine 324 operations courses associated with Remote Soil Excavation Operations integrating new templates as well as Waste Operations procedures for PRRB.
- Operations Program:
 - o Supported 324 Facility implementation of Nuclear Maintenance Management Program (NMMP) applicability.
- Readiness and Preparedness:
 - o Conducted operational drills in the mockup facility and in the 324 Facility controlled areas in preparation for the pending Readiness Assessment. These drills have been successful in helping the 324 Facility operational teams improve their skills and confidence in reacting to emergent conditions and interfacing with the emergency responders.

MAJOR ISSUES

Issue

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

Corrective Action

Labor Relations and Radiation Protection Management completed extra efforts to fill needed positions.

Status

The number of RCTs hired and assigned is now sufficient to perform planned Soil Remediation, K East Reactor asbestos removal, 100K Basin Operations, and 100-K Deactivation. Issue closed.

Issue

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

Corrective Action

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

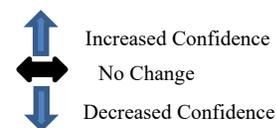
Status

The Director for the RL PFD approved fabrication of the debris washing station for the VPC system. A revision to the SOW is being prepared, and the contract will be re-bid in late August.

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 spotlight chart: Risk RCC-300-296-35: “300-296 Mockup Facility Unavailable to Support Project” and RCC-300-296-36: “Contamination Experienced During REC Cell Operations” are included under the <i>High Risk Threat Value</i> of the spotlight chart.																									
Realized Risks (Risks that are currently impacting project cost/schedule)																									
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 results in contamination levels that are much higher or deeper than assumed or the material encountered is different than anticipated, an alternative approach will require the development and/or fabrication of additional equipment for contamination mitigation and control . These impacts will limit progress on alternate fieldwork activities to recover. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$3,318K, 256 days	●	↔	<p>Risk Event: Unexpected contamination was found within room 18 during pilot hole drilling activities.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>As low as reasonably achievable (ALARA) review (IPAR) evaluations</td> <td>5/13/2019</td> <td>100</td> </tr> <tr> <td>Incorporate increased PCM usage and surveys to personnel exiting controlled areas.</td> <td>7/10/2019</td> <td>100</td> </tr> <tr> <td>Review Radiological Control Requirements and Monitoring Process prior to resuming pilot hole work scope within room 18.</td> <td>8/5/2019</td> <td>80</td> </tr> <tr> <td>Resume pilot hole work scope in room 18.</td> <td>8/6/2019</td> <td>-</td> </tr> </tbody> </table> <p>Recovery Assessment: ALARA review evaluations for process improvements were completed in May; however, fieldwork was placed on hold as radiological controls and thorough surveys were being enhanced to verify personnel exiting controlled areas. Continued progress related to addressing control measures for pilot hole work scope is nearly complete. Pilot hole fieldwork is scheduled to resume in the upcoming period.</p>	Recovery Action(s)	FC Date	%	As low as reasonably achievable (ALARA) review (IPAR) evaluations	5/13/2019	100	Incorporate increased PCM usage and surveys to personnel exiting controlled areas.	7/10/2019	100	Review Radiological Control Requirements and Monitoring Process prior to resuming pilot hole work scope within room 18.	8/5/2019	80	Resume pilot hole work scope in room 18.	8/6/2019	-						
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Resume pilot hole work scope in room 18.	8/6/2019	-																							
RCC-300-296-30: “300-296 Design Changes Result in Increased Subcontractor Change Order(s)/ Claims”	Structural modifications estimate is currently based on the vendor’s estimate as of the 30 percent design. The 60 percent design through initiation of 90 percent design and testing of the currently identified for 324 Building structural modifications to support design are ongoing. Due to the uncertainty and evolution of developments, design changes may be required upon completion of all design phases. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$3,318K, 136 days	●	↔	<p>Risk Event: Upon review of the 30 percent design submittal, it was determined that the cell wall loading/limitations were inadequate and required additional clarification. To reduce potential impacts associated with conflicting drawing information, applicable design efforts were updated to encompass further analysis of cell footings, load limitations, and field demonstrations to ensure safe and successful completion.</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 to 60 percent (VE2810)</td> <td>8/15/2018</td> <td>100</td> </tr> <tr> <td>Perform micropile demonstration and verification to support structural modification design (VS1220A)</td> <td>1/24/2019</td> <td>100</td> </tr> <tr> <td>Structural modifications design micro-pile comment resolution (VS1220C)</td> <td>5/13/2019</td> <td>100</td> </tr> <tr> <td>Perform pilot holing for structural mods (VS5010)</td> <td>8/6/2019</td> <td>55</td> </tr> <tr> <td>Perform Pit 6 soil verification testing/geotech (VS1220B)</td> <td>9/5/2019</td> <td>99</td> </tr> <tr> <td>Contractor prepare and submit structural modification design (VN1220)</td> <td>9/23/2019</td> <td>87</td> </tr> </tbody> </table> <p>Recovery Assessment: Delays for completing the final structural design have been incurred due to the realization of risks RCC-300-296-31: “300-296 Elevated Contamination Encountered While Performing Structural Modifications” and recently, RCC-300-296-01: “Latent Conditions Impact Facility Modifications.” The realization of these risks halted fieldwork activities supporting the completion of the final design; however, fieldwork was placed on hold in the period pending review of Radiological Control Requirements and Monitoring Process prior to resuming pilot hole work scope within room 18. Pilot hole fieldwork is scheduled to resume in the upcoming period and support completion of the final design.</p>	Recovery Action(s)	FC Date	%	Contractor prepare and submit structure modification design - 30 to 60 percent (VE2810)	8/15/2018	100	Perform micropile demonstration and verification to support structural modification design (VS1220A)	1/24/2019	100	Structural modifications design micro-pile comment resolution (VS1220C)	5/13/2019	100	Perform pilot holing for structural mods (VS5010)	8/6/2019	55	Perform Pit 6 soil verification testing/geotech (VS1220B)	9/5/2019	99	Contractor prepare and submit structural modification design (VN1220)	9/23/2019	87
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0041/WBS-041																
RCC-300-296-03: “300-296 Mockup Testing and Qualification of Remote Equipment/Process Identifies Major Modification Requirements”	<p>Issues such as equipment interferences, differing as-found conditions than planned, equipment reliability, etc., arise prior to or during mockup testing, leading to re-design of equipment and resulting in cost and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$773K, 80 days</p>	●	↔	<p>Risk Event: During vendor factory acceptance test and/or mockup, testing, issues and conditions were identified with mockup equipment, resulting in additional re-design, materials, and/or fabrication efforts greater than planned. Remote equipment procurements that have resulted in cost and/or schedule impacts include the Remote Excavation Arm (REA) system components (through supports and dummy post assemblies) and transfer mechanism (electrical components).</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install radiological assay system and perform Construction Acceptance Test (CAT) 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>12/23/2019</td> <td>42</td> </tr> </tbody> </table> <p>Recovery Assessment: Integration with remotely operated equipment through testing and training at the mockup will continue with preparations for 324 Building equipment. During testing and proficiency training of the floor saw, the project experienced failure of essential components. CHPRC exercised the contract option to have the vendor perform an onsite inspection of the components. Following repairs, the failed components were received back from the vendor. In addition, testing/training has since resumed. Impacts continue to be incorporated into the project schedule, along with the estimate to complete, to reflect further impacts of risk being realized.</p>	Recovery Action(s)	FC Date	%	Install radiological assay system and perform Construction Acceptance Test (CAT) 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)	12/23/2019	42
Recovery Action(s)	FC Date	%														
Install radiological assay system and perform Construction Acceptance Test (CAT) 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)	12/23/2019	42														
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in July.																
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																
RCC-300-296-07: “300-296 Failure of a REC Cranes (B-Cell, A-Cell, A-D & Airlock, and/or CHA Cranes)”	<p>Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$1,561K, 208 days</p>	●	↑	<p>Risk Trigger Metric: Radiochemical Engineering Cells (REC) crane failure occurs during operations.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Determine B Cell replacement crane options</td> <td>3/19/2019</td> <td>100</td> </tr> <tr> <td>Award contract – B-Cell 10T crane – 324</td> <td>6/20/2019</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in July. RFPs were issued in April. The project received estimates and feedback from potential vendors in May. On June 20, 2019, a contract was awarded for fabrication of the B Cell crane. Kickoff meetings were held with the vendor, and work scope was initiated. These efforts are expected to reduce the potential for impacts and mitigate significant impacts to the project in the event of risk being realized.</p>	Mitigation Action(s)	FC Date	%	Determine B Cell replacement crane options	3/19/2019	100	Award contract – B-Cell 10T crane – 324	6/20/2019	100			
Mitigation Action(s)	FC Date	%														
Determine B Cell replacement crane options	3/19/2019	100														
Award contract – B-Cell 10T crane – 324	6/20/2019	100														
RCC-300-296-15: “300-296 Cell Sealing, Interference Removal and/or Core Drilling Takes Longer Than Planned”	<p>Unexpected field conditions encountered during interference removal, sealing of cell penetrations, and/or core drilling work scope. The unexpected field conditions subsequently cause in-scope unplanned work and result in schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very likely (>90%)</p> <p>Worst Case Impacts: \$145.8K, 90 days</p>	●	↑	<p>Risk Trigger Metric: The project experiences unexpected field conditions outside their control that make cell sealing, interference removal, and core drilling more difficult than planned.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform core drilling and shield plug installation (VN1200)</td> <td>3/28/2019</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in July. A majority of core drilling interferences have been identified as the project progresses with drilling necessary at the 324 Building in advance of installing soil remediation equipment. The remainder of the known core drilling efforts were completed in the period. However, due to the uniqueness involved with work scope, there exists the potential for unexpected delays and additional core drilling efforts.</p>	Mitigation Action(s)	FC Date	%	Perform core drilling and shield plug installation (VN1200)	3/28/2019	100						
Mitigation Action(s)	FC Date	%														
Perform core drilling and shield plug installation (VN1200)	3/28/2019	100														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0041/WBS-041																
RCC-300-296-08: "300-296 Failure of Cell Shield Door"	Failure of shield door(s) or crane shield door(s) shuts down cleanout of REC cells/airlock, penetration sealing in airlock, equipment installation, and other activities for remote soil removal. It may not be possible to repair a shield door due to radiation dose rate and location, resulting in cost and schedule delays. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$460K, 96 days	●	↔	Risk Trigger Metric: During operations of cleanout activities, a cell shield door inoperable. <table border="1" style="width: 100%;"><thead><tr><th>Mitigation Action(s)</th><th>FC Date</th><th>%</th></tr></thead><tbody><tr><td>Preventative maintenance activities are being conducted</td><td>Ongoing</td><td>N/A</td></tr></tbody></table> Mitigation Assessment: No major changes in July. To assure that REC shield doors maintain operability, an engineering evaluation was conducted, resulting in the implementation of monthly PMs and the procurement of spare parts.	Mitigation Action(s)	FC Date	%	Preventative maintenance activities are being conducted	Ongoing	N/A						
Mitigation Action(s)	FC Date	%														
Preventative maintenance activities are being conducted	Ongoing	N/A														
RCC-300-296-35: "300-296 Loss of Mockup During REC Cell Installation, Startup or Operations"	During REC Cell installation, startup, or operations, the Mockup and associated support area becomes unavailable due to upset at neighboring fuel fabrication facility, loss of lease, City of Richland re-zoning, etc. resulting in significant cost and schedule impacts incurred. Risk Handling Strategy: Accept Probability: Very Low (<10%) Worst Case Impacts: \$2,632K, 180 days	●	↔	Risk Trigger Metric: During REC Cell installation, startup, or operations, the mockup and associated support area becomes unavailable due to upset at neighboring fuel fabrication facility, loss of lease, city of Richland re-zoning, etc. resulting in significant cost and schedule impacts incurred. <table border="1" style="width: 100%;"><thead><tr><th>Mitigation Action(s)</th><th>FC Date</th><th>%</th></tr></thead><tbody><tr><td>None identified at this time (risk is accepted)</td><td>N/A</td><td>N/A</td></tr></tbody></table> Mitigation Assessment: There exists a worst case consequence that will require relocation of mockup and equipment to neighboring site location. Including, storage of installed mockup equipment, delayed qualification/proficiency training, slowed development of off-normal recovery planning, delayed replacement of 324 failed equipment (alternate equipment checkout location required) or accelerated mockup demolition costs would be incurred. Due to primarily external factors, this risk is accepted and will be monitored throughout the risk lifecycle.	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														
RCC-300-296-36: "Contamination Experienced During REC Cell Operations"	During REC Cell cleanout (e.g. soil/debris removal, waste handling, 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	●	↔	Risk Event: Background radiation levels impact the use of PCMs in SMF during waste box loadout to a level that operations cannot continue as currently planned requiring fabrication of additional shielding and structures. Significant cost and schedule impacts are incurred. <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 CHA floor scabbling & apply epoxy floor coating</td><td>7/17/2019</td><td>100</td></tr><tr><td>Floor scabbling, when necessary</td><td>TBD</td><td>Ongoing</td></tr><tr><td>Floor coating applications, where necessary</td><td>TBD</td><td>Ongoing</td></tr></tbody></table> Mitigation Assessment: CHA floor scabbling and floor coating applications were performed in July and will reduce the likelihood for lengthy decontamination efforts and/or spread. Due to the uniqueness involved with this particular work scope, the probability and consequence levels remain the same. However, these mitigation efforts will reduce the cost and schedule consequences, as applicable.	Mitigation Action(s)	FC Date	%	Perform CHA floor scabbling & apply epoxy floor coating	7/17/2019	100	Floor scabbling, when necessary	TBD	Ongoing	Floor coating applications, where necessary	TBD	Ongoing
Mitigation Action(s)	FC Date	%														
Perform CHA floor scabbling & apply epoxy floor coating	7/17/2019	100														
Floor scabbling, when necessary	TBD	Ongoing														
Floor coating applications, where necessary	TBD	Ongoing														
FY2019 Risk Triggers (Risk could be realized in FY2019)																
100K-KWB-102: "105KW Basin Deactivation – Resources Unavailable"	Other higher CHPRC priority work results in reallocation of key resources (radiological planners, RCTs, industrial hygienist, and nuclear chemical operators), which results in cost and schedule delays as projects compete for key CHRPC resources. Risk Handling Strategy: Accept Probability: Low (10% to 25%) Worst Case Impacts: \$15K, 16 days	●	↔	Risk Event: 100K Closure project soil remediation and basin characterization work is experiencing a shortage of RCTs, radiation control engineers, radiation control work planners, and radiation control first line managers. <table border="1" style="width: 100%;"><thead><tr><th>Mitigation Action(s)</th><th>FC Date</th><th>%</th></tr></thead><tbody><tr><td>Work with RADCON to ensure KW Basin has sufficient RCTs to support remaining FY2019 scope.</td><td>Ongoing</td><td>N/A</td></tr></tbody></table> Mitigation Assessment: No significant changes in July. The number of RCTs hired and assigned is sufficient to perform planned soil remediation, K East Reactor asbestos removal, and basin deactivation work for the remainder of FY2019. Following a meeting with KBO management RADCON in May, Contract Services and Labor Relations have initiated an extraordinary effort to hire RCTs to support 100K Operations and 100-K Deactivation.	Mitigation Action(s)	FC Date	%	Work with RADCON to ensure KW Basin has sufficient RCTs to support remaining FY2019 scope.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%														
Work with RADCON to ensure KW Basin has sufficient RCTs to support remaining FY2019 scope.	Ongoing	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments		
		Month	Trend			
RL-0041/WBS-041						
RCC-300-296-01: "300-296 Latent Conditions Impact Facility Modification"	Latent conditions, poor visibility in REC cells, or drawing omissions, inconsistencies, or errors impact facility modifications (e.g. mechanical, electrical industrial hygiene/radiological control hazards), resulting in unplanned work and subsequently, cost and schedule impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$294.5K, 256 Days			Risk Event: Based on similar event experienced March 28, unexpected beta-gamma contamination is detected while performing clearance surveys at the 324 Building step-off pad. Following sampling, it was determined to be beta contamination (suspected strontium-90) without a corresponding gamma component, resulting in impacts to the project.		
				Mitigation Action(s)	FC Date	%
				Perform continuous surveying and monitoring	Ongoing	N/A
Mitigation Assessment: Follow-up contamination surveys were performed throughout the front side areas of the 324 Building using strontium controls (developed for room 18) with no contamination detected. Based on the historical discovery of an elevated latent contamination level (NOC, CHPRC-1801178), this risk will be monitored continuously as routine preventative maintenance activities are in place to reduce the likelihood of occurrence.						
Unassigned Risks (Pending ownership of identified risks/opportunities)						
RCC-300-296-04DOE: "300-296 Seismic Event (Force Majeure)"	A "force majeure" incident such as a seismic event results in the loss of structural integrity, causing cost and schedule impacts to the project delivery. CHPRC Comment: CHPRC cannot manage the geological seismic movement that may impact the structural integrity of a building; therefore, this risk is proposed to be transferred to DOE. DOE has "informally" accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted via acknowledgement from the RL contracting officer, it will be removed from the stoplight chart.					
RCC-300-296-23DOE: "300-296 Large Brush Fire (Force Majeure)"	A brush fire ignited on the Hanford Site near the proximity of the 300-296 Waste Site, resulting in cost and schedule delays. CHPRC Comment: This risk was identified as "force majeure" and is beyond the capabilities of CHPRC to manage; therefore, this risk was proposed to be transferred to DOE. DOE has "informally" accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted via acknowledgement from the RL contracting officer, it will be removed from the stoplight chart.					
RCC-300-296-27DOE: "300-296 Requirement Changes Result in Additional Work/Entry Prerequisite Training"	Due to complex-wide or facility-specific changes in requirements outside of CHPRC's ability to manage (e.g., technical documents, procedures, training), project delivery will be impacted in terms of cost and schedule. CHPRC Comment: Changes to DOE orders, federal or state regulations, waste acceptance criteria established by another site contractor, or another DOE site could impact the baseline scope/schedule/cost. Although a contract change is required to incorporate changes to DOE orders, no contract change is required for federal or state regulations or for waste acceptance criteria changes. The potential criteria changes are outside of CHPRC's ability to manage; therefore, this risk was proposed to be transferred to DOE. DOE has "informally" accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted via acknowledgement from the RL contracting officer, it will be removed from the stoplight chart.					

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	9.3	8.1	9.9	(1.2)	-13.3%	(1.9)	-23.0%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$1.2M/-13.3%)

The CM unfavorable schedule variance is related to latent beta contamination issues that continue to hinder the pilot hole scope and the downstream effect it is having on all follow-on work (specifically, converting pilot holes to micropiles and the associated apportioned activity for 324 Facility structural modification operations support). In addition, temporary shoring was delayed due to resource availability of qualified waste loadout personnel.

CM Cost Performance (-\$1.9M/-23.0%)

The CM unfavorable cost variance is related to latent beta contamination issues that continue to hinder the pilot hole scope. Productivity is low, while costs remain the same. Also contributing to the variance is the greater-than-planned labor support by health physics technicians (HPTs), the required number of which to support fieldwork scope was underestimated. Additional support and oversight is required as a result of the alpha contamination (latent conditions) being discovered at the 324 Building. In addition, multiple waste containers and shielding assemblies were received in the period that contributed to the variance, as procurement of these items were planned to be received during the fiscal year.

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	671.5	657.1	625.1	(14.4)	-2.1%	32.0	4.9%	696.9	659.1	34.0	37.8

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$14.4M/-2.1%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance (+\$32.0M/+4.9%)

The favorable cost variance is primarily due to completing confirmatory sampling - no action (CSNA) waste sites early and under cost. In addition, less demolition was required for the K East Sedimentation Basin, and fewer resources are supporting the level of effort (LOE) program management and usage-based services (UBS) scope. Some resources have been diverted to other priority work scope, and some resource sharing has occurred. Offsetting the positive cost variance, the 324 Building Disposition Project had an unfavorable variance related to latent beta contamination found during pilot hole execution. This variance has had a cascading effect on multiple 324 Facility structural modification activities: pilot holing, micropiling, floor coring, temporary shoring, converting pilot holes to micropiles, and the associated apportioned activity under 324 Facility structural modification operations support. In

addition, the delayed completion of the structural modification design has continued, as additional design requirements that were not originally part of their SOW were placed on the subcontractor. These requirements included more extensive building modeling, soil stabilization and building foundation, verifications and testing demonstrations, all of which have contributed to the cumulative schedule variance. Also contributing to the unfavorable variance in the operations management account, there were greater-than-planned labor support by HPTs required as a result of the alpha contamination latent condition(s) discovered at the 324 Building. The number of HPTs required to support REC cleanout and/or airlock entry (step-off pad and additional routine rad surveys) was underestimated at 10 full-time equivalents. In addition, increased project management and support staff to accelerate work scope as well as performing initial structural modifications contributed to the variance.

Variance at Completion (+\$37.8M/+5.4%)

The 100K Closure positive variance at completion (VAC) is primarily due to labor; fewer resources have been supporting the LOE program management and UBS scope. Some resources have been diverted to other priority work scope, and some resource sharing has occurred. Additionally, the VAC is due to completing the CSNA waste sites early and under cost. Offsetting the positive variance, the 324 Building Disposition project experienced greater-than-planned labor support by HPTs. Additional oversight is required as a result of the alpha contamination latent condition discovered at the 324 Building to support REC cleanout and facility modifications was underestimated. In addition, increased project management and support staff to accelerate work scope as well as performing initial structural modifications contributed to the variance. Lastly, a number of unplanned spare parts, acquisitions, and various materials were purchased and/or planned to be acquired in the current fiscal year. As work scope has progressed and evolved, acquisitions were accelerated to achieve alternate field work scope.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0041 Spending Forecast	148.3	126.6	21.8
Incremental Scope Change Pending Change Management	0.0	0.6	(0.6)
RL-0041 – Total	148.3	127.2	21.1

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The FY2019 projected funding for project breakdown structure (PBS) RL-0041 is \$148.3 million. The projected funding includes carryover from FY2018 and new budget authority. FY2019 funding aligns with the RL 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-016-85A	Complete Remote Excavation of 300-296 Waste Site	9/30/2021	5/27/2021	On schedule.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Prepare Documented Safety Analysis (DSA)/Technical Safety Requirement (TSR) Revision Safety Evaluation Report (SER)	5/17/2019(A)	7/26/2019
Safety Review Board Review SER for DSA/TSR Revision	7/27/2019	8/2/2019
RL Issue SER for 324 DSA/TSR	8/3/2019	8/9/2019
RL Review Emergency Planning Hazards Assessment (EPA) Draft	8/9/2019	8/23/2019
RL Approval EPA Final	9/11/2019	9/23/2019
DOE Independent Design Review – Issue for Construction Structural Modification	8/21/2019	9/10/2019

Section G

Fast Flux Test Facility Closure (RL-0042)

CH2MHILL
Plateau Remediation Company



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

July 2019
CHPRC-2019-07, 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

- Started routing for approval the C-670 fire pump controller acceptance test plan (ATP).
- Continued review of the updated C-670 fire pump controller replacement work package.
- Developed and approved an updated P-16 engineering change request (ECR) to correct an error identified during the previous effort to disconnect the P-16 pump control circuits. A revision to the ECR was developed and approved that reflected the as-found conditions.
- Drafted the work change notice (WCN) to the P-16 control circuit disconnection work package to incorporate changes from the revised ECR and routed for review.
- Started routing a WCN to the P-16 well pump variable frequency drive installation work package for approval.
- Continued design authority review of ATP for installation of the P-16 well pump variable frequency drive.

MAJOR ISSUES

Issue

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

Corrective Action

An alternative option was identified that involves replacing diesel fire pump P-61 in Building 481A; however, this 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

A determination on how to proceed is pending discussion and direction from the U.S. Department of Energy, Richland Operations Office.

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	0.1	0.1	0.1	0.0	0.0%	0.0	-10.1%

Numbers are rounded to the nearest \$0.1M

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

The schedule variance is within reporting thresholds.

CM Cost Performance: (+\$0.0M/-10.1%)

The 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	27.8	27.8	23.4	0.0	0.0%	4.4	15.8%	28.1	24.0	0.6	4.2

Numbers are rounded to the nearest \$0.1 million

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

The schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$4.4M/+15.8%)

The CTD favorable cost variance is due to reduction in surveillance and maintenance requirements at FFTF as the facility was deactivated. Efficient use of resources to support deactivation activities within available time further aided this favorable cost variance.

Variance at Completion: (+\$4.2M/+14.9%)

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS VS. SPEND FORECAST (\$M)

RL-0042 FFTF Closure	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0042 Spending Forecast	3.3	1.9	1.4

Numbers are rounded to the nearest \$0.1 million

Funds Analysis

Fiscal year (FY) 2019 funding for project breakdown structure RL-0042 reduced in July from \$4.3 million to \$3.3 million due to the U.S. Department of Energy, Richland Operations Office (RL) holding back \$1.0 million with plans to re-obligate it in FY2020. The spending forecast is \$1.9 million, which includes support due to electrical component failures and configuration challenges, interest by regulators requiring additional inspections, and a recent failure of the water system/water piping.

Critical Path Analysis

Critical path analysis is not applicable to this project. The remaining contract scope is the performance of interim surveillance and maintenance activities pending facility disposition.

MILESTONE STATUS

None currently identified.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

None currently identified.

Appendix A

Contract Performance

Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



July 2019
CHPRC-2019-07, 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 / 06 / 24									
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019 / 07 / 21									
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18										
5. CONTRACT DATA																
a. QUANTITY 1	b. NEGOTIATED COST 5,778,403	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 575,567	d. TARGET PROFIT/FEE 254,770	e. TARGET PRICE 6,033,173	f. ESTIMATED PRICE 6,477,449	g. CONTRACT CEILING 6,033,173	h. ESTIMATED CONTRACT CEILING 6,477,449	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		6,159,401			c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)									
b. WORST CASE		6,238,162														
c. MOST LIKELY		6,222,679	6,353,970	131,291												
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		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	3,380	1,434	4,430	-1,945	-2,996	1,104,415	1,089,266	1,190,566	-15,149	-101,301	0	0	0	1,122,883	1,227,032	-104,149
RL-0012 SNF Stabilization & Disp	1,398	1,347	1,332	-51	15	757,558	756,898	727,152	-661	29,746	0	0	0	761,100	730,108	30,991
RL-0013 Solid Waste Stab & Disp	12,304	11,640	11,123	-664	516	1,455,358	1,451,333	1,359,976	-4,025	91,357	0	0	0	1,485,621	1,392,098	93,523
RL-0030 Soil & Water Rem-Grndwtr/Vadose	10,163	9,935	7,808	-228	2,127	1,622,769	1,618,823	1,559,757	-3,946	59,066	0	0	0	1,646,654	1,583,339	63,315
RL-0040 Nuc Fac D&D - Remainder Hanfrd	2,913	2,502	4,644	-411	-2,143	547,548	540,685	524,153	-6,864	16,531	0	0	0	555,821	543,764	12,057
RL-0041 Nuc Fac D&D - RC Closure Proj	9,285	8,052	9,904	-1,233	-1,852	671,533	657,112	625,091	-14,420	32,021	0	0	0	696,927	659,103	37,823
RL-0042 Nuc Fac D&D - FTF Proj	125	125	138	0	-13	27,793	27,793	23,401	0	4,392	0	0	0	28,137	23,955	4,182
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	39,567	35,034	39,380	-4,533	-4,346	6,186,973	6,141,909	6,010,096	-45,065	131,812	0	0	0	6,297,144	6,159,401	137,743
f. MANAGEMENT RESERVE														63,278		
g. TOTAL	39,567	35,034	39,380	-4,533	-4,346	6,186,973	6,141,909	6,010,096	-45,065	131,812	0	0	0	6,360,422		
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																
a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE														6,360,422	6,159,401	201,021

*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 / 06 / 24		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019 / 07 / 21		
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	1,045	1,030	976	-15	53	96,191	95,103	88,662	-1,088	6,441	0	0	0	98,812	91,232	7,580
35 - Business Services	0	0	0	0	0	476,879	476,879	453,596	0	23,283	0	0	0	476,879	453,596	23,283
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	119	119	48	0	70	8,988	8,988	5,395	0	3,592	0	0	0	9,314	5,643	3,671
3B - PFP Closure Project	3,380	1,434	4,430	-1,945	-2,996	1,015,775	1,000,626	1,109,502	-15,149	-108,876	0	0	0	1,034,244	1,145,968	-111,724
3C - Waste & Fuels Management Project	9,462	9,036	8,467	-426	570	1,290,667	1,286,640	1,199,416	-4,027	87,225	0	0	0	1,314,083	1,224,389	89,694
3D - Soil & Groundwater Remediation	9,088	8,875	6,823	-213	2,052	1,424,756	1,421,898	1,363,461	-2,858	58,438	0	0	0	1,445,938	1,384,411	61,527
3G - K Basin Oper & Plateau Remediation Project	5,955	5,607	5,390	-348	217	1,097,733	1,092,458	1,030,767	-5,276	61,691	0	0	0	1,113,927	1,048,215	65,711
3H - River Risk Management Project	7,510	6,336	8,479	-1,174	-2,143	288,298	278,495	290,839	-9,803	-12,344	0	0	0	307,725	317,384	-9,659
3K - Central Plateau Risk Reduction	3,009	2,597	4,767	-411	-2,169	486,575	479,711	467,967	-6,864	11,745	0	0	0	495,111	488,070	7,041
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)	39,567	35,034	39,380	-4,533	-4,346	6,186,973	6,141,909	6,010,096	-45,065	131,812	0	0	0	6,297,144	6,159,401	137,743
f. MANAGEMENT RESERVE														63,278		
g. TOTAL	39,567	35,034	39,380	-4,533	-4,346	6,186,973	6,141,909	6,010,096	-45,065	131,812	0	0	0	6,360,422		

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE													DOLLARS IN THOUSANDS				Form Approved OMB No. 0704-0188				
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: 2019/06/24 b. TO: 2019/07/21											
5. CONTRACT DATA			a. ORIGINAL NEGOTIATED COST 4,312,366		b. NEGOTIATED CONTRACT CHANGE \$1,466,037		c. CURRENT NEGOTIATED COST (A + B) \$5,778,403		d. ESTIMATED COST AUTH UNPRICED WORK \$575,567		e. CONTRACT BUDGET BASE (C + D) \$6,353,970		f. TOTAL ALLOCATED BUDGET \$6,360,422		g. DIFFERENCE (E - F) (\$6,452)						
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2019		k. CONT COMPLETION DATE 9/30/2019			l. EST COMPLETION DATE 9/30/2019											
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)	TOTAL BUDGET (19)	
a. PM BASELINE (BEGIN OF PERIOD)			6,147,407	39,567	53,750	49,101	4,260	3,005	53	0	3,391,477	391,653	471,323	504,826	485,028	470,649	574,870	7,319	0	6,297,144	
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																					
BCR-011C-19-002R1 - Allocation of PBS RL-0011 CAP 2 Project DOE Contingency																				0	0
BCRA-PRC-19-017R0 - HPIC Updates July FY2019																				0	0
c. PM BASELINE (END OF PERIOD)			6,186,973	39,567	53,750	49,101	4,260	3,005	53	0	3,391,477	391,653	471,323	504,826	485,028	470,649	574,870	7,319	0	6,297,144	
7. MANAGEMENT RESERVE																					63,278
8. TOTAL																					6,360,422

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 / 06 / 24	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 07 / 21	
		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 AUG 2019 (4)	+2 SEPT 2019 (5)	+3 OCT 2019 (6)	+4 NOV 2019 (7)	+5 DEC 2019 (8)	+6 JAN 2020 (9)	FEB 2020 (10)	MAR 2020 (11)	APR 2020 (12)	MAY 2020 (13)	ATCOMPLETE (14)		
300 - Office of the President	14	895	7	7	0	0	0	0	0	0	0	0	0	0	909
303 - Internal Audit	6	585	5	5	0	0	0	0	0	0	0	0	0	0	595
304 - General Counsel	5	539	4	4	0	0	0	0	0	0	0	0	0	0	547
31 - Communications	9	1195	8	8	0	0	0	0	0	0	0	0	0	0	1212
32 - Safety Health Security & Quality	54	8336	56	56	0	0	0	0	0	0	0	0	0	0	8448
34 - Env Program & Strategic Plng	44	5718	44	39	2	1	0	0	0	0	0	0	0	0	5805
35 - Business Services	57	7952	56	60	0	0	0	0	0	0	0	0	0	0	8068
36 - Prime Contract & Proj Integr	38	4298	40	40	0	0	0	0	0	0	0	0	0	0	4378
37 - Resource Mgmt & Strategic Intg	39	3234	43	44	0	0	0	0	0	0	0	0	0	0	3321
38 - Project Technical Services	37	6343	31	35	0	0	0	0	0	0	0	0	0	0	6410
3B - PFP Closure Project	211	53300	204	204	231	198	209	209	98	10	0	0	0	0	54652
3C - Waste & Fuels Management Project	377	57443	371	364	10	6	5	5	4	1	1	1	0	0	58213
3D - Soil & Groundwater Remediation	261	42167	258	243	34	8	6	7	6	6	5	4	1	0	42744
3G - K Basin Oper & Plateau Remediation Project	243	36283	242	237	29	7	4	1	14	24	3	1	0	0	36846
3H - River Risk Management Project	227	8424	226	226	5	1	1	1	1	1	0	0	1	0	8886
3K - Central Plateau Risk Reduction	207	19513	213	218	35	29	11	8	4	3	0	0	0	0	20033
g. TOTAL DIRECT	1830	256223	1810	1789	346	250	227	232	127	44	10	6	2	261065	

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) 2019/06/24			
b. LOCATION (Address and ZIP Code) Richland, WA 99354		b. NUMBER DE-AC06-08RL14788		b. PHASE Base		b. TO (YYYY/MM/DD) 2019/07/21			
		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:	39,567	35,034	39,380	(4,533)	-11.5%	(4,346)	-12.4%	0.89	0.89
Cumulative:	6,186,973	6,141,909	6,010,096	(45,065)	-0.7%	131,812	2.1%	0.99	1.02
	BAC	EAC	VAC in \$	VAC in %	TCPI				
At Complete:	6,297,144	6,159,401	137,743	2.2%	1.04				
Explanation of Variance/Description of Problem:									
<p>Current Period Schedule and Cost Variance: The current month's negative schedule variance (SV) is primarily due to project breakdown structure (PBS) RL-0011 project's deliberate rate of demolition and warm weather impacts. The PFP team completed CSZ 3 and tunnels 1, 2, 3, and 6 but did not complete zones 3, 4, and 7 or CSZs 4.1 and 4.2. The schedule variance is also an artifact of the April Baseline Change Request (BCR) to incorporate the impact of stop works, demolition and decontamination (D&D) Labor Asset Management Program movement, and unexpected winter weather, which added a hotel load for 3.5 months in which all performance was taken up front.</p> <p>Also contributing to the negative SV is PBS RL-0041 related to latent beta contamination issues in the 324 Building that continued to hinder the pilot hole scope and the downstream effect it is having on all follow-on work (specifically, converting pilot holes to micropiles and the associated apportioned activity for 324 Facility structural modification operations support). In addition, installation of temporary shoring was delayed due to resource availability of qualified waste loadout personnel.</p> <p>The current month's negative cost variance (CV) is primarily due to PBS RL-0011 attributed to labor and subcontract costs for lagging performance on demolition activities. Demolition of the remaining PFP structures has been slower than planned due to warm weather impacts and a deliberate rate of demolition and debris loadout. The deliberate rate of demolition is appropriate to allow for the proper sequencing and critical consideration of activities for safe performance. Lagging demolition performance has necessitated the extension of level of effort demolition support activities beyond the budgeted baseline.</p> <p>Also contributing to the negative CV is PBS RL-0040 due to an increase in labor resources (D&D workers and insulators) needed to support the removal of the 200 West steam lines. Also, the discovery of mercury on the seventh floor of the REDOX silo gallery continues to halt progress as air sampling continues and worker safety documentation is updated to account for the presence of mercury.</p> <p>Additionally, PBS RL-0041 contributed to the negative CV related to latent beta contamination issues in the 324 Building that continued to hinder the pilot hole scope. Additional support and oversight is required as a result of the alpha contamination (latent conditions) being discovered at the 324 Building.</p> <p>The negative CV is partially offset by PBS RL-0030 groundwater modeling team supporting the 200-ZP-1 record of decision modification has become more efficient in the second year of this project and identified a suitable modeling run earlier than expected to support conversations with EPA and the State of Washington, Department of Ecology.</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>									

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

Corrective Action:

Current Period Schedule: No corrective actions have been identified.

Current Period Cost: No corrective actions necessary.

Cumulative Schedule: N/A

Cumulative Cost: N/A

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

CHPRC continues to track completion of the contract within budget and is currently projecting a variance at completion of \$137.7 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$201.0 million. For July, the project was 11.5 percent behind schedule and 12.4 percent over planned cost. For the contract to date, the project was 0.7 percent behind schedule and 2.1 percent under planned cost.

There was no change in the difference between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of July. The current negative delta is due to the request from PRC RL Contracting Officer (CO), documented in Correspondence No.1704418A, to implement a \$7.1 million drawdown for contingency in BCR-011C-17-013R0. The RL CO has not incorporated the directed \$7.1 million contingency drawdown into the PMB CBB, resulting in the negative delta. There was also an adjustment for \$0.6 million to align AUW to the global settlement.

There were two BCRs for the month of July and they did not impact the PMB.

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

Variance in Performance BAC and EAC: The variance at complete (VAC) between the BAC and EAC this month is a +\$137.7 million, +2.2% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

CPS - In Process		
	Total Authorized Unpriced Work	\$575,567
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	Grand Total Adjustments	\$575,567

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

Undistributed Budget Activity

BCR Number	Title	PBS	Fiscal Year	UB
N/A	N/A	N/A	2019	\$0

There was no change to UB in July.

Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
N/A	N/A	N/A	2019	\$0

There was no change to MR in July.

Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2019	\$0

There was no change to fee in July.

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

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

Prepared by:
Project Control Staff

Date:
08/21/2019

Approved by:

Date:

Appendix B

Project Services and Support (WBS 000)



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

M. A. Wright
Vice President for
Project Technical
Services

July 2019
CHPRC-2019-07, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

D. J. Henderson
Director of
Communications

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

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

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

This section is reported quarterly.

Appendix C

Capital Asset Projects

CH2MHILL
Plateau Remediation Company



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

July 2019
CHPRC-2019-07, 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



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

July 2019
CHPRC-2019-07, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Progress is on hold for work associated with critical decision (CD)-4 closure to remove the final glovebox from the 234-5Z Building during demolition. The remaining glovebox (HA-46) has been staged until the area of the 234-5Z Building is demolished. The total gloveboxes removed to date is 173 and is 99 percent complete.

The following are key metrics associated with this Capital Asset Project (CAP).

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

KEY ACCOMPLISHMENTS

RL-0011_C1 Accomplishments:

- The project is on hold pending completion of lower-risk demolition. Glovebox HA-46 will be removed during higher-risk demolition.

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 July.				
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 July.				
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 July.				
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)				
No critical risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in July.				
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in July.				

CRITICAL PATH ANALYSIS

The PFP critical path schedule begins with demolition completion of zones 5 and 6 second floor and duct level in the 234-5Z facility. After completion of 234-5Z low-risk demolition and the associated formal post-job and lessons learned, activities for remote mechanical C and A process lines demolition and debris disposition and glovebox HA-46 loadout will begin. The 234-5Z demolition is projected for completion by October 15, 2019. These completion activities will lead to a CD-4 declaration and confirmation of the completion worksheet. The CD-4 closeout completion milestone is scheduled for January 7, 2020.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	*Due Date	**Forecast Date	Status/ Comment
CAP.1	Removal of 174 gloveboxes from 234-5Z	11/30/2017	01/07/2020	The CAP 1 project forecasted completion date is January 7, 2020.

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Nothing to report at this time.

DOE ACTIONS / DECISIONS

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

Appendix C.1

RL-0011.C1 – PFP D&D

(Removal of 174 Gloveboxes from 234-5Z)

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



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

July 2019
CHPRC-2019-07, 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 / 06 / 24	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 07 / 21	
		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 344,856	g. CONTRACT CEILING 340,865	h. ESTIMATED CONTRACT CEILING 344,856	i. DATE OF OTB/OTS (YYYYMMDD)

6. ESTIMATED COST AT COMPLETION			7. AUTHORIZED CONTRACTOR REPRESENTATIVE		
	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)	a. NAME (Last, First, Middle Initial) Underwood, Teresa	b. TITLE Prime Contract Compliance Manager
a. BEST CASE	332,585			c. SIGNATURE	
b. WORST CASE	334,991			d. DATE SIGNED (YYYYMMDD)	
c. MOST LIKELY	334,978	330,987	-3,991		

CAPN.PBS Control Account.PARS 2 WBS (2) ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION				
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)								
RL-0011 Nuclear Mat Stab & Disp PFP																		
RL_0011_C1.02 Maintain Safe & Compliant PFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
RL_0011_C1.05 Disposition PFP Facility	0	0	0	0	0	235,514	235,495	259,792	-19	-24,296	0	0	0	235,514	259,798	-24,283		
RL_0011_C1.06 Project Management & Support	0	0	0	0	0	11,990	11,990	12,477	0	-487	0	0	0	11,990	12,477	-487		
RL_0011_C1.90 Usage Based Services Distributions -PBS RL-11	0	0	0	0	0	7,221	7,221	7,731	0	-510	0	0	0	7,221	7,731	-510		
RL_0011_C1.98 Ramp-up and transition	0	0	0	0	0	19,399	19,399	19,253	0	147	0	0	0	19,399	19,253	147		
RL_0011_C1.99 PBS RL-11 UBS, G-n-A, Direct Distrib	0	0	0	0	0	41,028	41,028	33,328	0	7,700	0	0	0	41,028	33,328	7,700		
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
d. UNDISTRIBUTED BUDGET	0																	
e. SUBTOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,585	-17,433		
f. MANAGEMENT RESERVE	2,393																	
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545	332,585	-15,040		
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																		
a. VARIANCE ADJUSTMENT	0																	
b. TOTAL CONTRACT VARIANCE	-19									-17,446			317,545			332,585		-15,040

*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 / 06 / 24	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 07 / 21	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)						
35 - Business Services	0	0	0	0	0	60,427	60,427	52,580	0	7,847	0	0	0	60,427	52,580	7,847
3B - PFP Closure Project	0	0	0	0	0	254,725	254,706	279,999	-19	-25,293	0	0	0	254,725	280,005	-25,280
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET														0	0	0
e. SUBTOTAL (Performance Measurement Baseline)	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,585	-17,433
f. MANAGEMENT RESERVE														2,393		
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545		

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE										DOLLARS IN THOUSANDS						Form Approved OMB No. 0704-0188			
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA			2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2019/06/24 b. TO: 2019/07/21								
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 9/30/2019		k. CONT COMPLETION DATE 9/30/2019			l. EST COMPLETION DATE 9/30/2019									
6. PERFORMANCE DATA																			
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)									UNDISTRIB BUDGET (17)	TOTAL BUDGET (18)
			+1 Aug-19 (4)	+2 Sep-19 (5)	+3 Oct-19 (6)	+4 Nov-19 (7)	+5 Dec-19 (8)	+6 Jan-20 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)				
a. PM BASELINE (BEGIN OF PERIOD)	315,152	0	0	0	0	0	0	0	0	302,288	4,109	7,749	890	116	0	0	0	315,152	
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	0	302,288	4,109	7,749	890	116	0	0	0	315,152	
7. MANAGEMENT RESERVE																		2,393	
8. TOTAL																		317,545	

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 / 06 / 24		b. TO (YYYYMMDD) 2019 / 07 / 21		
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 AUG 2019 (4)	+2 SEPT 2019 (5)	+3 OCT 2019 (6)	+4 NOV 2019 (7)	+5 DEC 2019 (8)	+6 JAN 2020 (9)	FEB 2020 (10)	MAR 2020 (11)	APR 2020 (12)	MAY 2020 (13)	ATCOMPLETE (14)		
35 - Business Services	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
3B - PFP Closure Project	0	15441	0	0	1	0	0	0	0	0	0	0	0	0	15442
g. TOTAL DIRECT	0	15458	0	0	1	0	0	0	0	0	0	0	0	0	15459

CLASSIFICATION (When Filled In)										
CONTRACT PERFORMANCE REPORT FORMAT 5 - Explanations and Problem Analysis									FORM APPROVED OMB No. 0704-0188	
1. CONTRACTOR		2. CONTRACT		3. PROGRAM				4. REPORT PERIOD		
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME MPB - RL_0011_C1 - PFP D&D (ARRA/Base)				a. FROM (YYYYMMDD) 2019/06/24		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE				b. TO (YYYYMMDD) 2019/07/21		
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE No X Yes				(YYYYMMDD) 2009 / 09 / 18		
Direct Projects										
5. Evaluation		Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:		0	0	0	0	0	0	0	0	0
Cumulative:		315,152	315,133	332,579	-19	0.0%	-17,446	-5.5%	1.00	0.95
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		315,152	332,585	-17,433	-5.5%	0	3.12			
Explanation of Variance/Description of Problem:										
Current Period:										
Schedule Variance: The schedule variance is within threshold.										
Cost Variance: The current month cost variance is within threshold.										
Cumulative To Date:										
Schedule Variance: Within Threshold										
Cost Variance: Within Threshold										
Impact:										
Impact: The RL-011.C1 Plutonium Finishing Plant (PFP) project baseline completion date is November 19, 2016. The current schedule reflects a completion date of January 7, 2020.										
Cost Impact: Cost variance is not considered recoverable as there is only a small amount of scope remaining to complete the Key Performance Parameters (KPP).										
Corrective Action:										
None at this time										
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 July. The Total Allocated Budget (TAB) is based on the DOE-HQ approved DOE PBS RL-0011-C1 Project Execution Plan Appendix D. The Appendix D table established a total project value of \$330.9M, based on a mix of actuals to-date (through ~FY2014) and a to-go forecast for project completion. The total project value reflected in the DOE PEP exceeded the Contract Budget Base (CBB) reflected in Plateau Remediation Contract (PRC) due to negative cost performance through ~FY2014 against the PRC negotiated cost for the C1 project. DOE elected to not incorporate the total project value reflected in the DOE PEP into the PRC to maintain the negative cost variance reported by CHPRC. This created the continuing difference between the TAB and CBB which is currently ~\$13.4M.										
1. Schedule Margin Analysis: There is no schedule margin associated with the RL-011.C1 capital asset account.										
2. IMS Data dictionary Changes: None in the month of July.										
3. Forecast Schedule with No Baseline: None in the month of July.										
4. UB Balance: None in the month of July.										
5. Negative Actual Cost of Work Performed (ACWP): None in the month of July.										
6. Earned Actual Cost (EAC) Analysis: Best Case = \$332,585; Most Likely = \$334,978; Worst Case = \$334,991. The Best Case EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no use of management reserve. The Most Likely EAC is the EAC reported this month plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will remain at completion but all available management reserve is used (e.g., all identified risks realized). The Worst Case EAC is the ACWP plus the ETC or Budgeted Cost of Work Remaining if greater plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will be eroded at completion and all available management reserve is used (e.g., all identified risks realized), plus the scope identified in the Trend Log that is not in the EAC. The Best/Worst and Most Likely EAC values are documented in the Format 1 Report.										
7. Negative Cost Variance (CV) > Variance at Completion (VAC): Scope to perform size reduction efforts on the high gram glovebox removal efforts was estimated to be completed in a much shorter time frame with much fewer resources than originally planned causing the large cost variance. The EAC is reflective of the current approach to perform the remaining work scope.										
8. Management Reserve Transactions: None in the month of July.										
9. Freeze Period Changes: None in the month of July.										
10. Retroactive Changes: None in the month of July.										
11. Earned Value Types Changes: None in the month of July.										
Prepared by: Jessica Mares		8/20/2019			Approved by:			Date:		

Appendix C.2

Capital Asset Project

RL-0011.C2 - Demolition of PFP Facilities



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

July 2019
CHPRC-2019-07, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In July, the Plutonium Finishing Plant (PFP) team completed demolition and debris disposition of Core Stability Zone (CSZ) 3 and tunnels 1, 2, 3 and 6. Article 32's stop work was verbally lifted, and documentation was drafted for signature. Demolition began in Zone 4 as well as the duct level down to the second floor in zones 5 and 6. A new material balance area was implemented following the installation of updated postings, security requirements, and project notifications. Fifty-seven (57) containers of low-risk demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal. Efficiency efforts to expand the ERDF container loading area progressed through the month.

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

KEY ACCOMPLISHMENTS

RL-0011_C2 Accomplishments:

- Completed demolition and debris loadout of CSZ 3 and tunnels 1, 2, 3, and 6.
- Started demolition on Zone 4 as well as the duct level down to the second floor in zones 5 and 6.
- Continued work to expand ERDF container area to allow more efficient demolition waste loading and shipping.
- Shipped 57 containers of low-level debris to ERDF.

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

Unmitigated Risk Impacts	Assessment		Comments															
	Month	Trend																
RL-0011/WBS-011.OA																		
Explanation of major changes to the project monthly stoplight chart:																		
Risk PFP-P3-003, <i>Weather Impacts During 234-5Z Demolition</i> , was realized in July due to the summer weather impacts. Risk PFP-P-007, <i>Demolition Equipment Reliability and Modification</i> , was added as a risk trigger in July.																		
Realized Risks (Risks that are currently impacting project cost/schedule)																		
PFP-P3-003: <i>Weather Impacts During 234-5Z Demolition</i>	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms will result in in-scope unplanned work and schedule impacts to the project. Risk Handling Strategy: Control Probability: Very Likely (>90%) Worst Case Impacts: \$0, 20 days	● 	Risk Event: Summer weather brought high temperatures that limited outside fieldwork as well as wind speeds greater than 30 mph and gusts above 40 mph. These events impacted demolition status, and the project moved to a tropical shift schedule to reduce potential impacts. Productivity has been impacted by the weather events and resulting shift change. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Risk Recovery Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Move workforce to "tropical" shift schedule</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100</td> </tr> </tbody> </table> Risk Action Assessment: This risk was realized in July. Wind has impacted demolition progress, but surveys are conducted more efficiently, resulting in less time to recover from wind events and allowing work to resume sooner following an event. The tropical shift allows work crews to make early morning zone entry to avoid heat impact.	Risk Recovery Action(s)	FC Date	%	Move workforce to "tropical" shift schedule	Complete	100									
Risk Recovery Action(s)	FC Date	%																
Move workforce to "tropical" shift schedule	Complete	100																
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.)																		
No critical risks identified in July.																		
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																		
No high risk threat values identified in July.																		
FY2019 Risk Triggers (Risk could be realized in FY2019)																		
PFP-P-004: <i>Stop Work From Concerned Workers</i>	Concerned workers result in a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 52 days	● 	Risk Trigger: During PFP demolition activities, an increase in stop works could result in delays. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Mitigation action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Provide new maps with entry/exit instructions when boundaries are revised.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> Mitigation Assessment: In July, the risk occurrence probability level was decreased from very likely to likely and the confidence trend increased as the ongoing mitigation actions are improving morale and worker understanding of the scope of work. Increased communication and worker involvement to avoid confusion and concern in an effort 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																
PFP-P-007: <i>Demolition Equipment Reliability and Modification</i>	Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment, impact the demolition of PFP. Equipment modification, leasing, or replacement will be required resulting in cost and schedule impacts. Risk Handling Strategy: Control Probability: Very Likely (>90%) Worst Case Impacts: \$1.0M, 48 days	● 	Risk Trigger: Ineffective demolition equipment attachments, mechanical failures, or contamination of clean equipment impact the demolition of PFP. Equipment modification, leasing, or replacement would be required, resulting in cost and schedule impacts. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Mitigation Action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Negotiate buy-out of leased equipment</td> <td style="text-align: center;">11/30/19</td> <td style="text-align: center;">33%</td> </tr> </tbody> </table> Mitigation Assessment: This item was added to the stoplight chart as a risk trigger in July. Additional leased equipment that was contaminated in the December 2017 event has been identified. Procurement is working with the leasing vendors to establish buy-out agreements.	Mitigation Action(s)	FC Date	%	Negotiate buy-out of leased equipment	11/30/19	33%									
Mitigation Action(s)	FC Date	%																
Negotiate buy-out of leased equipment	11/30/19	33%																

Unmitigated Risk Impacts	Assessment		Comments									
	Month	Trend										
RL-0011/WBS-011.OA												
PFP-P5-006: <i>Additional Soil Removal is Required</i>	Prior to the placement of the cover cap, the additional soil added for contamination control is required to be dispositioned, resulting in cost and schedule delays to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 54 days	 	Risk Trigger: Additional soil above planned value is required to be removed due to contamination or regulatory concerns. <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Engage early with U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Collect and provide radiological mapping data to RL.</td> <td>TBD</td> <td>TBD</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in July. There has been continued communication with RL on required soil removal. No additional soil above planned quantity is required at this time. RL has requested radiological data to help determine that no additional soil disposition is required.	Mitigation action(s)	FC Date	%	Engage early with U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.	Complete	100	Collect and provide radiological mapping data to RL.	TBD	TBD
Mitigation action(s)	FC Date	%										
Engage early with U.S. Department of Energy, Richland Operations Office (RL) to identify a path forward associated with the additional soil.	Complete	100										
Collect and provide radiological mapping data to RL.	TBD	TBD										
Unassigned Risks (Pending ownership of identified threats/opportunities)												
No unassigned risks identified in July.												

CRITICAL PATH ANALYSIS

The PFP critical path schedule begins with demolition completion of zones 5 and 6 second floor and duct level. After completion of 234-5Z low-risk demolition and the associated formal post-job and lessons learned, activities for remote mechanical C and A process lines demolition and debris disposition and glovebox HA-46 loadout will begin. The 234-5Z demolition is projected for completion by October 15, 2019. The 236-Z Canyon demolition will also resume with completion anticipated by December 17, 2019, 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 mid-March 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	3/4/2020	Demolition on 234-5Z is progressing.

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

**Forecast date reflects CD-4 completion date (does not include contingency).

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

DOE ACTIONS / DECISIONS

Working with RL on CD-4 closure actions.

Appendix C.2

RL-0011.C2 - Demolition of PFP Facilities

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



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

July 2019
CHPRC-2019-07, Rev. 0
Contract DE-AC07-08RL14788
Deliverable C.3.1.3.1 - 1

**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 / 06 / 24		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2019 / 07 / 21		
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18					

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)						
3B - PFP Closure Project	3,035	1,136	3,657	-1,900	-2,521	107,573	92,945	134,308	-14,628	-41,362	0	0	0	125,742	163,846	-38,104
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)	3,035	1,136	3,657	-1,900	-2,521	107,573	92,945	134,308	-14,628	-41,362	0	0	0	125,742	163,846	-38,104
f. MANAGEMENT RESERVE														13,535		
g. TOTAL	3,035	1,136	3,657	-1,900	-2,521	107,573	92,945	134,308	-14,628	-41,362	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: 2019/06/24 b. TO: 2019/07/21													
5. CONTRACT DATA											a. ORIGINAL NEGOTIATED COST 51,683		b. NEGOTIATED CONTRACT CHANGE \$10,101		c. CURRENT NEGOTIATED COST (A + B) \$61,784		d. ESTIMATED COST AUTH UNPRICED WORK \$70,435		e. CONTRACT BUDGET BASE (C + D) \$132,220		f. TOTAL ALLOCATED BUDGET \$139,277		g. DIFFERENCE (E - F) (\$7,058)	
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008			j. PLANNED COMPL DATE 9/30/2019			k. CONT COMPLETION DATE 9/30/2019			l. EST COMPLETION DATE 9/30/2019												
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)	TOTAL BUDGET (19)						
			+1 Aug-19 (4)	+2 Sep-19 (5)	+3 Oct-19 (6)	+4 Nov-19 (7)	+5 Dec-19 (8)	+6 Jan-20 (9)																
a. PM BASELINE (BEGIN OF PERIOD)	104,538	3,035	5,161	5,689	4,260	3,005	53	0	0	0	6,090	29,182	19,407	628	63,116	7,319	0	125,742						
b. BASELINE CHANGES AUTH DURING REPORT PERIOD None at this time.															0	0		0						
c. PM BASELINE (END OF PERIOD)	107,573	3,035	5,161	5,689	4,260	3,005	53	0	0	0	6,090	29,182	19,407	628	63,116	7,319	0	125,742						
7. MANAGEMENT RESERVE																		13,535						
8. TOTAL																		139,277						

**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 / 06 / 24	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 07 / 21	
		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 AUG 2019 (4)	+2 SEPT 2019 (5)	+3 OCT 2019 (6)	+4 NOV 2019 (7)	+5 DEC 2019 (8)	+6 JAN 2020 (9)	FEB 2020 (10)	MAR 2020 (11)	APR 2020 (12)	MAY 2020 (13)	ATCOMPLETE (14)		
3B - PFP Closure Project	170	3766	158	158	185	157	156	155	75	1	0	0	0	4810	
g. TOTAL DIRECT	170	3766	158	158	185	157	156	155	75	1	0	0	0	4810	

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) 2019/06/24		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788			b. PHASE			b. TO (YYYYMMDD) 2019/07/21		
		c. TYPE CPAF	d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2009 / 09 / 18					
Direct Projects										
5. Evaluation		Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:		3,035.4	1,135.7	3,656.5	-1,899.7	-62.6%	-2,520.8	-222.0%	0.37	0.31
Cumulative:		107,573.3	92,945.4	134,307.9	-14,627.9	-13.6%	-41,362.5	-44.5%	0.86	0.69
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		125,742.1	163,846.4	-38,104.4	-30.3%	0	1.11			
Explanation of Variance/Description of Problem:										
Current Month:										
Schedule Variance: The Current Month (CM) unfavorable schedule variance is primarily attributed to the impact of summer heat and the project's deliberate approach to complete 235-Z low-risk demolition and load-out activities.										
Cost Variance: The CM unfavorable cost variance is primarily attributed to the accrual of labor costs and lagging demolition and debris load-out activities.										
Cumulative to Date:										
Schedule Variance: The cumulative schedule variance is due to delayed completion of low risk work scope due to implementation of revised approach, warm weather impacts, and a deliberate approach to demolition activities.										
Cost Variance: The cumulative negative cost variance is associated with MSA resources arriving to support PFP demolition that were planned as P/Q shift support. Additionally, Readiness Assessment activities lagged due to a delay in the start of 236-Z Demolition and increased requirements to show readiness resulting in increased costs due to additional time and effort required from subcontracted and direct labor resources. The apportioned project management activities (i.e. project oversight and planning) and support activities are ongoing, while a delay in the discrete field work is resulting in minimal apportioned BCWP. Demolition mobilization activities took longer than originally assumed because of recommendations made during the readiness assessment and purchasing unplanned PBS fixative to support 236-Z demolition. In addition, significant winter weather impacts (i.e., snow, wind, freezing rain, etc.) have been recognized on the Hanford Site. Site closures, freezing temperatures and significant snowfall that required clearing of the demolition zone rather than performing physical demolition on the facilities while a constant staff provides demolition support services is a contributing factor. Unplanned Management Assessment efforts for the 234-5Z and 291-Z facilities took longer than originally assumed. Impacts associated with the Stop Work that was initiated by the HAMTC union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As the project gets further into the demolition phase of the PRF Canyon, increased utilization of Personnel Protective Equipment to align with the original plan as well as increased material procurements to align with the scope being performed (i.e., P-100 filters, Labounty Shear, additional fixative, etc.) are also contributing to this variance. An adjustment to the General & Administrative (G&A) Rate for FY2017 resulted in a reduction to the Performance Measurement Baseline (PMB) of \$463K. Finally, impacts from a contamination event that occurred on Friday, December 15, 2017, swing shift where RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis was conducted and resumption actions identified.										
This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
Impact:										
Schedule Impact: Completion of all demolition activities are forecast to occur in December 2019. 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 slab on grade date is 1/8/2020.										
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 July. The current negative delta is due to the request from PRC RL Contracting Officer (CO), documented in Correspondence No.1704418A, to implement a \$7.1 million drawdown for contingency in BCR-011C-17-013R0. The RL CO has not incorporated the directed \$7.1 million contingency drawdown into the PMB CBB, resulting in the negative delta.										
The following items are addressed, as applicable:										
1. Schedule Margin Analysis: No change in the month of July.										
2. IMS Data dictionary Changes: No change in the month of July.										
3. Forecast Schedule with No Baseline: No change in the month of July.										
4. UB Balance: No change in the month of July.										
5. Negative Actual Cost of Work Performed (ACWP): No change in the month of July.										
6. Earned Actual Cost (EAC) Analysis: Best Case = \$163,846; Most Likely = \$177,382; Worst Case = \$181,471. The Best Case EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no use of management reserve. The Most Likely EAC is the EAC reported this month plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will remain at completion but all available management reserve is used (e.g., all identified risks realized). The Worst Case EAC is the ACWP plus the ETC or BCWR if greater plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will be eroded at completion and all available management reserve is used (e.g., all identified risks realized), plus the scope identified in the Trend Log that is not in the EAC. The Best/Worst and Most Likely EAC values are documented in the Format 1 Report.										
7. Negative CV > VAC: No change in the month of July.										
8. Management Reserve Transactions: No change in the month of July.										
9. Freeze Period Changes: No change in the month of July.										
10. Retroactive Changes: No change in the month of July.										
11. Earned Value Type Changes: No change in the month of July.										
Prepared by: Jessica Mares		Date: 08/20/19			Approved by:			Date:		