

Monthly Performance Report

August 2018

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 7:49 am, Sep 24, 2018

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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August 2018
CHPRC-2018-08, Revision 0

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EXECUTIVE SUMMARY

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

- **Waste and Fuels Management Project (W&FMP):** The subcontractor for the Cask Storage System (CSS) continued working the final design for the CSS. Workers finished checking the dimensions of 248 cesium and strontium capsules as of August 26. At the Canister Storage Building (CSB), workers completed installing new duct work, registers, dampers and other ventilation system components for Air Handling Unit 004, as the system was no longer capable of passing the required testing and a redesign and re-installation was necessary.
- **Soil and Groundwater Remediation Project (S&GRP):** The S&GRP team met the DOE goal to treat 2.2 billion gallons of groundwater by the end of the fiscal year (FY), seven weeks ahead of schedule.
- **Plutonium Finishing Plant (PFP):** PFP completed a Management Assessment with DOE oversight of preparedness to resume demolition. The reviews resulted in three pre-start corrective actions, which the PFP team is completing.
- **K Basin Operations (KBO):** The Sludge Removal Project filled the second (of approximately two dozen) sludge transport and storage containers and shipped it to T Plant. 100K Area Closure workers excavated and safely disposed of more than 99,000 tons of soil to reach a buried, contaminated crib along the Columbia River and prepared for a Hazard Review Board for removal of the actual crib.
- **River Risk Management Project (RRMP):** Workers at the 324 Building Disposition Project installed the first remote-operated excavator arm in the mock-up structure. Workers will train on it there before using similar equipment inside the 324 Building. The team also began planning in preparation for testing micropiles, which are steel and concrete structural support systems to stabilize the foundation of the 324 Building's B Cell during the removal of the highly radioactive soil below.
- **Central Plateau Risk Management Project (CPRMP):** Workers performed a third investigative entry into the B Plant Canyon and completed B Plant filter media sampling and loading out of the pre-filters. Demolition of the Battelle NW Research and Technology Laboratory (RTL) continued. At the end of the month, crews had completed 50 percent demolition of the RTL slab and basement. Workers installed equipment to place grout inside the Plutonium Uranium Extraction Plant (PUREX) Tunnel 2 and installed a mobile batch plant that will mix grout during stabilization efforts. CHPRC supported DOE with a presentation on Tunnel 2 during the two Washington State Department of Ecology (Ecology) public hearings, resulting from Ecology's 45-day public comment period

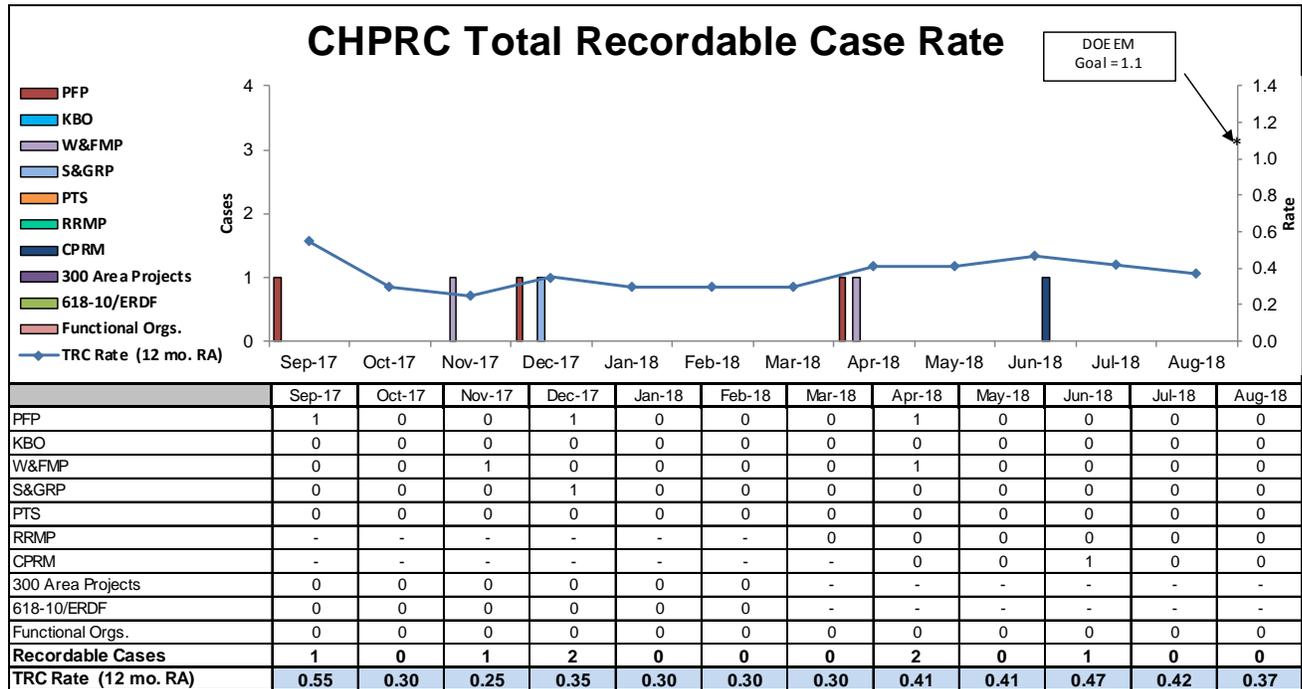


Installation of the grout placement equipment is nearly complete at the Plutonium Uranium Extraction (PUREX) Facility Tunnel 2. Workers installed equipment in six openings, called risers, along the top of Tunnel 2, which is 1,688-feet long. The equipment will place engineered grout into the tunnel.

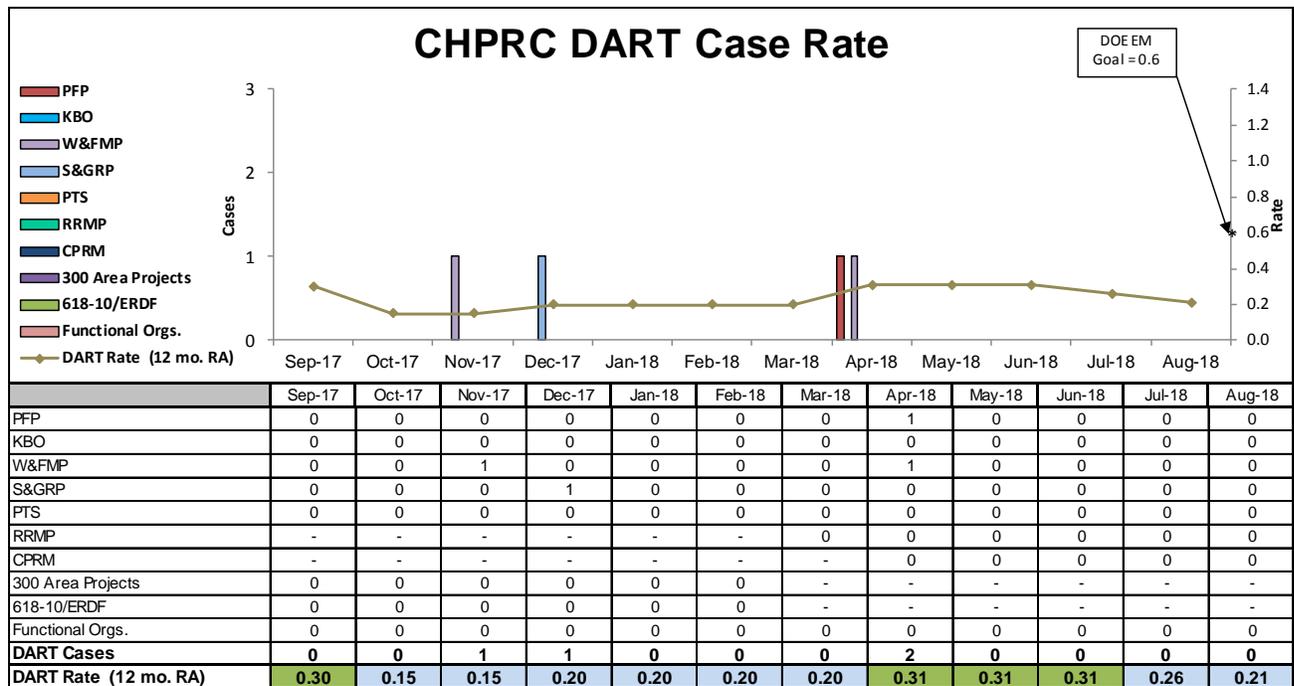
- The President’s Zero Accident Council (PZAC) meeting for August was hosted by W&FMP. The three main ideas were:
 - Destination and Itinerary.
 - Preparation.
 - Verification.
- Four “*Thinking Target Zero*” (TTZ) bulletins were published to convey important occupational, safety, health, and environmental messages:
 - Heat Stress.
 - Wildfire Smoke.
 - Emergency Response.
 - Distraction Zone.
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
 - Four Lessons Learned:
 - Electrician inadvertently trips breaker while explaining racking procedure during walk-down (WRPS).
 - Acid splash to face, degraded container allowed liquid to pool inside secondary container (offsite).
 - Electrical Conduit Breached During Core Drilling (offsite).
 - Multiple Factors Influence Less Than Adequate Response to Fire (offsite).
 - Injuries.
 - Weekly Ethics Moments.
 - Vehicle events.
 - Footwear reminder.
 - Sentinel roll-out Update.
 - Tertiary road inspections.
 - Fire safety reminder.
 - Injury Reporting.
 - Report Unsafe Driving.
 - Radiological work reminder.

TARGET ZERO PERFORMANCE

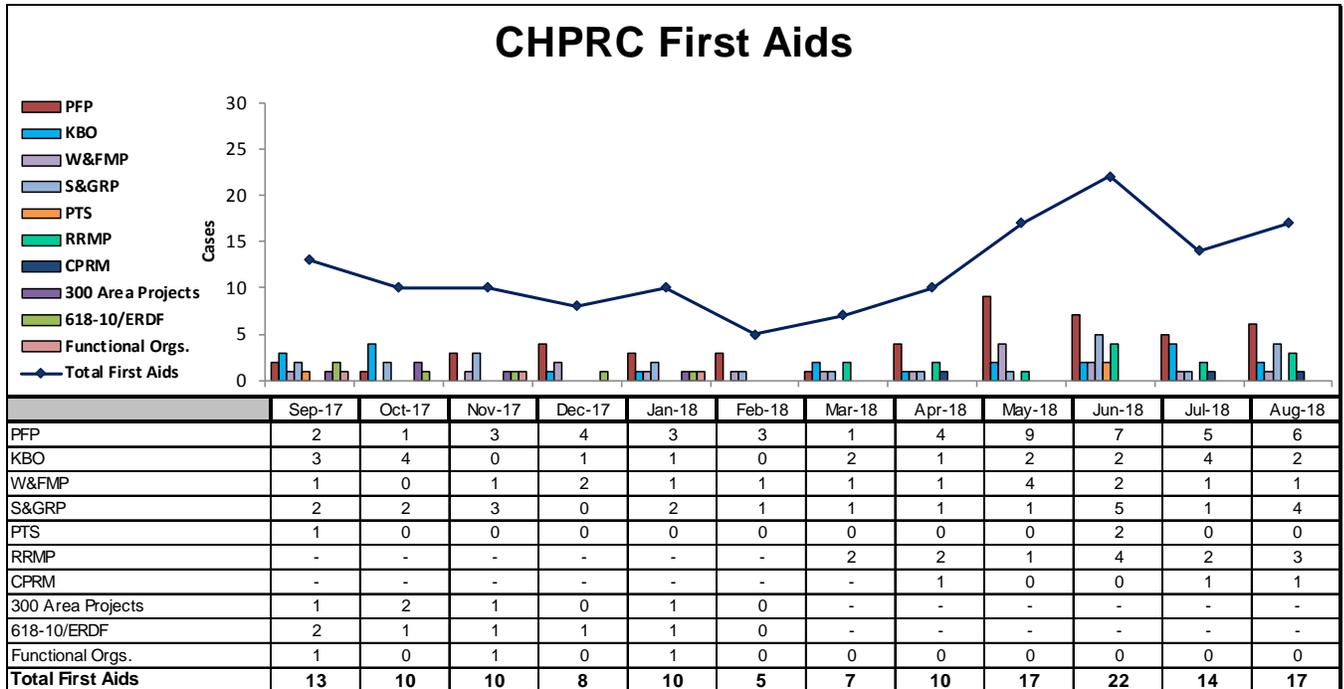
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.37 is based on a total of seven recordable injuries. August had no reported recordable cases.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.21 is based upon a total of four Days Away cases. August had no reported DART cases.



First Aid Case Summary: CHPRC reported 17 First Aid cases in August. The contributors were five sprains/strains/pains; five insect bites, three abrasions/bruises/contusions; three misc. (burns, rashes, repetitive motion, etc.) and one cuts/lacerations/punctures injury. In addition, 11 self-treat cases were reported in August.

KEY ACCOMPLISHMENTS

Projects

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

Project Services and Support

- Refer to the Appendix B section of this report for specific overhead support (which is reported quarterly) and Sections A through G, as well as Appendix C of this report, for specific project support.

MAJOR ISSUES

Issue:

Significant Contract Change Management is ongoing and must be resolved to retain PRC alignment for fiscal year (FY) 2017-2018.

- As of August month-end, there was a backlog of 51 undefinitized change proposals (CPs), requests for equitable adjustments (REAs), rough orders of magnitude (ROMs), and responses to requests for proposals (RFPs) – totaling approximately \$320 million in net value without fee.

Corrective Action:

- Work with RL to reach agreement on PRC FY2017-2018 alignment and support RL evaluation and determination of the disposition of undefinitized CHPRC CPs/REAs.

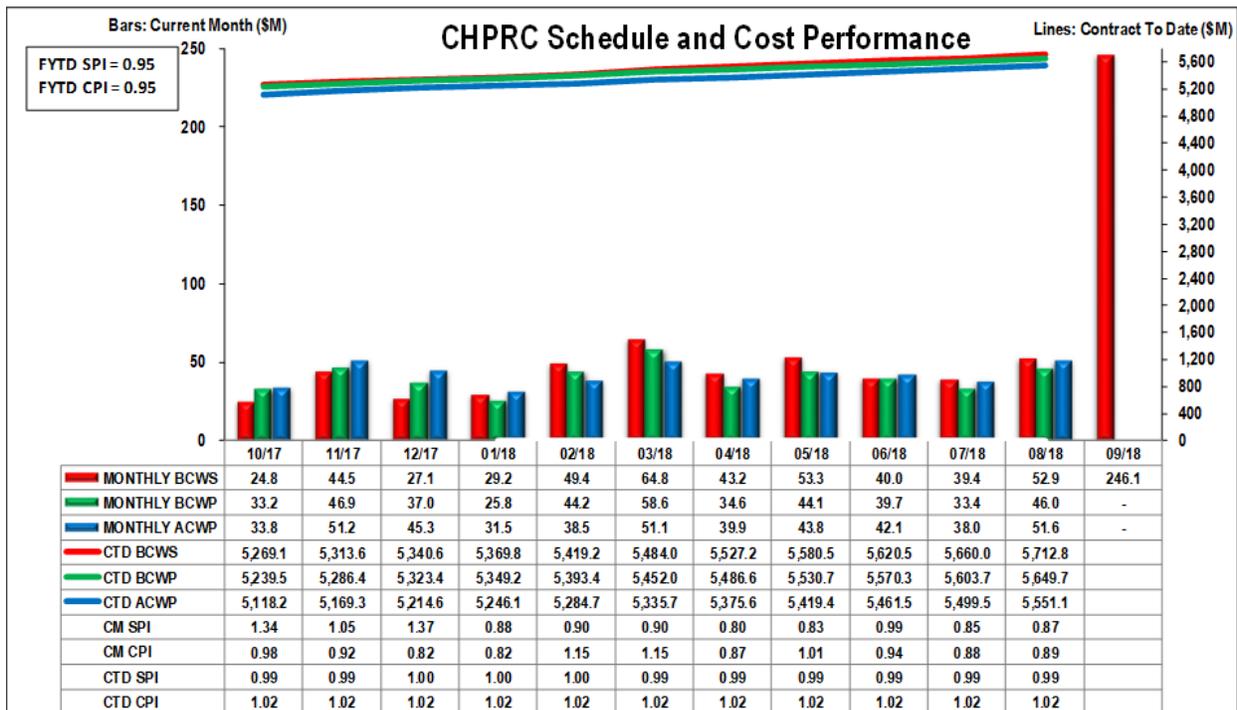
Status:

- CHPRC continues to discuss proposed alignment strategy with RL.
 - o Realigned remaining contract scope for cost consistent with FY2018 Budget Guidance.
 - o Developed configured contract change management basis for contract change entitlement and contract closeout.

Projects

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

EARNED VALUE MANAGEMENT



*September includes \$204.3 million of BCWS in undistributed budget.

	\$M					\$M					\$M		
	Current Period		Contract to Date			Contract to Date		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	1.6	1.5	7.3	(0.0)	(5.7)	989.2	976.2	1133.9	(13.0)	(157.7)	994.8	1,202.3	(207.5)
RL-0012 - SNF Stabilization & Disposition	4.8	4.4	4.3	(0.5)	0.1	741.1	739.6	710.2	(1.4)	29.4	745.4	715.8	29.5
RL-0013 - Solid Waste Stab & Disposition	14.5	13.9	13.6	(0.6)	0.3	1333.6	1329.0	1238.4	(4.6)	90.6	1,411.8	1,320.0	91.8
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	11.2	11.4	10.3	0.1	1.1	1520.0	1513.9	1463.4	(6.1)	50.4	1,595.6	1,544.5	51.1
RL-0040 - Nuc Fac D&D - Remainder	6.3	4.0	5.5	(2.4)	(1.5)	491.4	485.7	463.4	(5.7)	22.3	535.5	511.5	23.9
RL-0041 - Nuc Fac D&D - RC Closure Project	14.2	10.6	10.3	(3.6)	0.3	611.4	579.0	519.9	(32.3)	59.2	649.3	586.4	62.9
RL-0042 - Nuc Fac D&D - FFTF Project	0.2	0.2	0.3	(0.0)	(0.0)	26.3	26.3	21.8	(0.0)	4.5	26.5	22.0	4.5
Total	52.9	46.0	51.6	(6.9)	(5.6)	5,712.8	5,649.7	5,551.1	(63.1)	98.6	5,958.9	5,902.6	56.3

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

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

Performance Summary

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$56.3 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$119.6 million. For August, the project was 13.0 percent behind schedule and 12.2 percent over planned cost. Contract to date (CTD), the project was 1.1 percent behind schedule and 1.7 percent under planned cost.

The current month (CM) negative schedule variance is primarily due to project breakdown structure (PBS) RL-0041 completion of scope ahead of schedule, including: backfill at the 618-10 Burial Ground completed ahead of schedule in early FY2018. Backfill was originally planned to be completed in the latter half of FY2018. Accelerated performance of the AB Waste Site remediation work scope contaminated soil excavation and disposal, planned in October 2017 through November 2018, was completed ahead of schedule in FY2016. Finally, the 183.2KE backfill started earlier than planned and was accelerated as a result of shorter turn-around times between pit 23 and waste site 183.2KE. Completion of the backfill of 183.2KE was originally planned to finish in August FY2018, and actual completion was in February FY2018.

Also contributing to the negative schedule variance is the PBS RL-0040 delays experienced in the installation of the PUREX conveyance system and start-up of the mobile batch plant. The partial temporary authorization to install the conveyance system was not received until August 13, 2018, which impacted the critical path by 10 working days. In addition, steam line crossover removals in 200 East and West areas contributed to the negative variance as resources necessary to support the work were assigned to higher priority work scope.

The CM negative cost variance is primarily due to PBS RL-0011 resumption actions and implementation of the new demolition requirements associated with a December 2017 contamination event. This includes fixative applications, performance of radiological surveys, revising radiological postings, infrastructure modifications, and stabilization activities to support resumption of PFP demolition. This also includes additional material and equipment purchases to support the revised demolition approach. As resumption corrective actions and mockups are performed, costs for labor, subcontracts, and material purchases add to the current month variance.

Also contributing to the negative cost variance is the PBS RL-0040 incurring change orders on the PUREX Tunnel 2 firm-fixed price (FFP) contract for the grout conveyance fabrication and installation including delay time and design change to the fabrication specifications. In addition, investigative entries were made into the B Plant Canyon and sampling of the B Plant filter media was performed for offsite analysis. The planning efforts and field work associated with the entries and sampling were unplanned and added to the negative variance.

The negative cost variance is partially offset by PBS RL-0030:

- The 200-ZP-1 Operations and Maintenance account experienced cost efficiencies when labor resources were loaned to other projects including modutank decanting, 300-FF-5 Stage B Uranium Sequestration, and PFP support and additional absences were incurred due to short term disabilities and unfilled positions. The performance of dowex and purolite resin has been greater than expected which has resulted in a reduced number of resin changes, eliminating the need for the planned material costs and labor support for those efforts.
- Environmental Integration experienced under-runs in several areas: non-essential Environmental Database maintenance was not performed as planned in order to fund higher priority work scope, Technical Integration experienced swings in costs due to prior month accrual errors, and Remediation Decision Support staff spent more time supporting projects.
- The Groundwater Monitoring and Performance Assessment account continues to realize efficiencies in the geophysical logging subcontract that was competitively rebid with a subsequent reduction in contract costs. Sample packaging and shipments were performed efficiently, further contributing to the positive cost variance. These savings have been offset by increased efforts at modutanks to remove sediment and lower the water level.

- Groundwater Data Evaluation and Reporting realized a significant cost efficiency when it was determined that the Groundwater Monitoring Plans being prepared to support the Resource Conservation and Recovery Act (RCRA) Revision 9 Permit Modification did not require both an internal and regulator-review draft.

FUNDING ANALYSIS

FY2018 Funds vs. Fiscal Year Spend Forecast (\$M)

PBS	Project	FY2018		Variance
		Projected Funding	Spending Forecast	
Estimate at Complete				
RL-0011	Nuclear Materials Stabilization and Disposition	80.0	56.9	23.2
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	41.9	36.1	5.8
RL-0012	15-D-401 Sludge Retrieval Project	18.8	17.1	1.7
RL-0013	Waste and Fuels Management Project	144.3	134.1	10.2
RL-0013	Management of Cesium and Strontium Capsules	6.5	0.7	5.8
RL-0030	Soil, Groundwater and Vadose Zone Remediation	121.9	112.5	9.3
RL-0040	Nuclear Facility D&D, Remainder of Hanford	69.0	43.9	25.1
RL-0041	Nuclear Facility D&D, River Corridor	143.6	116.4	27.3
RL-0042	Fast Flux Test Facility Closure	4.0	2.0	2.0
Total Estimate at Complete		630.0	519.6	110.4
Incremental Scope Pending Change Management				
RL-0011	Nuclear Materials Stabilization and Disposition	0.0	0.0	0.0
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	0.0	0.0	0.0
RL-0012	15-D-401 Sludge Retrieval Project	0.0	0.0	0.0
RL-0013	Waste and Fuels Management Project	0.0	0.0	0.0
RL-0013	Management of Cesium and Strontium Capsules	0.0	0.0	0.0
RL-0030	Soil, Groundwater and Vadose Zone Remediation	0.0	0.0	0.0
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	0.2	(0.2)
RL-0041	Nuclear Facility D&D, River Corridor	0.0	0.4	(0.4)
RL-0042	Fast Flux Test Facility Closure	0.0	0.0	0.0
Total Incremental Work Scope		0.0	0.6	(0.6)
Total Fiscal Year Spend Forecast				
RL-0011	Nuclear Materials Stabilization and Disposition	80.0	56.9	23.2
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	41.9	36.1	5.8
RL-0012	15-D-401 Sludge Retrieval Project	18.8	17.1	1.7
RL-0013	Waste and Fuels Management Project	144.3	134.1	10.2
RL-0013	Management of Cesium and Strontium Capsules	6.5	0.7	5.8
RL-0030	Soil, Groundwater and Vadose Zone Remediation	121.9	112.5	9.3
RL-0040	Nuclear Facility D&D, Remainder of Hanford	69.0	44.1	24.9
RL-0041	Nuclear Facility D&D, River Corridor	143.6	116.7	26.9
RL-0042	Fast Flux Test Facility Closure	4.0	2.0	2.0
Total		630.0	520.2	109.8

Funds/Variance Analysis

For August, FY2018 expected funding was unchanged and remains at \$630 million. The spending forecast reduced primarily in PBS RL-0040 due to the delay in PUREX Tunnel 2 grouting.

BASELINE CHANGE REQUESTS

In August 2018, CHPRC approved and implemented six baseline change requests (BCRs) into the performance measurement baseline (PMB) budget. Three of the six BCRs impacted the PMB. Each change request is identified in the table below:

Change Request #	Title	PBS	Summary of Change
BCR-030-18-023R0	<i>Incorporate Drilling Campaign Planning</i>	RL-0030	This BCR incorporated the scope for performance of drilling campaign planning activities in the last quarter of FY2018 to prepare for a first quarter start of drilling in FY2019 into the Performance Measurement Baseline for three separate drilling campaigns. This BCR did not change the PMB value.
BCR-040-18-012R0	<i>RL-0040 SQUID WBS Corrections</i>	RL-0040	This BCR corrected coding issues and aligns the activities to the correct CO and appropriate WBS. This BCR did not change the PMB value.
BCR-040-18-013R0	<i>Incorporate PUREX Tunnel 2 NTE Increase</i>	RL-0040	This BCR incorporated into the PMB changes to the Plateau Remediation Contract (PRC) scope associated with the stabilization of PUREX Tunnel 2. This BCR increased the PMB value by \$4,919K.
BCR-PRC-18-031R0	<i>Incorporate CO #327 Re-Plan Accelerated Shipment of Sludge</i>	RL-0012, RL-0013	This BCR re-planned the scope for undefinitized Change Order (CO) 327. This BCR decreased the PMB value by \$1,121K.
BCRA-PRC-18-033R0	<i>HPIC Updates August 2018</i>	000, RL-0011, RL-0012, RL-0013, RL-0030, RL-0040, RL-0041, RL-0042	This BCR incorporated August FY2018 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

The Allocated (Distributed) Budget increased by \$3,798K.

Undistributed Budget Activity

BCR Number	Title	PBS	Fiscal Year	UB
BCR-PRC-18-032R0	<i>Undistributed Budget Adjustments August 2018</i>	RL-0012, RL-0013, RL-0040	2018	-\$3,859K

The Undistributed Budget decreased by \$3,859K.

Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
N/A	N/A	N/A	2018	N/A

Overall, there was no change to MR in August.

Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2018	N/A

Overall, there was no change to the fee during August.

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

August 2018 Summary of Changes

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	Contract Period Total	Total PMB
July 2018 Estimate									
PMB	3,391,477	391,653	471,323	504,826	485,028	714,683	2,567,513	5,958,989	5,958,989
MR	0	0	0	0	0	63,278	63,278	63,278	63,278
Fee	155,504	14,325	14,501	27,804	10,612	18,860	86,101	241,605	241,605
Total	3,546,981	405,978	485,824	532,630	495,639	796,821	2,716,892	6,263,873	6,263,873
August 2018 Change									
PMB									
Change to PMB	0	0	0	0	0	-61	-61	-61	-61
MR									
Change to MR	0	0	0	0	0	0	0	0	0
Fee									
Change to Fee	0	0	0	0	0	0	0	0	0
Total Change	0	0	0	0	0	-61	-61	-61	-61
August 2018 Estimate									
PMB	3,391,477	391,653	471,323	504,826	485,028	714,622	2,567,452	5,958,928	5,958,928
MR	0	0	0	0	0	63,278	63,278	63,278	63,278
Fee	155,504	14,325	14,501	27,804	10,612	18,860	86,101	241,605	241,605
Total	3,546,981	405,978	485,824	532,630	495,639	796,760	2,716,831	6,263,812	6,263,812

Changes to/Utilization of Management Reserve in August 2018

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	Total
July 2018 MR Totals								
RL-0011	0	0	0	0	0	4,089	4,089	4,089
RL-0012	0	0	0	0	0	8,416	8,416	8,416
RL-0013	0	0	0	0	0	5,933	5,933	5,933
RL-0030	0	0	0	0	0	19,602	19,602	19,602
RL-0040	0	0	0	0	0	8,700	8,700	8,700
RL-0041	0	0	0	0	0	16,350	16,350	16,350
RL-0042	0	0	0	0	0	189	189	189
Total	0	0	0	0	0	63,278	63,278	63,278
August 2018 MR Changes/Utilization								
RL-0011	0	0	0	0	0	0	0	0
RL-0012	0	0	0	0	0	0	0	0
RL-0013	0	0	0	0	0	0	0	0
RL-0030	0	0	0	0	0	0	0	0
RL-0040	0	0	0	0	0	0	0	0
RL-0041	0	0	0	0	0	0	0	0
RL-0042	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
August 2018 MR Totals								
RL-0011	0	0	0	0	0	4,089	4,089	4,089
RL-0012	0	0	0	0	0	8,416	8,416	8,416
RL-0013	0	0	0	0	0	5,933	5,933	5,933
RL-0030	0	0	0	0	0	19,602	19,602	19,602
RL-0040	0	0	0	0	0	8,700	8,700	8,700
RL-0041	0	0	0	0	0	16,350	16,350	16,350
RL-0042	0	0	0	0	0	189	189	189
Total	0	0	0	0	0	63,278	63,278	63,278

SELF-PERFORMED WORK

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

Contract-to-Date Actual Awards & Mods				Projection to FY2018	
10/1/2008 - 8/31/2018				Planned Subcontracting:	\$2,720,084,369
Reporting Category				Contract-to-date awards:	\$2,741,058,021
				Bal remaining to award:	-\$20,973,652
	\$ Value	%	Goal %	Goal award\$	Bal to Goal
SB	\$1,545,128,698	56.37%	49.3%	\$1,341,001,594	-\$204,127,104
SDB	\$296,296,551	10.81%	8.2%	\$223,046,918	-\$73,249,633
SWOB	\$287,719,327	10.50%	7.5%	\$204,006,328	-\$83,712,999
HUB	\$80,845,579	2.95%	2.2%	\$59,841,856	-\$21,003,723
VOSB	\$224,916,879	8.21%	3.5%	\$95,202,953	-\$129,713,926
SDVO	\$136,827,502	4.99%	1.3%	\$35,361,097	-\$101,466,405
NAB	\$70,527,482	2.57%	N/A	PRC clause H.20 small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
Large	\$696,275,086	25.40%	N/A		
GOVT	\$4,435,832	0.16%	N/A		
GOVT CONT	\$483,196,609	17.63%	N/A		
EDUCATION	\$129,035	0.00%	N/A	CHPRC Contract Value:	\$5,732,255,464
NONPROFIT_	\$4,034,491	0.15%	N/A	17% rqmt:	\$974,483,429
FOREIGN	\$7,858,269	0.29%	N/A	SB actual:	\$1,545,128,698
Total	\$2,741,058,021	100.00%	N/A	Bal to rqmt	-\$570,645,269

Notes:

1. Since the CHPRC contract award in October 2008, CHPRC has subcontracted more than \$2.7 billion in goods and services, with more than 56 percent going to small businesses. All subcontracting goals have been exceeded.
2. Approximately 91 percent of the total dollars arise from service and staffing contracts and contract amendments, with 6 percent of the remaining expenditures arising from PCard purchases and 3 percent from the balance in purchase orders for materials and equipment.
3. Data is summarized by business categories (Women Owned Minority Business Enterprise codes) in accordance with socioeconomic reporting requirements. Small business categories overlap and should not be added together.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS/DECISIONS

Refer to Sections A through G as well as Appendix C of this report for the project specific DOE Actions/Decisions.

Section A

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

CH2MHILL
Plateau Remediation Company



K. A. Wooley
Vice President for
Plutonium Finishing Plant
Closure Project

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

On December 15, 2017, contamination was found outside of the established Plutonium Finishing Plant (PFP) radiological boundaries. On December 18, 2017, follow-up radiological surveys found additional contamination present in the administrative office area. Work was stopped after the second event, pending completion of a root cause analysis (RCA) and development of a resumption plan. CH2M HILL Plateau Remediation Company (CHPRC) finalized the Root Cause Evaluation (RCE) in April 2018 and is working with Department of Energy, Richland Operations Office (RL) and regulators to implement a plan to enable demolition activities to resume. Plutonium Reclamation Facility (PRF) debris, which had been loaded into super sacks prior to stopping work, has been loaded out, and adjustments to the work control zone and radiological buffer area (RBA) inside the work control zone are complete. Contamination Area/High Contamination Area (CA/HCA) postings have been revised and infrastructure modifications are being performed to support the resumption of demolition activities. A mockup and management assessment has been performed to ensure the project is prepared to resume demolition. Once all resumption pre-start items are complete, the project will begin demolition debris loadout.

Key Metrics

<i>Key Performance Indicators</i>	<i>Current Month</i>	<i>Contract To Date</i>
COMPLETE Glovebox/ Hood Removed or Dispositioned in Place	0	232 gloveboxes/hoods
COMPLETE KPP Rooms/Areas Ready for Demo	0	72 rooms/areas
COMPLETE Asbestos/Asbestos Containing Material (ACM) Removed	0	35,827
COMPLETE Process Vacuum Piping Dispositioned	0	7,231 feet
COMPLETE Process Transfer Line Dispositioned	0	1,525 feet
COMPLETE Pencil Tank Units Removed (Shipped)	0	196 pencil tank units
COMPLETE Buildings Ready for Demo	0	68 structures
Buildings Demolished or Removed	0	63 structures
Non-radioactive Waste Shipped	0 m ³	89.5 m ³
Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped	0 m ³	5,014 m ³
LLW/MLLW Shipped	8 m ³	16,363 m ³

EMS Objectives and Target Status

Objective #	Objective	Targets	Actions	Status
18-EMS-PFP-OB1-T1	Minimize emissions resulting from demolition (including rubble management) of 234-5Z and 236Z.	Establish controls to minimize radioactive air emissions during PFP demolition activities and monitor the effectiveness of the controls.	Evaluate radioactive emissions on a weekly basis, identify if there are gaps in implementing the controls, and if the controls are effective when implemented. If problems are identified, ensure that prompt corrective actions are taken. Provide a monthly report on results and actions.	100%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	0	2	N/A
First Aid Cases	6	49	<p>8/1/2018 - Employee misjudged the first step on the stairs and fell, striking the right knee on the edge of the stairs. The fall caused minimal bruising on the right knee and did not break the skin. (24916)</p> <p>8/3/2018 - Employee twisted his left knee upon exiting a company jeep. Pain was immediately felt but quickly subsided. Employee was taken to HPMC and released to work without restrictions. (24920)</p> <p>8/8/2018 - Employee was stepping off the forklift and felt a pull/pop in the left ankle (Achilles tendon area). Employee was taken to HPMC for evaluation and released back to work with no restrictions. (24929)</p> <p>8/22/2018 - Employee handled multiple items at the Sheet Metal Shop. The employee reported the left arm was itching and a discoloration on the arm. The employee notified the Field Work Supervisor (FWS) and was taken to HPMC for evaluation. (24943)</p> <p>8/22/2018 - Employee handled multiple items at the Sheet Metal Shop. The employee reported the left arm was itching and a discoloration on his arm. The employee notified the FWS and was taken to HPMC for evaluation. (24940)</p> <p>8/23/2018 - Employee entered the HCA/Airborne Radioactivity Area (ARA) to check Continuous air monitor (CAM) Number 5 and change the filter paper, which is located north of 234-5Z. The cord on the survey instrument had made its way under a wood stanchion next to CAM Number 5. As the employee moved, he was pulled toward the stanchion, caught a foot on the stanchion, and the loose gravel in the area caused him to begin to lose balance. The visor on the Powered air purifying respirator (PAPR) hood hit the top of the stanchion and punctured the visor. The employee's skin was punctured under the right cheek. The employee made their way to MO2754, where he was surveyed out. The FWS was notified and the proper notifications were made. The employee was taken to HPMC and a Band-Aid was placed on the cheek. The employee was then taken for a wound count, which was negative. The employee returned to work with a restriction concerning requirements for working in a radiological area. (24944)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments

- Accomplishments to achieve stabilization following the December 2017 contamination event include:
 - Continued maintenance applications of fixative.
 - Routine radiological surveys.
 - Extra radiological surveys when sustained winds are 30 miles per hour or greater.
- Continued implementation of new demolition requirements associated with the December 2017 contamination event. Efforts include:
 - Completed retrofitting 2754W to accommodate new step-off pad.
 - Continued mockup of debris loadout.
 - Installed additional radiological monitoring equipment.
 - Placed and powered climate structures.
 - Supported management assessment to ensure project is prepared to resume lower risk work.
 - Completed set-up of canister transfer area for Environmental Restoration Disposal Facility (ERDF) waste.

MAJOR ISSUES

Issue:

On December 15, 2017, contamination was found outside of the established PFP radiological boundaries. On December 18, 2017, follow-up radiological surveys found additional contamination present in the administrative office area. CHPRC has identified resumption requirements based on a finalized RCA and working with RL and regulators to implement plan to enable demolition activities to resume.

Corrective Action:

Work was stopped after the second event, pending completion of pre-start resumption activities. Pre-start resumption activities include: material relocation, waste shipments, and infrastructure modifications to support enhanced radiological postings. Demolition activities will resume after pre-start items are complete and the project is approved to initiate low-level debris loadout and demolition.

Status:

CHPRC has identified resumption requirements based on finalized RCA and is working with RL and regulators to implement resumption plans to enable demolition activities to resume.

- Some of the activities that were performed during August were:
 - Implementation of additional radiological monitoring (i.e., CAMs, cookie sheets).
 - Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration.
 - Application of fixatives (i.e., paints, stabilization agents) to items and areas in the PFP work control zone.
 - Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.
 - Continued mockup of debris loadout.
 - Set-up of canister transfer area for ERDF waste.
 - Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.).
 - Completed retrofitting 2754W to accommodate new step off pad.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- Increased Confidence
- No Change
- Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0011/WBS-011.OA																			
Explanation of major changes to the project monthly spotlight chart: No major changes for August.																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
Risk PFP-P1-001, <i>Deterioration of Super Sack's within the PFP Demolition Zone</i> , was closed and has been removed from the spotlight chart.																			
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
FY2018 Risk Triggers (Risk could be realized in FY2018)																			
PFP-P-004: Stop Work From Concerned Workers	Concerned workers result in a stop work to address an 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 Risk Handling Strategy: Probability: Very Likely (>90%) Worst Case Impacts: \$0, 52 days	●		<p>Risk Event: During resumption of PFP demolition activities, an increase in stop works could result in delays.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps, with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in August. Increased communication and worker involvement to avoid confusion and concern in an effort to minimize stop works.</p>	Mitigation action(s)	FC Date	%	Update communications as positions change.	Ongoing	N/A	Provide new maps, with entry/exit instructions when boundaries are revised.	Ongoing	N/A	Encourage additional worker involvement.	Ongoing	N/A	Increase frequency of post-job reviews.	Ongoing	N/A
Mitigation action(s)	FC Date	%																	
Update communications as positions change.	Ongoing	N/A																	
Provide new maps, with entry/exit instructions when boundaries are revised.	Ongoing	N/A																	
Encourage additional worker involvement.	Ongoing	N/A																	
Increase frequency of post-job reviews.	Ongoing	N/A																	
PFP-P-005: Unexpected Contamination Event within Established Boundaries	During operational activities (i.e. execution of characterization, monitoring, disposition of chemicals, and shipment), a loss of contamination control within the newly established boundary is experienced. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 64 days	●		<p>Risk Event: On May 19, 2018, low-level contamination was discovered during routine surveys. Radiological control technicians (RCTs) detected the contamination a few feet outside of the RBA south of 19th Street and Camden Avenue, but within the work control boundary. Since being detected, the sample decayed to 279 disintegrations per minute (dpm)/100 cm². The area is now controlled as a Contamination area (CA), and additional surveys are planned. No workers were contaminated.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct air modeling.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct large particle modeling.</td> <td>Complete</td> <td>N/A</td> </tr> <tr> <td>Analyze data and use it to establish new boundaries for PFP demolition zone.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Establish and maintain new radiological boundaries</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in August. The area was posted as a CA pending further investigation. With the contamination being discovered within the work control boundary, no workers were contaminated in this event. Applicable surveys were performed and work was not impacted.</p>	Mitigation action(s)	FC Date	%	Conduct air modeling.	Ongoing	N/A	Conduct large particle modeling.	Complete	N/A	Analyze data and use it to establish new boundaries for PFP demolition zone.	Ongoing	N/A	Establish and maintain new radiological boundaries	Ongoing	N/A
Mitigation action(s)	FC Date	%																	
Conduct air modeling.	Ongoing	N/A																	
Conduct large particle modeling.	Complete	N/A																	
Analyze data and use it to establish new boundaries for PFP demolition zone.	Ongoing	N/A																	
Establish and maintain new radiological boundaries	Ongoing	N/A																	
PFP-P1-003: Weather Impacts During Stabilization, Waste Disposition, & Support	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms will result in in-scope unplanned work and result in schedule impacts to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 24 days	●		<p>Risk Trigger: When sustained wind speeds are greater than 30 mph or gusts are above 40 mph, work will be stopped pending radiological surveys to confirm no contamination has spread beyond established boundaries.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Plan for 80% T.O.E.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in August. Wind has continued to impact progress on resumption activities at the expected rate. Surveys are being conducted more efficiently and are resulting in less time to recover from wind events, allowing work to resume sooner following an event.</p>	Mitigation action(s)	FC Date	%	Plan for 80% T.O.E.	Ongoing	N/A									
Mitigation action(s)	FC Date	%																	
Plan for 80% T.O.E.	Ongoing	N/A																	
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																			
No high threat risks identified in August.																			
Unassigned Risks (Pending ownership of identified risks/opportunities)																			
No unassigned risks identified in August.																			

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled (BCWS)	Budgeted Cost of Work Performed (BCWP)	Actual Cost of Work Performed (ACWP)	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	1.6	1.5	7.3	(0.0)	-0.3%	(5.7)	-370.2%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Variance: (-\$0.0M/-0.3%)

The CM schedule variance is within threshold.

CM Cost Variance: (-\$5.7M/-370.2%)

The current month negative cost variance is due to the resumption actions and implementation of the new demolition requirements associated with a December 2017 contamination event. This includes fixative applications, performance of radiological surveys, revising radiological postings, infrastructure modifications, and stabilization activities to support resumption of PFP demolition. This also includes additional material and equipment purchases to support the revised demolition approach. As resumption corrective actions and mockups are performed, costs for labor, subcontracts, and material purchases add to the current month variance.

Contract-to-Date

(\$M)

WBS 011/ RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	989.2	976.2	1,133.9	(13.0)	-1.3%	(157.7)	-16.2%	994.8	1,202.3	68.4	(207.5)

Numbers are rounded to the nearest \$0.1 million

Contract-to-Date (CTD) Schedule Variance (-\$13.0M/-1.3%)

The CTD schedule variance is within threshold.

CTD Cost Variance (-\$157.7M/-16.2%)

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

Other contributors to the negative cost variance include resumption actions associated with the December 2017 contamination event, which included: fixative applications, performance of radiological surveys,

revising radiological postings, infrastructure modifications, and stabilization activities to support resumption of PFP demolition. Reassignment of CHPRC personnel to support the RCA and programmatic assessments have also contributed to the variance.

The negative cost variance is partially offset by using fewer breathing air suits and hoses than originally planned for 242-Z entries. This is a result of fewer field work team members being required to perform hands-on work in 242-Z because of the confined space and number of suits (three suits per day versus five). In addition, there were recognized efficiencies where crews were able to complete process vacuum removal in 291-Z with less effort than originally planned. Characterization results indicated lower levels of hold-up than planned, which allowed more efficient piping removal. Isolations of the 291-Z Facility were performed more efficiently than planned due to the main electrical power being disconnected outside of the building rather than performing individual isolations within the facility. Hazardous material removal, stabilization, and decontamination was more efficient than originally planned. (i.e., using powerful fans to assist with vertical fixative flow up the stack).

Implementation of a BCR was processed in September 2017 to draw down on RL contingency to recover cost impacts to the project breakdown structure (PBS) RL-0011 C.2 project associated with realized RL risks, which also partially offset the variance. Areas impacted were associated with weather delays, stop works, PRF contamination events, and Mission Support Alliance resources retained to prevent bump and roll impacts. Recognition of efficiencies associated with demolition of 242-Z, 291-Z, and 234-5ZA are also contributing to the offset of the negative variance.

Variance at Completion (-\$207.5M/-20.9%)

The unfavorable variance at completion (VAC) is reflective of extended hotel load and field resource costs due to delays in demo-ready and demolition activities.

As a result of wall removals and electrical isolations, it was discovered that approximately 10,000 feet of additional asbestos was found between the walls that required removal. CHPRC is working with RL to use contingency for the additional 10,000 feet of identified asbestos, impacts from the criticality alarm, and relief from the 30 days of weather delays experienced from December 2016 through March 2017.

Overtime was used to ready the 234-5Z Facility for demolition by September 2017. Also, unplanned work on the HDPE water loop is contributing to this variance. This unfavorable variance is partially offset by recognized efficiencies due to characterization data in the 234-5Z duct level, allowing piping and ducting to be left in place for demolition and the 291-Z demolition activities.

After a stop work was called due to the December 2017 contamination event, the estimate at completion (EAC) and VAC is reflective of the projected date to reach slab-on-grade in May 2019. The EAC and VAC are reflective of resumption activities and revised demolition approach implementation.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	80.0	56.9	23.2
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0011 - Total	80.0	56.9	23.2

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

Fiscal Year (FY) 2018 expected required funding for the PBS RL-0011 is \$56.9 million to allow for recovery actions and continuation of demolition activities to achieve slab-on-grade. Projected funding is \$80.0 million.

Critical Path Schedule

The PFP Critical Path schedule begins with the continuation of resumption activities related to the December contamination event. After a completion of pre-start items identified during the management assessment (MA), the project will obtain DOE concurrence for resumption of low-risk demo activities. Debris disposition of the 234-5Z rubble piles will resume, starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of zones 2 and 7, with the exception of the drain line. Remote Mechanical C process line demolition, Remote Mechanical A process line demolition, and loadout of glovebox HA-46, in parallel with completion of the basement of 234-5Z demolition, will begin after a second MA and concurrence is obtained to resume high-risk demo from DOE. The 234-5Z demolition is projected to complete March 28, 2019. The 236-Z canyon demolition will then resume with completion scheduled for May 29, 2019, meeting the requirements for the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-083-00A – PFP Facility Transition and Selection Disposition Activities. Completion of demolition is followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities completing in September 2019.

MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. RL Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The performance measurement baseline (PMB) annual update, implemented in September 2013, and subsequently approved Baseline Change Requests (BCRs), define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a two-year look-ahead of commitments and Tri-Party Agreement-enforceable milestones.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-083-00A	PPF Facility Transition and Selection Disposition Activities	9/30/2017		5/29/2019	On Friday, December 15, 2017, swing shift 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 a path forward. An RCA has been conducted and resumption actions and expected completion have been established. Thirteen days were lost on the schedule in August due to identified pre-start corrective actions required to resume demolition activities at PFP.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS / DECISIONS

None at this time.

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Sludge Transport & Storage Container (STSC) 2 was disconnected and prepped for shipment on August 3, 2018, and the second shipment of sludge was placed in interim storage at T Plant on August 8, 2018. The third STSC is forecast to be placed in interim storage at T Plant in September.

Project breakdown structure (PBS) RL-0012 scope is 99.2 percent complete, with a cumulative schedule performance index 1.00 and a cost performance index of 1.04.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Dart Injuries	0	0	N/A
Recordable Injuries	0	0	N/A
First Aids	2	18	8/16/2018 – Employee reported bug bite to left leg. Employee was evaluated at HPMC and returned to work without restrictions. (24933) 8/23/2018 – Employee reported multiple bug bites to right arm. Employee was evaluated at HPMC and returned to work without restrictions. (24947)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

100K Operations

- The 100K Operations group continued maintaining facilities in a safe and compliant condition. Crews continued relocation activities in the 105KW Basin and performance of monthly and quarterly routines during the period.

KW Basin Sludge Removal

- The 100K Operations support team performed preventive maintenance and calibrations on both Engineered Container Retrieval and Transfer System components and Annex Utility System components.
- STSC 2 was placed in interim storage at T Plant on August 8, 2018.

MAJOR ISSUES

No major issues to report at this time.

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: Risk STP-018-O: An Operational Upset or Spill Results in a Work Shutdown at K Basins was closed, as the first STSC shipment was completed. Risk STP-018: STP Operational Upset or Spill – After 1 st STSC was re-opened in the risk database to capture the risk of an operational upset or spill during the remaining sludge retrieval.																
Realized Risks (Risks that are currently impacting project cost/schedule)																
STP-151: Leak Tightness of Sludge Transportation System Casks	A failed leak test of the Sludge Transportation System (STS) Cask could result in in-scope unplanned work and significant schedule delays not assumed in the Sludge Removal Project (SRP) baseline. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$1,000K, 48 days	●	↑	Risk Event: Although the project did not realize a failed cask leak rate test, a negative trend on Cask 2 resulted in a project management determination that it was necessary to procure a replacement lid. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e0e0e0;"> <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>Verify that both casks can pass the leak test criteria prior to initiating sludge removal operations.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Institute procedural controls that maintain cask sealing surfaces in a condition that leak tightness is not compromised.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Procure a replacement cask lid if a negative leak rate trend is observed.</td> <td style="text-align: center;">10/05/18</td> <td style="text-align: center;">60</td> </tr> </tbody> </table> Risk Action Assessment: No major changes in August . A procurement order has been processed to procure a new STS Cask Lid. Cask 2 will not be used until the new lid has been received and successfully leak tested.	Risk recovery action(s)	FC Date	%	Verify that both casks can pass the leak test criteria prior to initiating sludge removal operations.	Complete	100	Institute procedural controls that maintain cask sealing surfaces in a condition that leak tightness is not compromised.	Complete	100	Procure a replacement cask lid if a negative leak rate trend is observed.	10/05/18	60
Risk recovery action(s)	FC Date	%														
Verify that both casks can pass the leak test criteria prior to initiating sludge removal operations.	Complete	100														
Institute procedural controls that maintain cask sealing surfaces in a condition that leak tightness is not compromised.	Complete	100														
Procure a replacement cask lid if a negative leak rate trend is observed.	10/05/18	60														
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in August .																
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																
FY2018 Risk Triggers (Risk could be realized in FY2018)																
STP-073-C: Processing Efficiency - Retrieval & Shipping	The realized processing efficiency associated with sludge retrieval and shipping operations does not match the baseline plan. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$0K, 60 days	●	↓	Risk Triggers: Actual processing efficiency associated with sludge retrieval and shipping operations does not match baseline assumptions. While Management Directive (MD) PRC-MD-RP-53085, Suspension of 67 percent Confidence Level Surveys, was rescinded for 100K Radiological Area Activities, conservative radiological practices may extend operational activities beyond what was assumed in the baseline. This risk will continue in fiscal year (FY) 2018/FY2019 during operations campaign. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e0e0e0;"> <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>Establish a Production Control Center to facilitate maximum efficiency integrating SRP operations and maintenance activities.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">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 style="text-align: center;">Complete</td> <td style="text-align: center;">100</td> </tr> <tr> <td>Revised plan to establish the appropriate campaign schedule</td> <td style="text-align: center;">9/30/18</td> <td style="text-align: center;">70</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in August . Project personnel continue working on a revised plan to establish the appropriate campaign schedule, taking into account ion exchange module (IXM) change outs and performance of preventive maintenance activities. A revised plan has been provided to RL via the FY2019 Post Contract Baseline submittal and RL is currently reviewing this plan.	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	Revised plan to establish the appropriate campaign schedule	9/30/18	70
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														
Revised plan to establish the appropriate campaign schedule	9/30/18	70														
Unassigned Risks (Pending ownership of identified threats/opportunities)																
No unassigned risks identified in August .																

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	4.8	4.4	4.3	-0.5	-9.7%	0.1	2.4%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$0.5M/-9.7%)

The variance is within reporting thresholds.

CM Cost Performance (+\$0.1M/+2.4%)

The variance is within reporting thresholds.

Contract-to-Date

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	741.1	739.6	710.2	(1.4)	-0.2%	29.4	4.0%	745.4	715.8	5.6	29.5

Numbers are rounded to the nearest \$0.1 million

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

The variance is within reporting thresholds.

CTD Cost Performance (+\$29.4M/+4.0%)

The variance is within reporting thresholds.

Variance at Completion (+\$29.5M/+4.0%)

The variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2018		Variance
	Projected Funding	Spending Forecast	
Expense – Spending Forecast	41.9	36.1	5.8
Incremental Scope Pending Change Management	0.0	0.0	(0.0)
Expense – Subtotal	41.9	36.1	5.8
Line Item (LI)	18.8	17.1	1.7
Incremental Scope Pending Change Management	0.0	0.0	(0.0)
LI – Subtotal	18.8	17.1	1.7
RL-0012 – Total	60.7	53.2	7.5

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

Fiscal year (FY) 2018 funding for PBS RL-0012 is \$60.7 million. Positive variance of \$5.8 million in expense funding is due to revised funding levels in the Central Plateau control point provided by RL in March 2018 and due to delays in the start of retrieval operations. Positive variance in the Line Item (LI) is the result of efficiencies gained due to acceleration of the installation activities and risk mitigation efforts.

Critical Path Schedule

The project critical path schedule runs through completion of retrieval operations, including the filling of STSCs with sludge, transporting to T Plant, and placement in T Plant cell. Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-016-176, Complete Sludge Removal from 105KW Fuels Storage Basin, is required by December 2019.

MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. RL Enforceable Agreement (EA) milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB annual update, implemented in September 2013, and subsequently approved baseline change requests (BCRs) define CHPRC planning with respect to Tri-Party Agreement milestones. The following table shows the Tri-Party Agreement milestone within the CHPRC contract period (September 30, 2018).

Number	Title	Due Date	Actual Date	Forecast Date	Status/Comment
M-016-175	Begin Sludge Removal from 105KW Fuel Storage Basin.	9/30/2018	6/12/2018 (A)	Complete	

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

None currently identified.

Section C

Solid Waste Stabilization and Disposition (RL-0013)

CH2MHILL
Plateau Remediation Company



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

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

M. A. Wright
Vice President for Project
Technical Services

PROJECT SUMMARY

During the August reporting period, July 23 – August 26, 2018, Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. Overall, the project continues to deliver ongoing efficiencies that were identified in the fiscal year (FY) 2012-2013 time frame but continues to be impacted by emerging work and realized risks. The River Risk Management Project continued operations at the Environmental Restoration Disposal Facility (ERDF) and continued document preparations and permit revisions associated with the Integrated Disposal Facility (IDF).

This month:

- Management of Cesium and Strontium Capsule (MCSC) Project: Work continues on the final design for the Cask Storage System (CSS) and the Capsule Storage Area (CSA) pad. The CSA Final Design media continues to be processed through document control. Work continues on the preliminary design activities for the Waste Encapsulation and Storage Facility (WESF) modifications. A ventilation analysis is in preparation for the facility to identify cooling requirements. Revised shielding drawings and analysis have been completed for the CSS final design. Training with the new capsule gauge has been initiated. Dimension checks for 248 capsules using the new gauge are complete and all capsules were determined to be satisfactory.
- At T Plant, the sludge receipt team received the second shipment of sludge from the 100K West Reactor Basin to T Plant. The third sludge shipment is forecasted to be received on September 4, 2018.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
18-EMS-WFMP-OB1-T1	Reuse equipment from West Valley DOE site/conserves resources/minimize waste.	Reuse West Valley equipment for cesium (Cs) and strontium (Sr) capsule storage. Receive, manage, and use equipment as received.	9/30/2018	100%
18-EMS-WFMP-OB2-T1	Chemical management compliance.	Evaluate the process for chemical management at Canister Storage Building (CSB) and T Plant. Perform an assessment on chemical inventory locations.	9/30/2018	65%
18-EMS-WFMP-OB3-T1	Improve compliance.	Identify implementing mechanisms and gaps for low-level burial ground (LLBG) compliance matrix requirements at the project level.	Cancelled	N/A
18-EMS-WFMP-OB4-T1	Reduce environmental impact of contaminants along the Columbia River and minimize accompanying risks.	Complete T Plant Readiness Assessment and Master Documented Safety Analysis (MDSA) Revision 12 implementation in order to prepare for sludge receipt at T Plant.	9/30/2018	100%
18-ERDF-OB1-T1	Conserve resources/waste minimization	Procure and use metal liner substitutes for the macro-encapsulation treatment of waste instead of using functional roll-on/roll-off (RO/RO) waste containers as sacrificial containers.	9/30/2018	80%

Objective #	Objective	Target	Due Date	Status
18-ERDF-OB2-T1	Improve compliance/ pollution prevention	Monitor and evaluate universal waste (UW) and recycling accumulation areas for compliance with CHPRC procedures.	9/30/2018	80%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	0	2	N/A
First Aid Cases	1	16	8/30/2018 – Employee was stung by a wasp on the right shoulder blade. Employee notified management and went to HPMC. HPMC released employee back to work with no restrictions. (24960)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- o Performed/Completed:
 - Current Consent Agreement and Final Order (CAFO) document development status: On April 16, 2018, Ecology identified additional changes to the Sampling and Analysis Plan (SAP) portion of the CAFO closure plans with additional changes related to statistical analyses. CHPRC personnel met with RL and Ecology multiple times to agree on a path forward; an agreement was reached with RL on July 12, 2018, and document revisions resumed. On August 2, 2018, CHPRC transmitted certified revised closure plans for the 277-T Building, 271-T Cage, 211-T Pad, and 2401-W Waste Storage Building to RL. The revised plans and accompanying Review Comment Record (RCR) forms reflect changes agreed upon with Ecology.
 - For the Solid Waste Operations Complex (SWOC) Part B Permit Application, the revised Waste Analysis Plan and RCR, including responses to Ecology's comments, were provided to RL for review on July 23, 2018.
 - Initiated responses to Ecology comments on the Process Information Addenda for the SWOC part B Permit Application.

13.02 Capsule Storage & Disposition

- o Performed/Completed:
 - Capsule dimensional checks (248 to date) in support of the W-135 Project.
 - Canyon entries in support of Canyon Crane work, Task 1 (inspection of crane rail/clips and retrieval system) in support of the W-135 Project.

- Canyon light fixture decontamination and relamping in support of the W-135 Project.
- Installation of new hose components on tank 100.
- o Completed Surveillances/Preventive Maintenance (PM):
 - 40 PM packages.
- 13.03 Canister Storage Building (CSB)**
 - o Performed/Completed:
 - Air Handler-004 upgrade punch list item closeout, registers, and paint.
 - Monthly inspections.
 - o Completed Surveillances/PMs:
 - 26 PM packages.
- 13.06 Transuranic (TRU) Repackaging**
 - o Repackaging:
 - Received two shipments of M-091 legacy suspect transuranic mixed (TRUM) waste from Perma-Fix Northwest (PFNW) into Mixed Waste Disposal Trenches (MWT)34. Contributing 38.5 cubic meters (m³) toward the next volumetric objective, bringing the total to date to 409.5m³.
- 13.07 Waste Receiving and Processing (WRAP)**
 - o Performed/Completed:
 - Monthly inspections for WRAP.
 - o Completed Surveillances/PMs:
 - 210 surveillances.
 - 23 PM packages.
- 13.08 T Plant**
 - o Performed/Completed:
 - Updates to canyon crane camera system.
 - 277T West and East doors electrical walk-down.
 - o Completed Surveillances/PMs:
 - 517 surveillances.
 - 35 PM packages.
 - Sludge Receipt**
 - o Performed/Completed:
 - Receipt of Sludge Transport & Storage Container (STSC) W-424, placed in cell 10L position number 3.
 - Placed STSC W-421 into Cask 1 prepped for shipment to K Basins.
 - The second shipment of sludge received from the 100K West Reactor Basin to T Plant. The third sludge shipment is forecasted to be received on September 4, 2018.
- 13.09 Central Waste Complex (CWC) and Low-level Burial Ground (LLBG)**
 - o Performed/Completed:
 - Drum moves at 2403WD in support of the D10 Tank relocation.
 - o Completed Surveillances/PMs:
 - 365 surveillances.
 - 26 PM packages.
 - o Shipments received:
 - Eight drums from Pacific Northwest National Laboratory (PNNL) into CWC in one shipment.
 - One Standard Waste Box (SWB) and one drum from Plutonium Finishing Plant (PFP) into CWC in two shipments.
 - o Shipments shipped:
 - Eleven boxes from CWC to PFNW in one shipment.

13.15 TRU Disposition

- o Performed/Completed:
 - Supported DOE-HQ independent review of Advanced Mixed Waste Treatment Project Business Case requested by EM-1.
 - Transmitted the letter validating the Hanford Annual Transuranic Waste Inventory Report for 2018 to LANL-CO on July 30, 2018.

13.16 Offsite Spent Nuclear Fuel Disposition

- o Performed/Completed:
 - Maintained coordination for offsite Spent Nuclear Fuel Disposition.

13.21 Mixed Waste Disposal Trenches (MWT)

- o Completed surveillances/PMs:
 - 150 surveillances.
- o Shipments received:
 - Eighteen boxes from PFNW into MWT34 in six shipments.

13.24 Management of Cesium and Strontium Capsules Project

- o Performed/Completed:
 - CSA Design: CSA final design media continues to be processed through document control.
 - WESF Modifications Design: Subcontractor continues work on the preliminary design activities for the WESF modifications. A ventilation analysis is in preparation for the facility to identify cooling requirements.

13.25 Capsules Interim Storage Operations

- o Performed/Completed:
 - CSS design: NAC International continues to work on the CSS final design. Revised shielding drawings and analyzes are complete.
 - Engineering: Training with the new capsule gauge has been initiated. Dimension checks for 248 capsules using the new gauge are complete.
 - Nuclear Safety: The 60 percent draft Preliminary Documented Safety Analysis (PDSA) has been issued for review.

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

- o Received 26,447 tons in August.
- o Received 172,636 tons fiscal year-to-date (FYTD).
- o Used the non-standard crane to offload one long length item (LLI) for disposal.
- o Conducted a hazard review board (HRB) to analyze the place and cover mockups.

13.12 Integrated Disposal Facility (IDF)

- o Care & Custody
 - Performed/completed August monthly inspections.
 - Collected daily flow and tank level data.
 - Performed two required significant storm event inspections.
- o IDF Operational Readiness
 - Continued work on Part A, Security and Closure Plan addenda to support IDF Resource Conservation and Recovery Act of 1976 (RCRA) permit modifications.
 - Continued the conceptual final cover design for the RCRA permit Part A Addendum.
 - Received three proposals and completed technical evaluations for the subcontract to design the facility modifications and site infrastructure.
 - Continued work on the IDF performance assessment documents to address DOE Low-Level Waste Disposal Facility Federal Review Group (LFRG) review comments.
 - Continued preparation of the IDF Waste Acceptance Criteria (WAC) and WAP.

- Initiated work with MSA to add additional property (the triangle area near the IDF entrance) for the IDF waste receiving infrastructure.

Project Technical Services (PTS) Support

- o Project Delivery:
 - CSB Air Handling unit 004:
 - Completed and released final design report.
 - Construction Completion Document (CCD) signed.
 - Trench 31 and 34 Manway extension and void fill:
 - Commenced site mobilization with gravel delivery.
 - Field work scheduled to commence week of September 4, 2018.
 - NR-1 Reactor Surface Prep
 - Completed design review of the NR-1 precast supporting blocks.

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 provide 30 percent design (as agreed in the permitting plan).

Status:

The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. Ecology's completeness review for the WESF permit modification request was received on February 5, 2018. Ecology's completeness review for the Capsule Interim Storage (CIS) permit application was received on February 13, 2018. Ecology concluded that the permit applications were incomplete. Additional information to address the completeness review was transmitted to Ecology on May 8, 2018. Specific comments on the proposed permit addenda have not yet been received from Ecology and are not anticipated until October 2018.

Issue:

Ecology issued findings in inspection reports for the Low-Level Burial Ground (LLBG) Trenches 31-34 and CWC regarding major risk labeling. The findings direct RL and CHPRC to label the containers with the major risks of the dangerous waste contents. CHPRC uses the U.S. Department of Transportation (DOT) hazard class labeling system (which includes the use of radiological labels) to comply with the regulatory requirement.

Corrective Action:

Work with RL to obtain agreement from Ecology that CHPRC may use the DOT hazard class labeling system, as this complies with the regulatory requirement for a "system" in use that performs the function in accordance with local, state, or federal regulations.

Status:

CHPRC and RL met with Ecology inspectors regarding this item, and the parties agreed to elevate the issue to management for resolution. Ecology is working through the rule-making process to incorporate these requirements into the regulations but continues to identify this issue in recent inspections. The project continues to await direction from RL.

Issue:

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

Corrective Action:

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

Status:

Continuing to use the best demonstrated available technology to provide adequate configuration and minimize the potential for contamination spread during the long-term storage (i.e., protecting boxes with tarps or protective shoring; overpacking drums). Streamlined and consolidated container management procedures. RL authorized the additional FY2018 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue throughout the year.

Issue:

Mission Support Alliance, LLC (MSA) Cross-Connection Control Program performed a Health Hazard Level Re-Evaluation following the guidance listed in Washington Administrative Code 246-290-490 and internal MSA Cross-Connection Control procedures. As a result, 225-B (WESF) Health Hazard Level was changed from high to severe, requiring service connections to have cross-connections installed.

Corrective Action:

The WAC requires the corrective action to be accomplished “within 90 days of the purveyor notifying the consumer ...” or “In accordance with an alternate schedule acceptable to the purveyor.” MSA has worked with affected facilities and RL to develop corrective actions that minimize impacts to ongoing cleanup milestones.

Status:

RL provided direction to MSA to remedy the majority of the issue with a modification at the source by MSA versus modifications at each facility. Description and preliminary schedule for WESF potable water facility modifications is required, unless RL approves an alternate (no action) approach that was transmitted on July 6, 2016 (CHPRC-1602928). The project continues to await RL direction for sanitary water system facility modifications. The MSA water purveyor also performed the annual cross-connection review at WESF on February 6, 2018. WESF is currently awaiting the report. Additionally, at MSA’s request, a letter was transmitted that describes to the MSA water purveyor the recently completed risk reduction activities at WESF (e.g.; W-130 Project) and the current schedule for removal of capsules to dry storage. On May 7, 2018, CHPRC received a response to this status stating that “the facility hazard level can be reduced from severe to high ONLY after Project W-135 is fully executed, with the capsules removed and protective basins drained.” CHPRC has notified RL that they will include work for the planning and preparations necessary for modifications to the potable water system in the FY2019 Post Contract Baseline to be authorized in the FY2019 work authorization. Field work would commence in FY2020.

Issue:

On August 14, 2018, notification was received (RL: 18-AMRP-0151) informing CHPRC that RL is supportive of enhancing the operating margin for the cesium salt-metal interface temperature by

increasing the number of casks (as appropriate up to 24 casks) to reduce the heat load in each individual cask, in order to bound the range of uncertainty.

Corrective Action:

CHPRC is preparing a response to RL that will identify our proposed path forward and preliminary cost and schedule impacts.

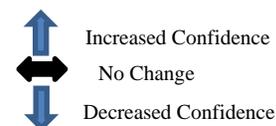
Status:

Draft letter is developed and has been shared with RL project personnel and RL Nuclear Safety.

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: The following changes were made to the monthly stoplight chart: Risk WSD-W135-15, <i>Utilization of 2003 Pre-Conceptual Design</i> was removed from the stoplight chart and risk WSD-CSA-007: <i>Delays in CSS Design Impact PDSA</i> was added to realized risk section of the monthly stoplight chart. Risk WSD-140: <i>As-Found-Unknown Conditions - T Plant</i> was removed from the stoplight chart as all mitigation actions have been completed. Risk WSD-097: <i>Major Equipment Failure - T-Plant</i> remains as a critical risk and will support the risk posture for the remaining FY18 scope at T-Plant.																
Realized Risks (Risks that are currently impacting project cost/schedule)																
WSD-CSA-007: Delays in CSS Design Impact PDSA	The final development of the PDSA is impacted due to delays in completing the CSS final design, resulting in schedule impacts to the CSA construction and CSS fabrication. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$0K, 96 days			Risk Event: The CSS final design is delayed due to late identification of the need for additional shielding in the cask design due to the unique nature of the capsules. Accident analysis needed to support development of the PDSA cannot be completed until final design is complete. The PDSA development cannot complete until CSS design is complete. <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>CHPRC has provided draft PDSA for review and comment to internal reviewers and DOE to allow early feedback and comment incorporation.</td> <td>9/6/18</td> <td>90</td> </tr> <tr> <td>CHPRC is working with the CSS design contractor to prioritize accident analysis needed for the PDSA development.</td> <td>9/30/18</td> <td>75</td> </tr> <tr> <td>Complete shielding design and accompanying analysis for final design</td> <td>9/30/18</td> <td>75</td> </tr> </tbody> </table> Risk Action Assessment: CSS final design will be submitted by the design contractor by 9/30/18 to CHPRC. CHPRC will conduct an in-process review of the G Cell operational and CSS loading equipment pending outcome of the impacts of DOE letter 18-AMRP-0151 to increase cask storage temperature operating margin.	Risk recovery action(s)	FC Date	%	CHPRC has provided draft PDSA for review and comment to internal reviewers and DOE to allow early feedback and comment incorporation.	9/6/18	90	CHPRC is working with the CSS design contractor to prioritize accident analysis needed for the PDSA development.	9/30/18	75	Complete shielding design and accompanying analysis for final design	9/30/18	75
Risk recovery action(s)	FC Date	%														
CHPRC has provided draft PDSA for review and comment to internal reviewers and DOE to allow early feedback and comment incorporation.	9/6/18	90														
CHPRC is working with the CSS design contractor to prioritize accident analysis needed for the PDSA development.	9/30/18	75														
Complete shielding design and accompanying analysis for final design	9/30/18	75														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0013/WBS-013																
WSD-TR-03: Equipment fails CVSA Inspection or is Non-Operational	<p>The Commercial Vehicle Safety Alliance (CVSA) Inspection identifies defects/issues with MSA Managed Fleet equipment that requires repairs or replacement, resulting in cost impacts and schedule delays.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$500K, 64 days</p>			<p>Risk Event: On March 29, 2018, the clutch on the tractor that is used when pulling super sacks went out. In addition, during a return shipment from PFNW, water inside the Super 7A was discovered.</p> <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform tractor clutch repair.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform leak test on Super 7A.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform four shipments to PFNW in June.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in August. Due to the realization of this risk, the project performed a repair on the tractor clutch. The tractor was returned to service following the repair. The Super 7A was returned from PFNW with water inside, which could indicate a leak. The investigations and leak test show no indication of a leak. After the PM, the Super 7A-1 should return to service. Shipments continue with the Super 7A-2. This risk will continue to be monitored as a realized risk until the Super 7A-1 is in service. At that time, this risk will be removed from the stoplight chart.</p>	Risk recovery action(s)	FC Date	%	Perform tractor clutch repair.	Complete	100	Perform leak test on Super 7A.	Complete	100	Perform four shipments to PFNW in June.	Complete	100
Risk recovery action(s)	FC Date	%														
Perform tractor clutch repair.	Complete	100														
Perform leak test on Super 7A.	Complete	100														
Perform four shipments to PFNW in June.	Complete	100														
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
Lifecycle Risk Triggers (Risk could be realized at any point of the project)																
WSD-097: Major Equipment Failure - T-Plant	<p>T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$3 million, 96 days</p>			<p>Risk Trigger Metric: During planned facility operation activities, a suspected system component is discovered that requires attention or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC (September 30, 2018) 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> </tbody> </table> <p>Mitigation Assessment: No significant changes in August. The project has put into place mitigating strategies (i.e., aggressive Surveillance and Maintenance [S&M] activities) to help reduce this risk. The crane is currently operational; however, an adequate spare parts inventory is needed. The project has identified spare parts for the T Plant crane with input from the manufacturer and is in the process of procuring critical spares. The project has received mechanical brake, motor parts, and spare parts. Engineering addressed quality assurance clause for the National Electrical Manufacturers Association (NEMA) MG1 standards to complete the mechanical motor parts order. An electrical parts order is in process.</p>	Mitigation action(s)	FC Date	%	Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A						
Mitigation action(s)	FC Date	%														
Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0013/WBS-013																			
WSD-019: MLLW & TRU Treatment Impacts	<p>Mixed Low-Level Waste (MLLW) and TRU treatment capacity/capability does not meet Hanford needs or treatment does not occur as scheduled, resulting in cost impacts.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$1.25 million, 0 days</p>	●	↔	<p>Risk Trigger Metric: Will continue throughout the contract (September 30, 2018).</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish multiple treatment contracts or obtain additional capability for the processing of MLLW and TRU waste, with terms extending to the end of the current CHPRC contract with RL (i.e. September 30, 2018).</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Continue to work with RL to fund the processing of TRU/M waste at PFNW at a rate that keeps them viable (i.e. keeps the doors open).</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Evaluate the benefit(s) associated with an increase to the PFNW plutonium (Pu) possession limit. Their current limit is 200 grams of total Pu. Increasing the limit may allow additional quantities of TRUM waste to be shipped to PFNW for processing. This evaluation took place in conjunction with the M-091-52 engineering study.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Negotiations with RL are ongoing to seek authorization for additional shipments of M-91 legacy TRUM to PFNW. The additional shipments would meet the objectives for the PFNW minimum optimal processing volume as identified in the optimization study provided to RL in December 2016.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in August. MLLW: Two contracts are in place for offsite commercial waste treatment, which provided sufficient capability/capacity to meet current MLLW treatment needs through the end of the CHPRC contract term. However, one of the contracts was recently restricted due to the closure of the Perma-Fix East treatment facility in Tennessee (M&EC). Additional treatment capabilities will be needed to meet future anticipated MLLW treatment needs.</p> <p>TRU/M: Only PFNW has current capability to process TRU/M waste. This is due solely to the practical limitations imposed by the need to ship the TRU/M waste via road closure; therefore, additional commercial providers cannot be obtained.</p> <p>Additional authorization has been received by DOE for FY2018, which will maintain PFNW’s minimum optimization processing volumes through the remainder of the fiscal year.</p>	Mitigation action(s)	FC Date	%	Establish multiple treatment contracts or obtain additional capability for the processing of MLLW and TRU waste, with terms extending to the end of the current CHPRC contract with RL (i.e. September 30, 2018).	Ongoing	N/A	Continue to work with RL to fund the processing of TRU/M waste at PFNW at a rate that keeps them viable (i.e. keeps the doors open).	Ongoing	N/A	Evaluate the benefit(s) associated with an increase to the PFNW plutonium (Pu) possession limit. Their current limit is 200 grams of total Pu. Increasing the limit may allow additional quantities of TRUM waste to be shipped to PFNW for processing. This evaluation took place in conjunction with the M-091-52 engineering study.	Complete	100	Negotiations with RL are ongoing to seek authorization for additional shipments of M-91 legacy TRUM to PFNW. The additional shipments would meet the objectives for the PFNW minimum optimal processing volume as identified in the optimization study provided to RL in December 2016.	Complete	100
Mitigation action(s)	FC Date	%																	
Establish multiple treatment contracts or obtain additional capability for the processing of MLLW and TRU waste, with terms extending to the end of the current CHPRC contract with RL (i.e. September 30, 2018).	Ongoing	N/A																	
Continue to work with RL to fund the processing of TRU/M waste at PFNW at a rate that keeps them viable (i.e. keeps the doors open).	Ongoing	N/A																	
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Negotiations with RL are ongoing to seek authorization for additional shipments of M-91 legacy TRUM to PFNW. The additional shipments would meet the objectives for the PFNW minimum optimal processing volume as identified in the optimization study provided to RL in December 2016.	Complete	100																	
WSD-125: Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues	<p>A pause in waste processing results in an unexpected container degradation within Solid Waste Operations Complex (SWOC) (excluding TRU retrieval activities) and requires additional resources to respond.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$5 million, 0 day</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 overpacks for alternative storage of containers that show signs of degradation.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in August. The project continued to perform container surveillances in August to identify container and container cover abnormalities. Three drums have been placed in overpacks in FY2018, in addition to 24 containers in 2404WC with signs of exterior corrosion, which were placed in stainless steel overpacks on October 18, 2017. Five additional drums with corrosion were identified and completed. Furthermore, the overpack of storage box 75DMA16F3 was completed. RL authorized additional FY2018 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue. The remaining containers will continue to require surveillance and enhanced monitoring.</p>	Mitigation action(s)	FC Date	%	Perform daily/weekly waste container surveillances to identify container abnormalities.	Ongoing	N/A	Manage a “watch list” of waste containers that have shown signs of degradation or are associated with degraded containers.	Ongoing	N/A	Process waste packages at a rate funded by RL.	Ongoing	N/A	Procuring stainless steel 85-gallon overpacks for alternative storage of containers that show signs of degradation.	Complete	100
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Procuring stainless steel 85-gallon overpacks for alternative storage of containers that show signs of degradation.	Complete	100																	

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0013/WBS-013													
WSD-TR-01: DOE Provided Drivers Not Available	<p>Scheduling issues prevent the government-provided drivers from being assigned/available to make off-site waste shipments, resulting in cost impacts and schedule delays.</p> <p>Risk Handling Strategy: Transfer</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$100K, 48 days</p>	●	↑	<p>Risk Trigger Metric: Federal drivers were unavailable to perform scheduled waste shipments.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Scheduling remaining FY2018 shipments with supporting functions.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform four shipments to PFNW in June.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: Mitigation actions have been completed for FY2018. This risk will be removed from the stoplight chart, but will continue to be monitored internally.</p>	Mitigation action(s)	FC Date	%	Scheduling remaining FY2018 shipments with supporting functions.	Complete	100	Perform four shipments to PFNW in June.	Complete	100
Mitigation action(s)	FC Date	%											
Scheduling remaining FY2018 shipments with supporting functions.	Complete	100											
Perform four shipments to PFNW in June.	Complete	100											
FY2018 Risk Triggers (Risk could be realized in FY2018)													
WSD-W135-16: Content and Approval of Critical Decision Packages	<p>The content of the critical decision (CD) packages required by DOE O 413.3B are more extensive than anticipated and require an extensive RL review.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very Likely (>90%) Worst Case Impacts: \$2,000K, 0 days</p>	●	↑	<p>Risk Trigger Metric: The content and review/approval process for the CD packages is impacted by DOE O 413.3B.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Prepare joint tailoring strategy with RL on how to meet the DOE O 413.3B requirements</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in August. The pre-conceptual design of the project was based on DOE O 413.3A; the current version is DOE O 413.3B, Change Order 2. New requirements will impact the content of the CD packages or impact the duration and extent of the RL review. CHPRC continues to work closely with RL on the tailoring strategy to meet the DOE O 413.3B requirements. RL is currently evaluating the applicability of 413.3B due to new guidance from HQ which is in draft, but has not yet been published.</p>	Mitigation action(s)	FC Date	%	Prepare joint tailoring strategy with RL on how to meet the DOE O 413.3B requirements	Complete	100			
Mitigation action(s)	FC Date	%											
Prepare joint tailoring strategy with RL on how to meet the DOE O 413.3B requirements	Complete	100											
WSD-W135-17: Modifications to WESF	<p>The transfer of the capsules to dry storage will require more modifications to WESF than planned.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very Likely (>90%) Worst Case Impacts: \$7,300K, 0 days</p>	●	↔	<p>Risk Trigger Metric: Modifications to the WESF facility are required for transfer of capsules to dry storage.</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 changes in August. The approach incorporated into the pre-conceptual design for the transfer of the capsules required minimal modifications to WESF. New or updated requirements will require more extensive modifications to WESF. The CD-1 submitted in August provides the preliminary modifications to WESF.</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-W135-28: RCRA Permit Requires 90% Design Information for the Capsule Storage Area (CSA)	<p>Ecology may require the 90 percent design package for the CSA to be completed prior to issuing the permit for public comment.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (20% to 74%) Worst Case Impacts: \$1,775K, 360 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 changes in August. CHPRC continues to have regular interfaces with Ecology to discuss the issue and are evaluating options should the 90 percent be required. The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. The project is awaiting a determination of incompleteness and other comments on the application. The determination of incompleteness is primarily associated with the need for additional design information, which is currently being gathered. CHPRC submitted supplemental design information for the WESF Mods and CSA to RL in May to support Ecology's incompleteness determination. RL has transmitted this information to Ecology. Ecology is currently reviewing the design information. The project anticipates that a temporary authorization will be necessary if the permitting process is not timely.</p>	Mitigation action(s)	FC Date	%	None identified at this time.	N/A	N/A			
Mitigation action(s)	FC Date	%											
None identified at this time.	N/A	N/A											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0013/WBS-013																						
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																						
WSD-086: W&FMP Industrial Accident or Contamination	An industrial accident or contamination event requires corrective actions, resulting in cost impacts. Risk Handling Strategy: Accept Probability: Medium (26% to 74%) Worst Case Impacts: \$3 million, 0 days	●	↔	<p>Risk Trigger Metric: The spread of contaminated tumbleweeds at W&F laydown areas and burial grounds require additional personnel to monitor and mitigate the spread of contamination.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Additional radiation surveys, first line supervisors, and supporting staff are required to support herbicide spraying required to monitor and mitigate the spread of contamination in the burial grounds associated with biological vectors.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in August. The migration of tumbleweeds has the potential of spreading contamination to site “neighbors;” therefore, increased use of herbicide spraying and surveillances are required to help minimize contamination spread.</p>	Mitigation action(s)	FC Date	%	Additional radiation surveys, first line supervisors, and supporting staff are required to support herbicide spraying required to monitor and mitigate the spread of contamination in the burial grounds associated with biological vectors.	Ongoing	N/A												
Mitigation action(s)	FC Date	%																				
Additional radiation surveys, first line supervisors, and supporting staff are required to support herbicide spraying required to monitor and mitigate the spread of contamination in the burial grounds associated with biological vectors.	Ongoing	N/A																				
WSD-133: Results of External Audits/Assessments Impact Operations	External oversight groups identify gaps in licensing/permitting, surveillance, and maintenance activities at WSD facilities. This includes but is not limited to a change in the current interpretation of required electrical PMs and additional permitting at T Plant for sludge receipt. These gaps require additional resources to address discrepancies, resulting in cost impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$3,000K, 0 days	●	↔	<p>Risk Trigger Metric: WESF operations continue longer than assumed due to delays in the implementation of the Cs/Sr capsule dry storage project, which results in increased maintenance demands and the need to replace select systems required for operation due to their age and difficulty in obtaining spare parts. The WRAP facility extended dormant period requires increased maintenance work.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Replace WESF pool cell instrumentation systems, add 21 PM/S WRAP electrical system activities, and perform WRAP floor repair.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide RL information to substantiate the current project position.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Participate in technical mitigations to ensure compliance.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in August. The project has replaced the bulk of the WESF pool cell instrumentation system and is currently working the on-line beta monitoring modifications. WRAP floor repairs are ongoing. Completed maintenance on the High Energy Real Time Radiography Linear Accelerator. Additional maintenance work will be performed based on facility work priority.</p>	Mitigation action(s)	FC Date	%	Replace WESF pool cell instrumentation systems, add 21 PM/S WRAP electrical system activities, and perform WRAP floor repair.	Ongoing	N/A	Provide RL information to substantiate the current project position.	Ongoing	N/A	Participate in technical mitigations to ensure compliance.	Ongoing	N/A						
Mitigation action(s)	FC Date	%																				
Replace WESF pool cell instrumentation systems, add 21 PM/S WRAP electrical system activities, and perform WRAP floor repair.	Ongoing	N/A																				
Provide RL information to substantiate the current project position.	Ongoing	N/A																				
Participate in technical mitigations to ensure compliance.	Ongoing	N/A																				
WSD-136: CWC/WRAP Components Fail	CWC facilities and components may reach their end of life. These items will need to be replaced and/or repaired outside of planned funding profiles, resulting in cost impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$2 million, 0 days	●	↔	<p>Risk Trigger Metric: Maintenance activities at CWC increase due to aging facilities.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Obtain spare parts for the Fire Alarm Control Units (FACU) via deactivation of old FACUs.</td> <td>9/2018</td> <td>N/A</td> </tr> <tr> <td>Conduct fieldwork for 2727W deactivation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Conduct fieldwork for MO433 deactivation.</td> <td>9/2018</td> <td>0</td> </tr> <tr> <td>Conducting doorframe replacements and electrical equipment repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in August. The WRAP roof was analyzed for structural integrity following water intrusion. There was insufficient basis for the roof’s integrity, which may lead to an eventual roof replacement. The MDSA container stacking requirements are complete. Maintenance work at CWC will be scheduled based on facility work priorities. The WRAP facility experienced failure of the majority of the breakers earlier in the year and is currently repairing Motor Control Centers (MCC). A sinkhole in the WRAP parking lot was repaired in April 2018. Repair to the line and fire hydrant causing the sinkhole were completed in October 2017.</p>	Mitigation action(s)	FC Date	%	Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A	Obtain spare parts for the Fire Alarm Control Units (FACU) via deactivation of old FACUs.	9/2018	N/A	Conduct fieldwork for 2727W deactivation.	Complete	100	Conduct fieldwork for MO433 deactivation.	9/2018	0	Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A
Mitigation action(s)	FC Date	%																				
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Conduct fieldwork for MO433 deactivation.	9/2018	0																				
Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A																				
Unassigned Risks (Pending ownership of identified risks/opportunities)																						
No unassigned risks identified in August .																						

PROJECT BASELINE PERFORMANCE

Current Month

(\$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	14.5	13.9	13.6	(0.6)	-4.3%	0.3	1.8

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-0.6M/-4.3%)

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

CM Cost Performance (+\$0.3M/+1.8%)

The CM cost variance is within threshold.

Contract-to-Date (CTD)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,333.6	1,329.0	1,238.4	(4.6)	-0.3%	90.6	6.8%	1,411.8	1,320.0	81.5	91.8

Numbers are rounded to the nearest \$0.1 million

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

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$90.6M/+6.8%)

The CTD favorable cost variance is a result of realizing efficiencies such as organizational flattening and streamlining; right-sizing capabilities for planned scope; optimizing resources with reorganization and consolidation of engineering capabilities across W&FMP; combined administrative/records functions across WESF and CSB; removing waste from building(s) and reducing the need for inspections/surveillances; reducing the size and number of Radioactive Areas/Radioactive Material Areas (RAM) and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of preventive maintenance activities; increasing shared resources across all of SWOC; reducing dedicated resources for the Corrective Action System (CAS) and using project-wide support; optimizing maintenance scheduling and execution reducing Operations Field Work Supervision; increasing emphasis on managing planned absence coverage within existing resources; simplifying and optimizing acquisition and procurement management within W&FMP; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and the Solid Waste Inventory Tracking System (SWITS). The cost variance is also partially due to significant credits from the transportation and disposal of other Hanford contractor waste at ERDF.

Variance at Completion (+\$91.8M/+6.5%)

The VAC favorable 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/RAM and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of preventive maintenance activities; increasing shared resources across all of the SWOC; reducing dedicated resources for CAS and utilizing project-wide support; optimizing maintenance scheduling and execution; reducing Operations Field Work Supervision; increasing emphasis on managing planned absence coverage within existing resources; simplifying and optimizing acquisition and procurement management within W&FMP; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and SWITS. The significant credits from the transportation and disposal of other Hanford contractor waste at ERDF, as well as the optimization of project resources, also contribute to the variance at completion.

Contract Performance Report Formats are provided in Appendix A

FUNDS vs. SPEND FORECAST (\$M)

WBS 013/RL-0013	FY2018		Variance
	Projected Funding	Spending Forecast	
Waste Stabilization & Disposition	144.3	134.1	10.2
Management of Cesium and Strontium Capsules (Line Item)	6.5	0.7	5.8
Incremental Scope Pending Change Management	0	0	0
RL-0013 – Total	150.8	134.8	16.0

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The FY2018 projected funding level for project baseline summary (PBS) RL-0013 of \$150.8 million is based on the revised guidance provided by RL following passage of the FY2018 Omnibus. The \$16.0 million variance held steady in August. The positive variance is due to the MCSC Project (W-135) not experiencing subcontract charges at the anticipated levels as result of slow ramp-up for the WESF modification design, and deferral of regulatory document preparations (Revision 9, Part B, and CAFO closure plans) due to delay in receipt of regulatory comments and realization of reduced projected staffing levels.

Critical Path Schedule

Critical Path Analysis will be provided upon request.

MILESTONE STATUS

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones represent significant events in project execution. RL enforceable agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The Performance Measurement Baseline (PMB) annual update, implemented in September 2013, and subsequently approved BCRs define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a one-year look ahead of commitments and Tri-Party Agreement enforceable milestones and non-enforceable target due dates.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
C-026-07L	Tritium Treatment Technology Developments to Ecology and EPA.	3/31/2018	3/22/2018 (A)		Completed
M-091-53	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste	9/30/2018		9/27/2018	On schedule
M-092-00	Acquire Facilities for Cs/Sr, Na & SCW	9/30/2018		9/28/2018	In Program Planning
M-091-52-T01A	Remove Five (5) Mixed Waste Containers from Outside Storage Area A and/or Outside Storage Area B	11/30/2018	4/26/2018 (A)		Completed
M-026-07D	Evaluation of Tritium Treatment Technology to EPA & Ecology	3/31/2019		3/31/2019	On schedule
C-026-07M	Submit Tritium Treatment Technology Developments to Ecology & EPA	3/31/2019		3/31/2019	On schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
CONTRACT			
J.12/C.2.2, C.2.3	PBS-RL-0011, Plutonium Finishing Plant Closure Project PBS-RL-0013, Solid and Liquid Waste Treatment and Disposal	Offsite Transportation of Radioactive Material: RL provides equipment and government drivers to transport TRU materials outbound/inbound between the Hanford Site and Northwest locations. RL is the authorized shipper and acts as signatory on the shipping papers, and ensures DOE Manual 460.2-1 is complied with. RL arranges for Commercial Motor Vehicle Safety Alliance (CVSA) level VI vehicle inspections and verifies that the government drivers meet the applicable DOT Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or treatment, storage, and disposal (TSD) requirements.	Ongoing
J.12/C.2.3.6	PBS-RL-0013, Transuranic Waste Certification	WIPP provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable, and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office (CBFO).	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)	10/1/2018

Section D

Soil and Groundwater Remediation Project (RL-0030)

CH2MHILL
Plateau Remediation Company



J. D. Rendall
Vice President and
Project Manager for
Soil and Groundwater
Remediation Project

M. A. Wright
Vice President for
Project Technical
Services

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

PROJECT SUMMARY

Pump and Treat (P&T) Operations continued making progress on the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) remedial process documentation for the River Corridor and Central Plateau. Groundwater treatment completed in August 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	34.7	359.9	2.4	25.1						
HX P&T	26.3	346.0	2.0	23.7						
KR-4 P&T	13.9	116.8	0.1	1.1						
KW P&T	7.3	147.3	0.3	9.9						
KX P&T	37.3	366.0	2.5	22.8						
200 West P&T	87.7	1,029.8	9.2	95.1	189.0	2,122.0	.19x10 ¹²	2.40x10 ¹²	10.7	137.8
Combined	207.2	2,365.7	16.5	177.6	189.0	2,122.0	.19x10¹²	2.40x10¹²	10.7	137.8
FY2018 KPG	--	2,200.0	--	160.0	--	1,800.0	--	N/A	--	120

Well Drilling by Area	FY2018 Planned	Current Month	FY2018 Cumulative
100-KR-4	3	0	2
100-HR-3	6	0	6
200-UP-1	5	0	5
200-ZP-1	4	1	3
M-24 Milestone	1	0	1
Total Wells	19	1	17
Site Wide Boreholes	29	0	29

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
<u>18-EMS-SGRP-OB1-T1</u>	Reduce adverse environmental impact to health and the environment by monitoring and confirming low-carbon tetrachloride emissions at the 200 West Pump and Treat Facility.	Evaluate treated off-gas analytical results from compliance sampling and process sampling each quarter.	7/31/2018	100%
<u>18-EMS-SGRP-OB2-T1</u>	Improve compliance margin by improving expired chemical inventory management.	Better define the process of proper disposal of expired chemicals and/or chemicals with no future use.	9/30/2018	100%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	NA
Total Recordable Injuries	0	0	NA
First Aid Cases	4	23*	<p>8/2/2018 – Employee suffered an abrasion on the knee after a 1-inch pipe fell while removing it from a well. The individual returned to work with no restrictions. (24918)</p> <p>8/2/2018 – An individual was struck on the left ankle by a portion of a rake after it fell apart while surveying the rake head and tines. (24925)</p> <p>8/22/2018 – An employee reported not feeling well after working in the heat. The supervisor made the decision to have the individual evaluated at HPMC. The employee was released to work with no restrictions. (24951)</p> <p>8/31/2018 – An employee suffered swelling on the inside of the right elbow after what was determined to be a spider bite. The individual was seen at HPMC, where he was directed to see a physician if the swelling got worse or if the skin turned black. The employee returned to work with no restrictions. (24959)</p> <p>*1 First Aid case, PTS in support of RL-0030.</p>
Near-Misses	0	0	NA

KEY ACCOMPLISHMENTS

RL-0030.O1 RL-0030 Operations

Environmental Integration

- Conducted an information and feedback session with RL, DOE Office of River Protection (ORP), U.S. Environmental Protection Agency (EPA), and Washington State Department of Ecology on the development and use of geoframework models on the Hanford Site. A geoframework is a 3-D representation of the subsurface geology modeled to support the needs of remediation projects on site. The geoframeworks have been developed to be consistent across projects and contractors, flexible, scalable, and accessible so they can be used for a multitude of purposes.

River Corridor

300-FF-5 OU

- Completed Construction Acceptance Testing of the poly-phosphate injection system on August 20, 2018.
- Completed testing the batch chemicals to be used for injection. All chemicals passed the performance specifications, and chemical delivery is scheduled to begin August 29, 2018.

- Completed the required baseline groundwater sampling and initiated the Electro Resistivity Tomography prior to injections.

100-KR-4 OU

- Submitted the draft 100-KR-4 Groundwater Operable Unit Well Installation Sampling and Analysis Plan (SAP), Addendum 6: Wells 199-K-235 and 199-K-236 to RL and EPA for concurrent review on July 24, 2018. Received comments from RL and EPA on August 21, 2018.

100-HR-3 OU

- Received Tri-Party Agency signatures on the 100 D/H Record of Decision (ROD) by July 30, 2018.

100-NR-2 OU

- Submitted the Technical Impracticability Waiver documentation to RL for review and submittal to the regulators on August 23, 2018.

100-BC-5 OU

- Submitted Chapter 7 and the executive summary from the Draft Revision 0 Remedial Investigation/Feasibility Study (RI/FS) to EPA for final checking on July 26, 2018.
- Submitted the revised Chapters 3 and 9 from the Draft Revision 0 RI/FS report to RL on August 16, 2018, for review. The chapters were revised to include additional information about compliance with the National Historic Preservation Action (NHPA).

Central Plateau

200-UP-1 OU

- Incorporated RL's comments on the Decisional Draft Remedial Design Investigation Report for the Southeast Chromium Plume.

200-BP-5/200-PO-1 OU

- Completed comment incorporation and final checking by Ecology of the 200-BP-5 and 200-PO-1 RI reports on August 20, 2018.
- Met with RL on August 6, 2018, to review the Interim Record of Decision (IROD) FS remedial alternative cost estimates.
- Completed an RL briefing on August 8, 2018, of the waste management area (WMA) C performance assessment (PA) modeling results of groundwater impacts for comparison to the BP-5 RI Report. A follow-on meeting with ORP has been scheduled for August 30, 2018.

200-DV-1 OU

- Presented the results of the Shallow Risk Borehole Field Summary Report to RL on August 15, 2018.

200-ZP-1 OU

- Prepared a briefing to EPA on the progress made toward attainment of 200-ZP-1 remedial action objectives and path forward, to support a meeting scheduled for August 28, 2018. The objective of this meeting is to discuss the 200-ZP-1 remedy status and challenges faced, and obtain feedback on recommended next actions.
- Briefed EPA on the second quarter calendar year (CY) 2018 200 West Pump and Treat Facility performance August 20, 2018. Highlights included:
 - The throughput averaged 2,141 gallons per minute (gpm) and ranged between 1,510 gpm to 2,350 gpm for the second quarter.
 - Treated over 280.5 million gallons (1.06 billion liters), which is a 19.5 percent increase in production compared to the second quarter in 2017.

- Completed drilling, construction and well development of new injection well YJ-34 (C9880).

200-WA-1 and 200-BC-1

- Submitted the draft Tri-Party Agreement Change Notice of the Sampling and Analysis Plan to RL for review on August 06, 2018. The Tri-Party Agreement Change Notice incorporates lessons learned from the 200-DV-1 characterization.

200-EA-1

- Received Ecology's comments on the Draft A 200-EA-1 RI/FS Work Plan and SAP on August 17, 2018, 26-days ahead of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) allowed 60-days for review.

RCRA Revision 9 Permitting and Groundwater Monitoring

- Received comments from Ecology on August 20, 2018, for the nonradioactive dangerous waste landfill (NRDWL) Treatment, Storage and Disposal (TSD) Engineering Evaluation Reports (EERs) for the 200 East Area as Regulator review draft.
- Received comments from Ecology on July 24, 2018, for the 216-A-36B TSD EERs for the 200 East Area as Regulator review draft.
- Delivered the Regulator Review Draft of Trench 31/34 TSD Revision 9 Groundwater Monitoring Plan to RL and Ecology on July 31, 2018.
- Delivered the Regulator Review Draft of Waste Management Area-T TSD Revision 9 Groundwater Monitoring Plan to RL and Ecology on July 31, 2018.
- Delivered the Regulator Review Draft of Waste Management Area-S/SX TSD Revision 9 Groundwater Monitoring Plan to RL and Ecology on July 31, 2018.
- Delivered the Regulator Review Draft of Waste Management Area-TX/TY TSD Revision 9 Groundwater Monitoring Plan to RL and Ecology on August 8, 2018.
- Delivered the Regulator Review Draft of 216-S-10 TSD Revision 9 Groundwater Monitoring Plan to RL and Ecology on August 21, 2018.
- Completed the development work and actual site modeling of the 200 East TSDs on August 20, 2018, using the 200 East Hybrid Water Table Mapping Tool. The environmental calculation file (ECF) has been developed.
- Ecology agreed to "freeze" the 216-A-36B Crib closure plan until the remain closure plans are received.

Project Technical Services Accomplishments

- Training and Procedures
 - Worked with subject matter experts (SMEs) to revise SGRP-PRO-OP-50014, Sample Management and Reporting Records Management.
- Project Delivery
 - 300 FF5:
 - Completed Construction Acceptance Testing.
 - Construction Completion Document (CCD) signed.
 - ZP1 Wells YJ33/YJ34
 - Mobilized to the field and commenced electrical install.
 - ME55 Extraction Well
 - Completed bonding and flushing of 3-inch high-density polyethylene.
 - Completed tie in of ME55 extraction well to facility.
 - CCD signed and completed site demobilization.

Modular Storage Units (MSUs)

- The available water storage at the MSUs is 1,185,000 gallons as of August 26, 2018.
- Approximately 300,000 gallons of water from well rehabilitation, sampling, and development will be added back through mid-November 2018.
- The MSU planning model projects sufficient water level storage into the third quarter of Fiscal Year (FY) 2019.
- Removal of available sediment from MSU number 2 and number 3 have completed as of August 24, 2018.
- Briefed EPA on August 20, 2018, on the progress of the MSU Optimization Pilot Test treating MSU water at the 200 West P&T. The following is what was learned:
 - Sample data collected and analyzed from the MSU water before and during transfer did not show any surprises (constituents within acceptance criteria).
 - The data from the plant effluent met all the targets for the contaminants of concern (COC).
 - Verified sediment activities did not change water chemistry.
 - Using a clamshell to remove sediment proved to be more efficient.

Groundwater P&T Facilities

- Overall, the P&T systems are operating above target as depicted in the P&T performance graph below.

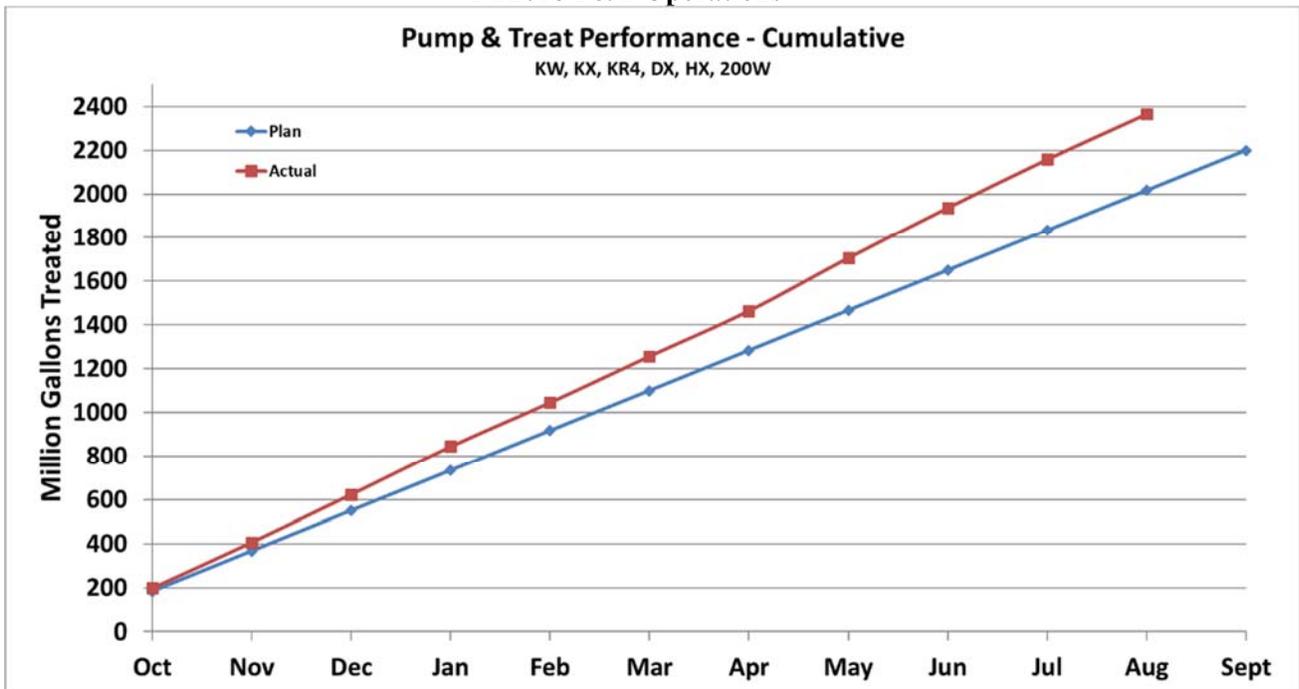
200 West P&T

- Operated the 200 West P&T at an average of 1,964 gpm in the month of August. Completed cleaning of membrane bioreactor (MBR) C and D cassettes and aeration tubes in August. Completed conversions of all extraction transfer buildings to use 200-PW-1 granulated activated charcoal containers in August.

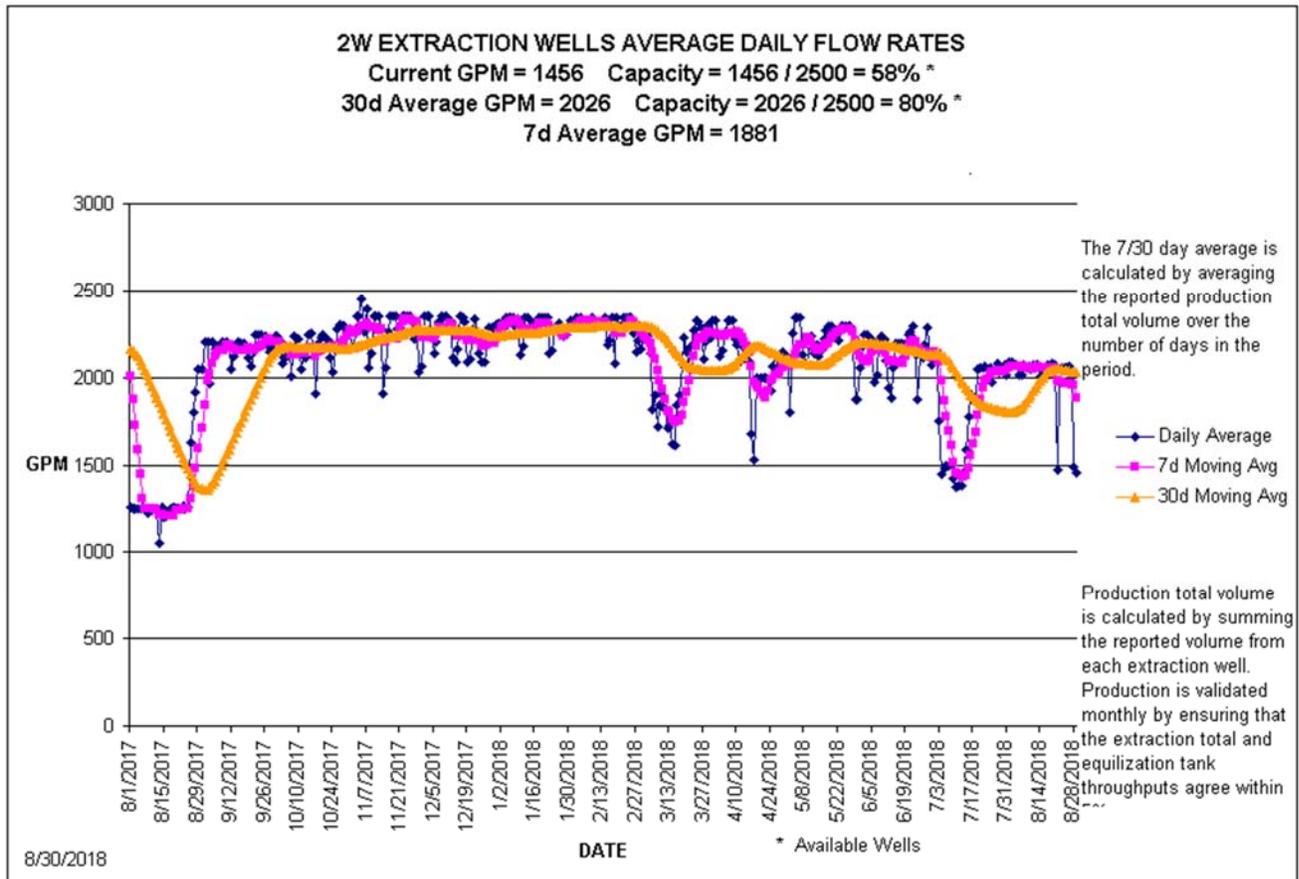
100 Area P&Ts

- Completed electrical power line upgrades and maintenance for HX, DX, KR-4 and KW P&T facilities in August.
- Operated the DX P&T at 777 gpm, above the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 312 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 163 gpm, below the facility capacity of 330 gpm.
- Operated the KX P&T at 836 gpm, below the facility capacity of 900 gpm. Completed conversion of booster pump header to stainless steel in August.
- Operated the HX P&T at 590 gpm, below the facility capacity of 900 gpm.

FY2018 P&T Operations



200 West P&T



MAJOR ISSUES

Issue:

The 2018 Key Performance Goal (KPG) requiring the initiation of a public review of the 100BC Proposed Plan (PP) will not be achieved this fiscal year. During a discussion between RL and EPA on July 23, 2018, it was agreed that RL would not proceed with the public review of the 100BC Proposed Plan until the Yakama Nation has reviewed the revised text in the 100BC RI/FS report that describes the National Historic Preservation Act (NHPA) and cultural resources information affecting 100BC. Additionally, EPA has indicated that the EPA administrator may require review of the draft PP before it is finalized.

Corrective Action:

Two corrective actions have been identified. First, the revised NHPA cultural resource summary (chapters 3 and 9 of the RI/FS) will be provided to the Yakama Nation for information. Second, clarification will be requested from the EPA project manager on whether an EPA administrator review is needed for the PP.

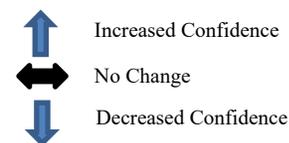
Status:

The revised NHPA cultural resource summary (chapters 3 and 9 of the RI/FS) was provided to RL for review on August 16, 2018. Following RL’s concurrence, the revised chapters will be provided to EPA for review and Yakama Nation for information. No additional information has been provided by EPA on whether it’s necessary for the EPA administrator to review the draft PP. A revised schedule has been prepared that completes public review of the 100BC Proposed Plan in FY2019. Issue 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.



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

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	11.2	11.4	10.3	0.1	1.3%	1.1	9.5%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (+\$0.1M/+1.3%)

The current period schedule variance is within reporting thresholds.

CM Cost Performance (+\$1.1M/+9.5%)

The favorable current period cost variance is the result of:

- The 200-ZP-1 Operations and Maintenance (O&M) account experienced cost efficiencies when labor resources were loaned to other projects, including modutank decanting, 300-FF-5 Stage B Uranium Sequestration, and Plutonium Finishing Plant (PFP) support, and additional absences were incurred due to short-term disabilities and unfilled positions. The performance of dowex and purolite resin has been greater than expected, which has resulted in a reduced number of resin changes, eliminating the need for the planned material costs and labor support for those efforts.
- Environmental Integration experienced under-runs in several areas: non-essential Environmental Database maintenance was not performed as planned in order to fund higher priority work scope, Technical Integration experienced swings in costs due to prior month accrual errors, and Remediation Decision Support staff spent more time supporting projects.
- The GW Monitoring and Performance Assessment account continues to realize efficiencies in the geophysical logging subcontract that was competitively rebid with a subsequent reduction in contract costs. Sample packaging and shipments were performed efficiently, further contributing to the positive cost variance. These savings have been offset by increased efforts at modutanks to remove sediment and lower the water level.
- Ground Water Data Evaluation and Reporting realized a significant cost efficiency when it was determined that the Groundwater Monitoring Plans being prepared to support the Resource Conservation and Recovery Act (RCRA) Revision 9 Permit Modification did not require both an internal and regulator-review draft.
- Costs for the Usage Based Services Distributions account for leased vehicles, fuel, inspection, and maintenance were less than planned because travel to field locations to support sampling drilling, and well maintenance was not required as frequently as planned.
- The project management account experienced less labor than planned due to providing more Quality Assurance (QA) and Project Management support directly to projects, experiencing more vacation, bereavement, and short term disability absences, and unfilled open positions.
- This positive variance was offset in part by unplanned field work preparation activities for the 300-FF-5 Stage B Uranium Sequestration project, where work is re-starting mobilization activities for field work that was planned and initiated in previous fiscal year but was laid up.
- Additional offsets include well drilling at 200-ZP-1 where additional resources were required to recover schedule, and miscellaneous well drilling, which experienced unplanned on-the-job training (OJT) and HAMMER training costs as well as medical appointments.

- Finally, within the Deep Vadose Zone Operable Unit, challenges to accessing historical data, efforts to develop waste site scoping in support of the risk assessment, and multiple regulator workshops have contributed to the greater efforts than planned to support the 200-DV-1 RI report.

Contract-to-Date (\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,520.0	1,513.9	1,463.4	(6.1)	-0.4%	50.4	3.3%	1,595.6	1,544.5	81.1	51.1

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$6.1/-0.4%)

The variance is within reporting thresholds.

CTD Cost Performance (+\$50.4M/+3.3 %)

The variance is within reporting thresholds.

Variance at Completion (+\$51.1M/+3.2%)

The variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0030 Soil and Groundwater Remediation	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	121.9	112.5	9.4
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0030 –Total	121.9	112.5	9.4

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

The fiscal year (FY) 2018 projected funding for project breakdown structure (PBS) RL-0030 is \$121.9 million. In August, there was no significant change in forecast.

Critical Path Schedule

Critical path analysis will be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
Milestones on Schedule					
M-015-92A	Submit RFI/CMS & RI/FS Work Plan for 200-EA-1 OU to Ecology	7/31/2018	7/12/2018 (A)		Complete
M-024-69-T01	Conclude discussions of well commitments initiated under M-024-58	8/1/2018	7/11/2018 (A)		Complete
M-016-193	Investigate SE Chromium Plume, Install Wells, Evaluate GW Monitoring Data & Install Monitoring -Wells	9/30/2018		9/14/2018	On schedule
M-015-21A	Submit 200 BP-5 & 200 PO-1 OU FS Report and PP(s) to Ecology	3/31/2019		2/22/2019	On Schedule
Milestones at Risk					
M-015-93C	Initiate Characterization Field Work for 200-SW-2 Operable Unit Landfills	10/31/2018		TBD	Dispute resolution was initiated on July 9, 2018 (18-AMRP-0135).

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review of Decisional Draft Biomobilization/Biointrusion SAP	9/17/2017 (A)	9/30/2018
RL Review of Decisional Draft 100-HR-3 RD/RAWP	11/23/2017 (A)	9/30/2018
RL Transmit Rev 0 SST WMA U Engineering Evaluation Report to Ecology	7/12/2018 (A)	8/30/2018
RL Transmit Rev 0 SST WMA T Engineering Evaluation Report to Ecology	7/12/2018 (A)	8/30/2018
RL Transmit Rev 0 216-S-10 Pond and Ditch Engineering Evaluation Report to Ecology	8/27/2018	8/31/2018
RL Transmit Rev 0 LLBG WMA-3 Engineering Evaluation Report to Ecology	8/31/2018	9/7/2018
RL Submit Rev 0 LLBG WMA-4 Engineering Evaluation Report to Ecology	8/31/2018	9/7/2018
RL Transmit Rev 0 SST WMA TX-TY Engineering Evaluation Report to Ecology	9/4/2018	9/17/2018

Description	CHPRC Delivery Date	Expected RL Due Date
RL Transmit Rev 0 SST WMA S-SX Engineering Evaluation Report to Ecology	9/4/2018	9/17/2018
RL Review Decisional Draft B Rev 1 200-ZP-1 O&M Plan	9/14/2018	10/9/2018
RL Review of Decisional Draft B 100-NR-2 RI/FS	9/14/2018	10/13/2018
RL Review Decisional Draft B Rev 1 200-ZP-1 RD/RAWP	9/20/2018	10/31/2018
RL Submit Regulatory Review Draft SST WMA U Groundwater Monitoring Plan to Ecology	10/1/2018	10/1/2018
RL Submit Regulatory Review Draft SST WMA T Groundwater Monitoring Plan to Ecology	10/1/2018	10/1/2018
RL Transmit 200-EA-1 RI/FS Work Plan Rev 0 to Regulators	10/5/2018	10/11/2018
RL Transmit Draft IDF Engineering Evaluation Report to Ecology for Review	10/12/2018	10/12/2018
RL Approve 200-EA-1 RI/FS Work Plan	10/12/2018	11/10/2018
RL Submit Regulatory Review Draft SST WMA S-SX Groundwater Monitoring Plan to Ecology	11/1/2018	11/1/2018
RL Submit Regulatory Review Draft SST WMA TX-TY Groundwater Monitoring Plan to Ecology	11/1/2018	11/1/2018

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

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

M. A. Wright
Vice President for
Project Technical
Services

PROJECT SUMMARY

The Plutonium Uranium Extraction Plant (PUREX) Tunnel 2 grouting conveyance system and mobile batch plant were installed in August. The team performed the third investigative entry into the B Plant Canyon and B Plant filter media sampling and loading out of the pre-filters. Annual surveillance of Reduction and Oxidation Plant (REDOX) completed, while the annual surveillance of B Plant commenced.

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	1	N/A
First Aid Cases	1	6	8/28/2018 – Employee felt a twinge in the back while standing up out of a chair. (24953)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0040 Accomplishments

Central Plateau Risk Reduction Project (CPRMP) Facilities and Waste Sites

- Completed the REDOX annual surveillance and commenced B Plant surveillance.
- Completed National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Stack Sampler Line Testing annual calibrations.
- Completed semi-annual cell 10 liquid level monitor system test.
- Completed annual REDOX air monitoring pump maintenance.
- Supported the inspection/adjustment of exterior tension rods for 216-Z-9A Crib.
- Completed Annual miscellaneous facility surveillances for 241-CX-40 (interior/exterior) and exterior of 215-C.
- Completed the 200 West area tri-annual (second of three) waste site surveillances.
- Performed annual PUREX stack spider lift maintenance.

PUREX Tunnel 2 Stabilization Project

• Project Technical Services (PTS) Support

- Grout Conveyance
 - Completed installation of the extension booms. All six grout conveyance systems are now complete.
 - Installed the generators and spider boxes for electrical backbone.

- Routed cabling to power up lights, cameras, and air sampling equipment.
- Installed cameras and lights at the six injection locations.
- Staged high-efficiency particle absorber skid and routed ducting to Riser 2.
- Grouting Contract
 - Completed erection of batch plant.
 - Calibrated chemical metering system and weigh hoppers on batch plant.
 - Completed first fill on admixtures, fly ash, cement, and continued to stockpile sand.
 - Completed constructing wash-out pits at the Integrated Disposal Facility and on the south-end of the tunnel.
 - Continued deploying signage to control traffic loop.

B Plant Pre-filter and High Efficiency Particulate Air (HEPA) Filter Change-out

- Made third entry into the B Plant Canyon to investigate elevated dose rates at the filter. Completed sampling B Plant filter media and transported to 222-S Laboratory for analysis.

REDOX Canyon Risk Mitigation

- Completed production of REDOX Access Accountability Board and staged it at the west loading dock entrance.
- Commenced wiring bundle assembly for installation of temporary lighting in silo and support areas.
- Commenced re-lamping and installation of temporary lighting and power in the silo.
- Installed and approved grating reinforcement installation for Blower Room number 3.
- Approved stair climber training for use in removal of heavy items from REDOX.
- Removed stop work restriction associated with installation of grating reinforcement for REDOX silo.
- Reviewed approved door coating removal work package with team and prepared for Hazard Review Board (HRB).
- Continued incorporation of Rad smear characterization data into REDOX Radiological Technical Evaluation (TE).
- Revised REDOX complex Fire Hazards Analysis (FHA) and routed for approval.
- Completed drawing aid for protective tent awning to support field installation by riggers and carpenters, in support of door coating removal.
- Reviewed REDOX canyon entry work package with craft and subject matter experts. Completed Job Hazards Analysis (JHA) on work scope and assigned detailed actions.
- Completed drawing aid for protective tent awning to support field installation.
- Commenced scheduling for additional bioassay requirements anticipated from newly discovered isotopic profile at REDOX.
- Completed all load, voltage and arc flash calculations for hooking up electrical power to the climate controlled connex boxes located at REDOX.

MAJOR ISSUES

Issue

During the past 12 months, the rate of radiological and foreign material buildup on both pre- and primary filter media at B Plant has exceeded historical trends. In the past year, the ventilation pre-filters have been replaced three times, as opposed to previous years with replacements only every 18 to 24 months. Additionally, debris collected on filter media indicate corrosion upstream of the filters.

Corrective Action

Perform B Plant Canyon entries to investigate elevated radiological dose rates.

Status

The third B Plant Canyon entry was performed in August. Initiated engineering evaluation to determine potential solutions for B Plant filter build up.

Issue

On January 11, 2018, Department of Ecology NWP performed a Dangerous Waste Compliance Inspection at B Plant. During their review of the “2017 B Plant Complex Annual Surveillance Issue List,” it was noted in the B Plant 221-B “Issue” column, “White residue on the floor (not new).” In addition, the “issue” column also noted “Expansion joint crack, white residue on floor.” As a result of these observations, Ecology has requested that within 90 days upon receipt of the compliance report, designation results of the white residue on the floor of the canyon building, 221-B pipe, and operating gallery be submitted.

Corrective Action

RL and CHPRC, with legal representation, have met to establish a path forward.

1. Perform a records search to determine when the white powder was first identified.
2. During upcoming entries as part of the annual surveillance, data (photos and description of surroundings) will be obtained and evaluated to determine if it is sufficient to support designation based on process knowledge.
3. Actual cost information associated with sampling and analysis of the white powder at PUREX will be used to develop a cost estimate for sampling and analysis of the white powder at B Plant.
4. The PUREX Sample Analysis Plan (SAP) will be revised to support sampling and analysis of the white powder in the event that it is determined as part of item number 2 that process knowledge is not sufficient to support designation.
5. If sampling is required to support designation, PRC will determine if designation can be accomplished in the required 90-day period, and notify DOE if an extension is needed.

Status

RL developing integrated strategy to address white residue in PUREX and B Plant.

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: No major changes in August.																																									
Realized Risks (Risks that are currently impacting project cost/schedule)																																									
D4-042: Unexpected Site Conditions - D4	<p>Unexpected site conditions are encountered during Deactivation, Decommission, Decontamination, and Demolition (D4) activities that result in recovery actions, causing unplanned, in-scope work, and schedule delays to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$0K, 300 day</p>			<p>Risk Event: The B Plant ventilation system was shut down due to elevated differential pressure readings in the ACT-002 filter bank. Upon initial investigation, it was determined that the pre-filters were saturated with water and there was standing water within the ACT-001 filter bank. The result of this unexpected occurrence is that the pre-filters and HEPA filters in the ACT-002 bank, and presumably the pre-filters and the HEPA filters in the ACT-001 filter bank, need to be replaced prior to startup of the B Plant ventilation system. Unexpected radiological contamination identified within/outside the containment tent used to initiate the pre-filter change out resulted in delays to the pre-filter replacement. After initial filter change out was completed in October 2017, dose rates on the pre-filters quickly became elevated and were replaced in December 2017.</p> <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>Risk Date</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Work package change notice (WCNs) are being prepared to perform additional investigation of the water intrusion, remove the pre-filters and HEPA filters, and restart the B Plant ventilation system.</td> <td rowspan="4" style="text-align: center;">August 2016</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Recovery actions were performed in April and May 2017 to fix contamination associated with ACT-002 in and around the containment tent.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Requests to expedite the HEPA filter order have been rejected by the manufacturer due to issues with their equipment at the production facility.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Execute pre-filter and HEPA filter change out.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Repair tents and perform second pre-filter change out in ACT-001 and ACT-002 filter banks.</td> <td style="text-align: center;">November 2017</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Perform dose rate monitoring of pre-filters in ACT-001 and ACT-002 filter banks.</td> <td style="text-align: center;">January 2018 – Current</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Order and receive additional materials (e.g., tents, bags) to support additional pre-filter replacement.</td> <td style="text-align: center;">February 2018</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Develop revision to pre-filter change out work package to improve ALARA and general efficiency.</td> <td style="text-align: center;">February 2018</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Complete site setup and replace pre-filters.</td> <td style="text-align: center;">May 2018</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No major changes in August. The replacement of the pre-filters was completed in June. Daily (M-Th) dose rate surveys are being performed on the pre-filter banks to track the increasing dose rates. Investigative entries into B Plant were performed and sampling of the B Plant filter media was sent offsite for analysis.</p>	Risk recovery action(s)	Risk Date	FC Date	%	Work package change notice (WCNs) are being prepared to perform additional investigation of the water intrusion, remove the pre-filters and HEPA filters, and restart the B Plant ventilation system.	August 2016	Complete	100%	Recovery actions were performed in April and May 2017 to fix contamination associated with ACT-002 in and around the containment tent.	Complete	100%	Requests to expedite the HEPA filter order have been rejected by the manufacturer due to issues with their equipment at the production facility.	Complete	100%	Execute pre-filter and HEPA filter change out.	Complete	100%	Repair tents and perform second pre-filter change out in ACT-001 and ACT-002 filter banks.	November 2017	Complete	100%	Perform dose rate monitoring of pre-filters in ACT-001 and ACT-002 filter banks.	January 2018 – Current	Ongoing	N/A	Order and receive additional materials (e.g., tents, bags) to support additional pre-filter replacement.	February 2018	Complete	100%	Develop revision to pre-filter change out work package to improve ALARA and general efficiency.	February 2018	Complete	100%	Complete site setup and replace pre-filters.	May 2018	Complete	100%
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0040/WBS-040																
PRXT-S2-004: Design Maturity	Inadequate design results in changes to the construction subcontractors, resulting in cost and schedule impacts. Risk Handling Strategy: Control Probability: Very Low (<10%) Worst Case Impacts: \$0K, 16 day			<p>Risk Event: Significant engineering design changes were incorporated prior to final issuance to construction as a result of the structural calculations analysis. Changes included upsizing of piping which required the contractor new load testing requirements.</p> <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>Risk Date</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Purchase new piping for fabrication of the conveyance system</td> <td>July 2018</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Performed load testing to new specifications</td> <td>July 2018</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No major changed in August. The contractor had already purchased piping/materials to the 60 percent design specification (which was the basis of the SOW). The contractor was required to expedite procurements for the revised material specifications. A load test was also required due to revised structural calculations. CHPRC provided a full time engineer to the contractor to help facilitate RCI and required submittals. Schedule margin was utilized between the contractor’s schedule and the CHPRCs field execution schedule (FSE) to absorb the delays without impacting the critical path for grouting. CHPRC has received all change orders from the contractor and all proposals were submitted at a lower cost than the ROM value. A revised change proposal was submitted to DOE in August that included the most updated design changes. This risk will be removed from the stoplight chart and will continue to be monitored internally.</p>	Risk recovery action(s)	Risk Date	FC Date	%	Purchase new piping for fabrication of the conveyance system	July 2018	Complete	100	Performed load testing to new specifications	July 2018	Complete	100
Risk recovery action(s)	Risk Date	FC Date	%													
Purchase new piping for fabrication of the conveyance system	July 2018	Complete	100													
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PRXT-S2-012: Excessive Comments from Regulators	Comments from RL or other regulators on documents submitted for approval (e.g. Proposed Plans, permits) are excessive, need multiple rounds of resolution, or change requirements resulting in increased schedule and labor requirements; causing cost and schedule impacts to the project. Risk Handling Strategy: Transfer Probability: Medium (26% to 74%) Worst Case Impacts: \$750K, 90 day			<p>Risk Event: The approved Resource Conservation and Recovery (RCRA) permit modification was not issued in July as originally planned allowing start of PUREX Tunnel 2 grouting activities. Ecology has requested additional information on the degradation/corrosion discovered under the PUREX Tunnel 2 Riser 16 during the camera investigation.</p> <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>Risk Date</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Issue final structural analysis of PUREX Tunnel #2 corrosion</td> <td>July 2018</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>DOE issue temporary authorization to proceed with PUREX Tunnel #2 grouting activities</td> <td>August 2018</td> <td>9/5/18</td> <td>0</td> </tr> </tbody> </table> <p>Recovery Action Assessment: The CHPRC Project Technical Services (PTS) engineering team performed a structural analysis of the corrosion under PUREX Tunnel 2 Riser 16 and submitted a white paper to Ecology. The information was presented by CHPRC at public hearings held by Ecology in review of the RCRA permit modification. The public comment period commenced August 13 with a duration of 45 calendar days. The permit is currently anticipated to be issued on November 1, 2018, which will allow grout to start Dec 3, 2018 (30-day appeal period for permit to be effective). RL has not yet granted temporary authorization (TA) to proceed with grouting. If the TA is not received in September, the delay impacts the start of grouting and change orders will be issued by the grout contractor.</p>	Risk recovery action(s)	Risk Date	FC Date	%	Issue final structural analysis of PUREX Tunnel #2 corrosion	July 2018	Complete	100	DOE issue temporary authorization to proceed with PUREX Tunnel #2 grouting activities	August 2018	9/5/18	0
Risk recovery action(s)	Risk Date	FC Date	%													
Issue final structural analysis of PUREX Tunnel #2 corrosion	July 2018	Complete	100													
DOE issue temporary authorization to proceed with PUREX Tunnel #2 grouting activities	August 2018	9/5/18	0													
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in August.																
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																
No high risk threat value risks in August.																
Unassigned Risks (Pending ownership of identified risks/opportunities)																
No unassigned risks identified in August.																

PROJECT BASELINE PERFORMANCE Current Month (\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	6.3	4.0	5.5	(2.4)	-37.2%	(1.5)	-38.6%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance: (-\$2.4M/-37.2%)

The current month (CM) negative schedule variance is mainly attributed to delays experienced in the installation of the PUREX conveyance system and start-up of the mobile batch plant. The partial temporary authorization to install the conveyance system was not received until August 13, 2018, which impacted the critical path by 10 working days. In addition, steamline crossover removals in 200 East and West areas contributed to the negative variance as resources necessary to support the work were assigned to higher priority work scope.

CM Cost Performance: (-\$1.5M/-38.6%)

The CM negative cost variance is partially attributed to incurring change orders on the PUREX Tunnel 2 firm-fixed price contract for the grout conveyance fabrication and installation, including delay time and design change to the fabrication specifications. In addition, investigative entries were made into the B Plant Canyon and sampling of the B Plant filter media was performed for offsite analysis. The planning efforts and field work associated with the entries and sampling were unplanned and added to the negative variance.

Contract-To-Date (\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	491.4	485.7	463.4	(5.7)	-1.2%	22.3	4.6%	535.5	511.5	48.1	23.9

Numbers are rounded to the nearest \$0.1 million

Cost to date (CTD) Schedule Performance: (-\$5.7M/-1.2%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$22.3M/+4.6%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$23.9M/+4.5%)

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 040/RL-0040 Nuclear Facility D&D	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	69.0	43.9	25.1
Incremental Scope Pending Change Management	0.0	0.2	(0.2)
RL-0040 – Total	69.0	44.1	24.9

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

Fiscal year (FY) 2018 projected funding for project breakdown structure (PBS) RL-0040 is \$69.0 million. The spending forecast reduced approximately \$5.7 million from July due to delays in the authorization to begin PUREX Tunnel 2 grouting.

Critical Path Schedule

Critical path analysis can be provided upon request.

MILESTONE STATUS

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones represent significant events in project execution. RL Enforceable Agreement (EA) milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The performance measurement baseline (PMB) annual update, implemented in September 2013, and subsequently approved baseline change requests (BCR) define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a one-year look ahead of commitments and Tri-Party Agreement enforceable milestones and non-enforceable target due dates.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-250C	Submit to Ecology a 3-Year Rolling Prioritized Schedule to Implement Waste Site Removal Actions	3/31/2018	3/28/2018 (A)		Completed
M-016-255	Complete Removal of All Waste Sites for FY18 as Updated/Modified in M-16-17-01	9/30/2018		9/30/2019	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
224B (B Plant) Removal Action Work Plan (RAWP) (2017-34)	8/16/2017 (A)	10/30/2018
202A (PUREX) Draft B EE/CA Ecology review	12/11/2017 (A)	10/30/2018
REDOX RAWP (2017-06) to RL for Review	3/15/2018 (A)	9/30/2018
Tier 2 Misc. (B Plant North) SAP (2017-47) to RL for Review	4/17/2018 (A)	9/30/2018
Tier 2 Misc. Fac. (B Plant North) RAWP (2016-50) to RL for Review	5/2/2018 (A)	9/30/2018
221B (B Plant) EE/CA Ecology Review	5/8/2018 (A)	11/30/2018

Section F

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

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

August 2018
CHPRC-2018-08, 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

The 100K Closure Project continued remediation of Waste Site 116-KE-2 and continued preparations to excavate Waste Site 100-K-47:1; completed integrated Garnet Filter Media Removal System (GFMR) testing; and performed characterization activities in K West Basin. The 324 Building Disposition Project continued to make progress with equipment procurements, testing, fabrication, as well as equipment installations at the mockup facility. The 618-10 Burial Ground project formally transmitted the cleanup verification package to RL.

EMS Objectives and Target Status (Draft)

Objective #	Objective	Target	Due Date	Status
18-EMS-KBOPR-OB1-T1	Improve compliance/pollution and spill prevention	Monitor and evaluate universal waste (UW) and recycling accumulation areas for compliance with CHPRC procedures. Survey spill prevention measures.	9/30/18	88%
18-EMS-324BDP-OB1-T1	Increase EMS awareness	Promote and increase 324 Building Disposition Project (324 BDP) personnel EMS awareness via various means throughout fiscal year (FY) 2018.	9/30/18	80%
18-EMS-324BDP-OB2-T1	Improve compliance	Review and update as needed Resource Conservation and Recovery Act of 1976 (RCRA) inspection implementing procedures, inspection forms, checklists, and work packages (WP) to capture operating record information and assign appropriate metadata.	9/30/18	85%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	3	26	<p>8/7/2018 – Employee experienced pain after stepping onto soft soil and nearly falling to the ground. Employee was examined and released to work without restrictions. (24926)</p> <p>8/16/2018 – Employee received a contusion after hitting knee on a desk. Employee was administered a cold pack and released to work without restrictions. (24935)</p> <p>8/28/2018 – Employee was bitten by a spider, received over-the-counter medicine, and returned to work without restrictions. (24955)</p>

	Current Month	Rolling 12 Months	Comment
Near Misses	1	2	<p>8/1/2018 – At approximately 3:20 p.m., while traveling the haul road in the 116-KE-2 excavation site, a roll-on/roll-off (RO/RO) shuttle truck kicked up a rock, which made contact with one government vehicle and one subcontract geologist vehicle occupied by drilling contract employees. The rock could have hit personnel if they were outside of their vehicles.</p> <p>Notifications were made, photos were taken, and a site walk down was performed.</p> <p>K Basin Operations (KBO) Management reviewed reporting criteria under PRC-PRO-EM-060, Reporting Occurrences and Processing Operations Information, and determined this event met occurrence reporting criteria. This event was categorized as a Group 10, (2) I, Near Miss.</p>

KEY ACCOMPLISHMENTS

K Basin Operations

- 100K Closure Project:
 - o 100K Soil Remediation:
 - Preparing for Waste Site 116-KE-2 radioactive waste crib removal. Hazard Review Board (HRB) is currently scheduled for September 26, 2018, (excavation is approximately 74 percent complete).
 - Started excavation and load out at Waste Site 100-K-47:1.
 - The Waste Site Reclassification form and Remaining Sites Verification Package (RSVP) for the closure of Waste Site 100-K-50:2 was sent to RL and the U.S. Environmental Protection Agency (EPA) for review and approval.
 - Continuing preparation of Waste Site 100-K-94 closure documentation and drafting the remaining sites verification package.
 - o K West Basin Deactivation:
 - Garnet Filter Media Removal (GFMRS):
 - GFMRS integrated testing is complete. The full-scale system mockup remains in place for the rest of the fiscal year (FY) for operations familiarization training and operating procedure development.
 - Continued update of the installation Facility Modification Package (FMP) and incorporated constructability review comments.
 - Overfill Recovery Tools were accepted by Acquisition Verification Services (AVS) and have been installed in Sludge Transport & Storage Containers (STSCs) 425-428.
 - Physical assembly of STSCs 425 and 426 is complete. HiLine is installing the instrumentation on the remaining two STSCs.
 - Completed component testing of items to be installed on STSCs 427 and 428.
 - The overall progress for readiness is 70 percent complete.
 - Garnet Filter Number 3 Sluice Outlet Valve V-305 Risk Mitigation:
 - o Effort to restart the V-305 air operator removal and manual operator installation by Apollo Construction continues. Comments on the Apollo proposal are being resolved. The current plans are to complete the work in September, based on Apollo availability.

- Sand Filter Media Removal System (SFMRS):
 - A draft of the SFMRS operational system description has been completed and is being reviewed internally.
 - Initiated the ALARA design review, environmental screening, and preliminary hazard analysis.
- K West Basin Below-water Debris Characterization:
 - Settled solids Data Quality Objective (DQO)/Sampling Analysis Plan (SAP) has been approved.
 - Completed floor core sampling in the K West Basin West Bay. As the lab analysis of floor core samples will be correlated with the sparged floor dose rate measurements, some sampling locations were changed to ensure the dose rate measurement was not biased by background radiation from other sources.
 - Completed 16 basin floor radiation survey measurements in the K West Basin East Bay. Initial review of data collected indicates that the number of samples collected should be sufficient for subsequent source term analysis.
 - Shipped all K West Basin floor core samples to Pacific Northwest National Laboratory (PNNL).
 - Progressed development of the K West Basin Waste Disposition Plan.
 - Started development of the procedure and work package, which will be used for discrete data collection targeted to affirm debris item information (weight, contents, dose-rate) used in dose-to-curie modeling of the radioactive source term, and to support deployment of the Gamma Camera.
 - Started development of the work package, which will be used for settled solids sampling in K West Basin.
- o K East Reactor Interim Safe Storage (ISS):
 - Received final stamped 105K East Reactor Geotechnical Report update from subcontractor.
 - Performed functional reviews of the statement of work (SOW) for the 105K East Reactor asbestos removal contract and incorporated received comments (not to be bid without authorization from RL).
 - Drafted and began functional reviews of the 105 K East Reactor ISS design modification contract SOW (not to be bid without authorization from RL).
 - Began preparing the draft SOW for the 105K East Reactor Safe Storage Enclosure (SSE) structural contract (earthwork, foundation, and SSE structure).
 - Finished first draft of an exemption request to DOE O 420.1C Change 1, Facility Safety, requirements for a fire protection system for the KE Safe Storage Enclosure and routed to Hanford Fire Marshall's Office for review.
- o Ancillary Facility Deactivation & Demolition (D&D):
 - Continued Thermal System Insulation abatement in 165K East Power Control Building.
 - Completed final draft revision of DOE/RL-2005-26, *RAWP for 100K Reactor and Ancillary Facilities*.
 - Continued 166KE Fuel Storage Bunker/Waste Site 130-KE-2 demolition/waste site remediation planning. Made the initial entry into the fuel oil transfer pump room. Deactivation, Decommission, Decontamination, and Demolition (D4) is working with sample management in planning fuel storage basin sampling. Completed load testing of the 166KE Fuel Storage Bunker roof.
 - Performed internal review and forwarded draft of DOE/RL-2018-47, *Remedial Action Report for 100D/H Waste Sites* to RL and EPA for their review.
 - Continued to perform technical review of DOE/RL-2010-52, *RD/RAWP for K Basins Interim Remedial Action: 105-K West Basin Deactivation*.
- o Remaining Closure Operations:
 - Awarded contract to grass seed suppliers to support revegetation of the 618-10 complex.

- Routed and received all approvals on the contract requisition for the 618-10 complex revegetation complex.
- Waste Sites 331LSLT1 and 331LSLT2:
 - Finished demobilizing contractor personnel and equipment.
 - Performed final site surveys of the 300-5, 331-LSLT1, and 331-LSLT2 sites to support development of H-3 as-built drawings. Started development of as-built drawings for the impermeable covers installed at the 300-5, 331-LSLT1, and 331-LSLT2 Waste Sites.

River Risk Management Project

- 618-10 Burial Ground
 - o Formally transmitted CHPRC-1802873, *Transmittal of Approved Cleanup Verification Package for the 618-10 Burial Ground, DOE/RL-2017-61, Revision 0*.
- 324 Building Disposition Project
 - o Assisted in the performance of the quarterly Fire Protection Engineering walk down throughout the 324 Building.
 - o Successfully performed 10 preventative maintenance (PM) packages.
 - o Completed the annual Radio Fire Alarm Reporter (RFAR) Testing and Periodic Maintenance.
 - o Fabricated and installed new A-Frame damper actuator indicator scales in preparation for HVAC testing.
 - o Received light plants to setup around the project to support safe illumination for personnel in parking lots and walkways.
 - o Completed the technical project animation video.
 - o Held a joint evaluation team meeting to define the level of readiness review needed to authorize remote soil excavation operations. The level of review determination will be transmitted to RL in the next Quarterly Startup Notification Report.
 - o Completed the factory acceptance testing (FAT) for the second hose assembly for the mockup facility's water delivery system.
 - o Installed third remote excavator arm (REA) through support and completed installation training with 324 Building installation team.
 - o Installed the upper and lower REAs in the mockup facility and completed the construction acceptance testing (CAT).
 - o Shipped a total of 62 Environmental Restoration Disposal Facility (ERDF) cans from the 324 Building (contract-to-date).
 - o Conducted 324 Building airlock entries to survey and separate several track sections from B-Cell and wrap them for removal and placement in a waste container.
 - o Completed removal of the concrete floor in C-gallery for the C-Cell foundation investigation work evolution. Started hand excavation for C-Cell foundation investigation. All five of the underground pipes have been located, tapped and drained, and removed to continue with the excavation.
 - o Initiated work site preparations at Pit 6. Geotechnical information will be collected at Pit 6 to provide data for the structural modification design. Completed geotechnical testing of soil samples at Pit 6.
 - o Received contractor 60 percent structural design, which initiated the formal structural design review.
 - o Completed three of five micro-pile test locations on the south side of 324 Building.
 - o Began excavating on the north side of 324 Building to expose geoprobes and subsequently loaded 11 ERDF containers with soil. All of the geoprobes have been exposed.
 - o Completed final interference removal for core drilling activities in support of the first REA installation.
 - o Subcontractor completed mobilization of equipment inside of the 324 Building in support of future REA core drilling.

- o Initiated core drilling and completed drilling two of three holes for the southeast REA through support.

Project Technical Support

- o Training and Procedures
 - Inactivated 80 legacy Washington Closure Hanford training courses.

MAJOR ISSUES

Issue

In February 2018, a higher-than-expected ratio of alpha to beta/gamma contamination was detected in a localized area in the Radiochemical Engineering Complex (REC) airlock after removing waste from C-Cell. Discovery of an elevated latent contamination level upon removal of the waste was unexpected and beyond the reasonable control of CHPRC. This condition is the realization of risk RCC-300-296-01, Latent Conditions Impact Facility Modification.

Corrective Action

Determine cause for high alpha reading and update appropriate procedures as necessary. Perform a follow-on review to identify previously unknown legacy activities conducted in the REC cells to determine contributing factors to elevated alpha levels.

Status

Timely Orders have been issued and a Notification of Differing Site Conditions Letter (CHPRC-1801178) was transmitted to RL in April. Workers at the 324 Building finalized high alpha contamination recovery, implemented corrective actions from RL, implemented additional controls, and resumed cell cleanout activities. The project has procured/obtained handheld instruments required for the additional controls and is in the process of procuring Alpha personal contamination monitors (i-PCM-12s). The i-PCM-12s are expected to arrive by the end of the fiscal year. The project is also procuring sources for the i-PCM-12s that will not arrive until FY2019.

Issue

A shortage of radiation control technicians, radiation control engineers, radiation control work planners, and radiation control first line managers is hampering 100K Closure Project soil remediation and basin characterization work.

Corrective Action

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

Status

Ongoing.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0041/WBS-041													
Explanation of major changes to the project monthly spotlight chart: No major changes to the spotlight chart for August.													
Realized Risks (Risks that are currently impacting project cost/schedule)													
RCC-300-296-08: 300-296 Failure of a cell shield door	Failure of shield door(s) or crane shield door(s) shuts down cleanout of REC cells/airlock, penetration sealing in airlock, and equipment installation efforts. It may not be possible to repair a shield door due to radiation dose rate and location. The door failure results in in-scope unplanned work and subsequently causes cost and schedule impacts to the project. Risk Handling Strategy: Accept Probability: Medium (26% to 74%) Worst Case Impacts: \$460K, 48 days	●	↔	Risk Event: During operation of cleanout activities on June 19, 2018, the A-Cell crane door became restricted from closing, prohibiting airlock entry. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: left;">Recovery action(s)</th> <th style="text-align: left;">FC Date</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>Airlock Entry Recovery from A-Cell Crane Door Malfunction</td> <td>7/10/2018</td> <td>100</td> </tr> <tr> <td>A-Cell Crane Door Malfunction Recovery</td> <td>11/14/2018</td> <td>Ongoing</td> </tr> </tbody> </table> Recovery Assessment: No major changes in August . A-Cell crane door became restricted from closing, prohibiting airlock entry. No personnel were affected. Airlock operations were delayed for three weeks while technical response teams deliberated planning actions and evaluations were performed in advance of successfully closing the A-Cell crane door. A-Cell debris cleanout operations will be impacted while the A-Cell crane door is repaired, as recovery is ongoing.	Recovery action(s)	FC Date	%	Airlock Entry Recovery from A-Cell Crane Door Malfunction	7/10/2018	100	A-Cell Crane Door Malfunction Recovery	11/14/2018	Ongoing
Recovery action(s)	FC Date	%											
Airlock Entry Recovery from A-Cell Crane Door Malfunction	7/10/2018	100											
A-Cell Crane Door Malfunction Recovery	11/14/2018	Ongoing											
RCC-300-296-30: 300-296 Design Changes Result in Increased Subcontractor Change Order(s) / Claims	Structural modifications estimate is currently based on the vendor's estimate as of the 30 percent design. The 60 percent design through initiation of 90 percent design and testing of the currently identified 324 Building structural modifications to support design are ongoing. Due to the uncertainty and evolution of developments, design changes may be required upon completion of all design phases. Risk Handling Strategy: Control Probability: Very Likely (>90%) Worst Case Impacts: \$3,318K, 136 days	●	↔	Risk Event: On review of the 30 percent design submittal, it was determined that the cell wall loading/limitations were inadequate and required additional clarification. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: left;">Recovery action(s)</th> <th style="text-align: left;">FC Date</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>Contractor Prepare and Submit Structure Modification Design -30%-60% (VE2810)</td> <td>8/15/2018</td> <td>100</td> </tr> <tr> <td>Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)</td> <td>12/20/2018</td> <td>5</td> </tr> </tbody> </table> Recovery Assessment: The 30 percent to 60 percent Structural Modification Design was submitted on August 15, 2018. The review process for the submittal has been initiated to support development of the Final Structural Modification Design. To reduce the potential impacts associated with conflicting drawing information, applicable design efforts were updated to encompass further analysis of cell footings, load limitations, and field demonstrations to ensure safe and successful completion. Additional efforts through progress on the 30 percent to 60 percent design activities have been incorporated into the field execution schedule (FES), along with the estimate to complete (ETC), to reflect impacts of risk being realized.	Recovery action(s)	FC Date	%	Contractor Prepare and Submit Structure Modification Design -30%-60% (VE2810)	8/15/2018	100	Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)	12/20/2018	5
Recovery action(s)	FC Date	%											
Contractor Prepare and Submit Structure Modification Design -30%-60% (VE2810)	8/15/2018	100											
Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)	12/20/2018	5											
RCC-300-296-03: Mockup Testing and Qualification of Remote Equipment / Process Identifies Major Modification Requirements.	Issues such as equipment interferences, differing as-found conditions than planned, equipment reliability, etc., arise prior to/during mockup testing, leading to re-design of equipment and resulting in cost and schedule delays. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$773K, 80 Days	●	↔	Risk Event: During recent vendor tests and/or FAT, issues and conditions were identified with mockup equipment, resulting in additional redesign, materials, and/or fabrication efforts greater than planned. Remote equipment procurements that have resulted in cost and/or schedule impacts include the REA system components (through support and dummy post assemblies), and transfer mechanism (electrical components). <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: left;">Recovery action(s)</th> <th style="text-align: left;">FC Date</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>Perform Construction Acceptance Test (CAT) for Mockup Equipment Install - Cameras and Lighting; REA system with HPU's; Transfer Mechanism (VE0640)</td> <td>8/23/2018</td> <td>100</td> </tr> </tbody> </table> Recovery Assessment:	Recovery action(s)	FC Date	%	Perform Construction Acceptance Test (CAT) for Mockup Equipment Install - Cameras and Lighting; REA system with HPU's; Transfer Mechanism (VE0640)	8/23/2018	100			
Recovery action(s)	FC Date	%											
Perform Construction Acceptance Test (CAT) for Mockup Equipment Install - Cameras and Lighting; REA system with HPU's; Transfer Mechanism (VE0640)	8/23/2018	100											

				<p>Construction Acceptance Testing (CAT) for Remotely Operated Mockup Equipment procurements was completed in August. The Remotely Operated Equipment has successfully completed CAT. Equipment inferences were identified and being addressed. Miscellaneous supporting equipment is scheduled to arrive at the mockup over the upcoming periods. In order to ensure successful integration with Remotely Operated Equipment, testing and training at the mockup continues with preparations for 324 Building equipment ongoing. The remaining equipment procurements will be continuously monitored and tracked to account for additional redesign efforts, materials, and fabrication efforts resulting in cost and/or schedule impacts. Impacts have been incorporated into the project schedule, along with the ETC, to reflect further impacts of risk being realized.</p>						
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
RCC-300-296-02: 300-296 Loss of ventilation in the 324 hot cells or Zone II	<p>Zone I or II ventilation system failure causes loss of ventilation and shutdown of soil remediation activities, resulting in in-scope unplanned work, and subsequently resulting in schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$0K, 48 days</p>	● ↔		<p>Risk Trigger Metric: Ventilation fan or other system component failure may prevent airlock entry, which is needed for cleanout of REC cells, penetration sealing, and installation of equipment.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)</td> <td>9/30/2018</td> <td>90.4</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in August. Ventilation PMs are being routinely performed. Spare fan parts are available for minor failures if occurrence is realized.</p>	Mitigation action(s)	FC Date	%	324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)	9/30/2018	90.4
Mitigation action(s)	FC Date	%								
324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)	9/30/2018	90.4								
RCC-300-296-07: 300-296 Failure of a REC Cranes (B-Cell, A-Cell, A-D & Airlock, 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: Control</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$832.7K, 144 days</p>	● ↔		<p>Risk Trigger Metric: 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>Order and Procure Spare Parts – REC Cranes (VE1235)</td> <td>10/10/2019</td> <td>Ongoing</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in August. The project experienced loss of the CHA crane in November 2017. Final repairs and load testing for the 30-ton CHA crane were completed and the crane was returned to service in January 2018. The project is in the process of reviewing evaluations and recommendations with manufacturers to assist with determining Preventive Maintenance, spare parts requirements, and Corrective Maintenance in the event of necessary repairs. These efforts are expected to reduce the potential for impacts.</p>	Mitigation action(s)	FC Date	%	Order and Procure Spare Parts – REC Cranes (VE1235)	10/10/2019	Ongoing
Mitigation action(s)	FC Date	%								
Order and Procure Spare Parts – REC Cranes (VE1235)	10/10/2019	Ongoing								
RCC-300-296-01: Latent Conditions Impact Facility Modification	<p>Latent conditions, poor visibility in Radiochemical Engineering Complex (REC) cells, or drawing omissions, inconsistency, or errors impact facility modifications (e.g. mechanical, electrical IH/RADCON hazards), resulting in unplanned work and subsequently, and cost and schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$294.5K, 72 days</p>	● ↔		<p>Risk Trigger Metric: Available drawings may not reflect the actual conditions in the 324 Building or REC cells. Debris within the REC cells, as well as poor visibility may prevent the verification of in-cell features for installing penetrations, removing interferences and supporting preparation activities for structural modifications.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)</td> <td>9/30/2018</td> <td>90.4</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in August. Uncertainties associated with aging 324 Building systems (e.g., stack sampling), sealing penetrations, and electrical outages needed for interference removal, there exists a potential for this risk to be realized. Based on recent discovery of an elevated latent contamination level (NOC, CHPRC-1801178), Corrective Actions have been implemented along with additional controls. This risk will continuously be monitored as routine preventative maintenance activities are in place to reduce the likelihood of occurrence.</p>	Mitigation action(s)	FC Date	%	324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)	9/30/2018	90.4
Mitigation action(s)	FC Date	%								
324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)	9/30/2018	90.4								
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
No high risks identified in August.										
Unassigned Risks (Pending ownership of identified risks/opportunities)										
RCC-300-296-04DOE: 300-296 Seismic Event (Force Majeure)	<p>A Force Majeure incident, such as a seismic event, results in the loss of structural integrity; causing cost and schedule impacts to the project delivery. CHPRC Comment: CHPRC cannot manage the geological seismic movement that may impact the structural integrity of a building. Therefore, this risk is proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted, via acknowledgement from the RL contracting officer, it will be removed from the stoplight chart.</p>									
RCC-300-296-23DOE: 300-296 Large Brush	<p>A brush fire ignited on the Hanford Site near the proximity of the 300-296 Waste Site, resulting in cost and schedule delays. CHPRC Comment: This risk was identified as “Force Majeure” and is beyond the capabilities of CHPRC to manage. Therefore, this risk was proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was</p>									

Fire (Force Majeure)	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 spotlight chart.
RCC-300-296-27: 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 spotlight chart.

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	14.2	10.6	10.3	(3.6)	-25.3%	0.3	2.6%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$3.6M/-25.3%)

The current month unfavorable schedule variance is partially due to the following;

- Backfill at the 618-10 Burial Ground completed ahead of schedule in early FY2018. Backfill was originally planned to be completed in the latter half of FY2018.
- Accelerated performance of the AB Waste Site remediation work scope contaminated soil excavation and disposal, planned in October 2017 through November 2018, was completed ahead of schedule in FY2016.
- The 183.2KE backfill started earlier than planned and was accelerated as a result of shorter turn-around times between pit 23 and Waste Site 183.2KE. Completion of the backfill of 183.2KE was originally planned to finish in August FY2018, and actual completion was in February FY2018.
- On August 1, 2018, at approximately 1520 hours, while driving on the haul road in the 116-KE-2 excavation site, a rock was kicked up by the haul truck and made contact with government vehicles occupied by multiple employees. The rock could have hit personnel if they were outside of their vehicles. This event was classified per PRC-PRO-EM-060, Appendix C, Group 10, (2) I, as a near miss to an injury, where something potentially physical happened that was unexpected or unintended and where no barrier prevented an event from having a reportable consequence (i.e., happenstance was the main reason the event did not result in a reportable injury). A stop work was issued for all soil remediation near the 116-KE-2 Waste Site and survey tent.

CM Cost Performance (\$0.3M/+2.6%)

The current month cost variance is within reporting thresholds.

Contract-to-Date (\$M)

WBS 041/ RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	611.4	579.0	519.9	(32.3)	-5.3%	59.2	10.2%	649.3	586.4	66.5	62.9

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$32.3M/-5.3%)

The contract-to-date unfavorable schedule variance is primarily due to 324 Building structural modifications caused by subcontractor delays in completing the structural modifications design; these delays are caused by additional requirements for the design, including more extensive building modeling, soil stabilization, and building verifications and demonstrations. Additionally, the 324 Building Disposition Project experienced delays in performing cell sealing and core drilling, vendor design and fabrication activities for multiple procurements, and equipment installation at the 324 Building.

CTD Cost Performance (+\$59.2M/+10.2%)

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 scope. Some resources have been diverted to other priority work scope and some resource sharing has occurred. The favorable cost variance was partially offset by the cost overruns in prior years for the utilities project. The 618-10 Burial Ground Complex also realized favorable cost variances with shared resources, lower drum processing costs, and excavation and backfill efficiencies at the 316-4 Waste Site and the 618-10 Burial Ground. These favorable variances are slightly offset by a negative CTD variance caused by difficulties at the 324 Building Disposition Project in execution of cell and airlock cleanout, higher-than-planned engineering costs resulting from mockup and 324 structural design changes, and increased expenditures for the design and fabrication of essential procurements.

Variance at Completion (+\$62.9M/+9.7%)

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	143.6	116.4	27.3
Incremental Scope Pending Change Management	0.0	0.4	(0.4)
RL-0041 - Total	143.6	116.7	26.9

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis:

FY2018 projected funding for project breakdown structure (PBS) RL-0041 is \$143.6 million. The delta between the spending forecast and projected funding levels for FY2018 is primarily due to scope deferral at the 324 Building Disposition Project. As a result of structural design and electrical issues and the A-Cell crane door failure, work scope associated with core drilling, cell sealing, interference removal and structural modifications activities have been delayed. The 324 Building Disposition Project also reduced expenditures for system repairs and maintenance and minimum safe consumables. Additionally, attrition and staffing ramp-downs at the 618-10 Burial Ground project have decreased the spending forecast below the projected funding levels.

Critical Path Schedule:

Critical Path Analysis can be provided upon request.

MILESTONE STATUS

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones represent significant events in project execution. RL Enforceable Agreement (EA) milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The performance measurement baseline (PMB) annual update, implemented in September 2013, and subsequently approved baseline change request (BCR), define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a one-year look ahead of commitments and Tri-Party Agreement enforceable milestones and non-enforceable target due dates.

Number	Title	Due Date	Actual Date	Status/ Comment
M-016-00B	Complete all 300 Area remedial actions in accordance with Record of Decision (ROD) requirements.	9/30/2018	8/2/2018 (A)	CHPRC issued the cleanup verification package for the 618-10 Burial Ground on 8/2/2018.
M-094-00	Complete disposition of all 300 Area surplus facilities, excluding 324 Building.	9/30/2018	7/10/2017 (A)	On October 19, 2017, issued letter-notifying RL of the completion on July 10, 2017.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
EPHA Draft – RL Review	9/11/18	9/25/18
RL Approval of SNR	8/29/18	9/26/18
RL Certify Information – RL Manager Letter to Ecology (1301 ,1325)	9/25/18	10/6/18
Ecology receive the certified CHPRC and RL Information (1301, 1325)	10/7/18	10/7/18
EPHA Final – RL Review	10/11/18	10/25/18
Class 1 Prime modification RL Certification send Class 1 Prime to Ecology for Action to close 1301-N and 1325-N	10/20/18	11/2/18
Deliver attachment(s) and certification(s) to RL (1301, 1325)	11/6/18	11/6/18
DOE Independent Structural Modification Review	11/9/18	12/8/18
Review DSA/TSR Revision	11/2/18	12/21/18
DOE Review WCH-539, Treatment Plan for Macro Encapsulation – 324	11/27/18	12/26/18
DOE Authorize SPA SEC for Hot Cell Disposal	9/26/18	12/31/18
Provide Comments on DSA/TSR in RCR	12/22/18	12/31/18
DOE Authorize SPA SEC for Soils – 300-296	10/5/18	1/9/19

Section G

Fast Flux Test Facility Closure (RL-0042)

CH2MHILL
Plateau Remediation Company



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

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

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

KEY ACCOMPLISHMENTS

RL-0042 Accomplishments

- Completed workability review of Work Change Notice-1 of the 400 Area electrical circuit verification work package (WP) and received all approval signatures.
- Completed all 400 Area electrical circuit verifications as part of a system outage. Circuit verification was needed as an input to complete the P-16 pump electrical hook up.
- Installed a 100-amp weld receptacle that will enable temporary power to be routed to the new 400 Area Stationary Operating Engineer trailer.
- Completed an update to the Industrial Hygiene Exposure Assessment for silica and completed a Lead Control Compliance Plan as attachments to the WP for replacing sections of the 4-inch water supply line for the 481 Building sprinklers.
- Received all approvals on WPs for replacing sections of the 4-inch water supply line for the 481 Building sprinklers and mobilized materials to the work site.
- Finished disassembly the leaking 4-inch water supply line in the 481 Building fire system and started installation of replacement sections.
- Developed list of issues/deficiencies associated with the 400 Area water and electrical system that have the potential to affect the design/build of the new 400 Area fire station.
- Performed workability review on the WP to replace the FFTF 480V power contactor and received all approval signatures. The contactor is needed because the safety disconnect switch is currently being turned off and on with applied load which can lead to switch failure.

MAJOR ISSUES

Issue:

Identified and investigated a Lockout/Tagout (LO/TO) incident associated with previous electrical work (2017) on the P-16 pump motor starter.

Corrective Action: A new WP to physically verify 400 Area electrical circuits for water utility equipment will be developed. This verification must be completed before further work is performed on the 400 Area water utility equipment. This also affects the completion of a number of WPs that are currently in development/review.

Status: Completed workability review of Work Change Notice-1 of the 400 Area electrical circuit verification work package (WP) and received all approval signatures. Completed all 400 Area electrical circuit verifications as part of a system outage. Circuit verification was needed as an input to complete the P-16 pump electrical hook up. This issue is closed.

RISK MANAGEMENT STATUS

No key risks currently identified.

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	0.2	0.2	0.3	(0.0)	-0.0%	(0.0)	(16.1)%

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/-16.1%)

The cost variance is within reporting thresholds.

Contract-to-Date (\$M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	26.3	26.3	21.8	(0.0)	-0.0%	4.5	17.0%	26.5	22.0	0.2	4.5

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 (+\$4.5M/17.0%)

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

Variance at Completion (+\$4.5M/+16.8%)

The Variance at Completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS VS. SPEND FORECAST (\$M)

RL-0042 FFTF Closure	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	4.0	2.0	2.0
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0042 – Total	4.0	2.0	2.0

Numbers are rounded to the nearest \$0.1 million

Funds Analysis

Fiscal year (FY) 2018 projected funding for project breakdown structure (PBS) RL-0042 is \$4 million. The spending forecast of \$2 million includes inspections of the fire suppression system tanks and minor repairs.

Critical Path Schedule

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

MILESTONE STATUS

None currently identified.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

None currently identified.

Appendix A

Contract Performance

Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



August 2018
CHPRC-2018-08, 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) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18			

5. CONTRACT DATA								
a. QUANTITY 1	b. NEGOTIATED COST 5,588,957	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 426,206	d. TARGET PROFIT/FEE 241,605	e. TARGET PRICE 5,830,563	f. ESTIMATED PRICE 6,207,499	g. CONTRACT CEILING 5,830,563	h. ESTIMATED CONTRACT CEILING 6,207,499	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) Dickerson, Kala K		b. TITLE Prime Contract Compliance Manager	
a. BEST CASE 5,902,616						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)	
b. WORST CASE 6,141,393									
c. MOST LIKELY 5,965,894		6,015,164		49,270					

8. PERFORMANCE DATA																		
CAPN.PBS ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION			
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)								
RL-0011 Nuclear Mat Stab & Disp PFP	1,553	1,549	7,282	-4	-5,733	989,214	976,207	1,133,946	-13,007	-157,740	0	0	0	990,610	1,198,101	-207,491		
RL-0012 SNF Stabilization & Disp	4,835	4,365	4,258	-470	107	741,053	739,626	710,203	-1,428	29,423	0	0	0	744,220	714,672	29,548		
RL-0013 Solid Waste Stab & Disp	14,486	13,862	13,610	-623	253	1,333,553	1,328,992	1,238,440	-4,561	90,552	0	0	0	1,346,961	1,255,122	91,839		
RL-0030 Soil & Water Rem-Grndwtr/Vadose	11,210	11,356	10,281	145	1,074	1,519,965	1,513,864	1,463,425	-6,101	50,439	0	0	0	1,530,122	1,479,015	51,108		
RL-0040 Nuc Fac D&D - Remainder Hanfrd	6,335	3,981	5,517	-2,354	-1,536	491,400	485,697	463,400	-5,703	22,297	0	0	0	494,443	470,528	23,914		
RL-0041 Nuc Fac D&D - RC Closure Proj	14,216	10,625	10,347	-3,591	278	611,362	579,036	519,880	-32,326	59,156	0	0	0	621,821	558,886	62,935		
RL-0042 Nuc Fac D&D - FTF Proj	221	221	257	0	-36	26,273	26,265	21,809	-8	4,456	0	0	0	26,487	22,028	4,460		
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														204,264	204,264	0		
e. SUBTOTAL	52,856	45,959	51,552	-6,897	-5,593	5,712,820	5,649,686	5,551,102	-63,134	98,584	0	0	0	5,958,928	5,902,616	56,312		
f. MANAGEMENT RESERVE														63,278				
g. TOTAL	52,856	45,959	51,552	-6,897	-5,593	5,712,820	5,649,686	5,551,102	-63,134	98,584	0	0	0	6,022,206				
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																		
a. VARIANCE ADJUSTMENT																		
b. TOTAL CONTRACT VARIANCE																		
										-63,134		98,584		6,022,206		5,902,616		119,590

* Per email direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, baseline change requests (BCRs) will be processed to align the PMB with the settlement values.

*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 \$ OMB No. 0704-0188

FORM APPROVED

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)								
34 - Env Program & Strategic Plng	956	987	713	31	274	84,581	83,957	76,754	-623	7,203	0	0	0	85,449	78,158	7,291		
35 - Business Services	0	0	0	0	0	477,296	477,296	453,535	0	23,761	0	0	0	477,296	453,535	23,761		
36 - Prime Contract & Proj Integr	190	190	126	0	64	8,621	8,621	5,170	0	3,451	0	0	0	8,807	5,250	3,557		
3B - PFP Closure Project	1,553	1,549	7,282	-4	-5,733	900,432	887,425	1,052,891	-13,007	-165,466	0	0	0	901,828	1,117,045	-215,217		
3C - Waste & Fuels Management Project	11,301	10,723	10,534	-578	189	1,191,178	1,186,687	1,101,651	-4,491	85,036	0	0	0	1,201,472	1,115,915	85,557		
3D - Soil & Groundwater Remediation	10,197	10,312	9,534	114	778	1,333,856	1,328,378	1,279,181	-5,478	49,196	0	0	0	1,343,088	1,293,356	49,733		
3G - K Basin Oper & Plateau Remediation Project	9,591	7,524	6,707	-2,068	816	1,036,968	1,030,670	972,160	-6,298	58,510	0	0	0	1,044,340	982,123	62,217		
3H - River Risk Management Project	12,534	10,496	10,917	-2,038	-421	250,622	223,097	203,920	-27,525	19,177	0	0	0	259,882	239,806	20,076		
3K - Central Plateau Risk Reduction	6,534	4,179	5,739	-2,354	-1,560	429,267	423,556	405,840	-5,711	17,715	0	0	0	432,502	413,165	19,337		
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														204,264	204,264	0		
e. SUBTOTAL (Performance Measurement Baseline)	52,856	45,959	51,552	-6,897	-5,593	5,712,820	5,649,686	5,551,102	-63,134	98,584	0	0	0	5,958,928	5,902,616	56,312		
f. MANAGEMENT RESERVE														63,278				
g. TOTAL	52,856	45,959	51,552	-6,897	-5,593	5,712,820	5,649,686	5,551,102	-63,134	98,584	0	0	0	6,022,206				

* Per email direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, baseline change requests (BCRs) will be processed to align the PMB with the settlement values.

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE															Form Approved OMB No. 0704-0188			
DOLLARS IN THOUSANDS																		
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA					2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:					3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009					4. REPORT PERIOD a. FROM: 2018/07/23 b. TO: 2018/08/26			
5. CONTRACT DATA					a. ORIGINAL NEGOTIATED COST 4,312,366		b. NEGOTIATED CONTRACT CHANGE \$1,276,591		c. CURRENT NEGOTIATED COST (A + B) \$5,588,957		d. ESTIMATED COST AUTH UNPRICED WORK \$426,206		e. CONTRACT BUDGET BASE (C + D) \$6,015,164		f. TOTAL ALLOCATED BUDGET \$6,022,206		g. DIFFERENCE (E - F) (\$7,042)	
h. CONTRACT START DATE 6/19/2008					i. DEFINITIZATION DATE 6/19/2008			j. PLANNED COMPL DATE 9/30/2018			k. CONT COMPLETION DATE 9/30/2018			l. EST COMPLETION DATE 9/30/2018				
6. PERFORMANCE DATA																		
BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)																		
SIX MONTH FORECAST																		
FY09-13 FY14 FY15 FY16 FY17 FY18 UNDISTRIB TOTAL																		
ITEM (1) BCWS CUM TO DATE (2) BCWS FOR REPORT PERIOD (3) +1 Sep-18 (4) +2 Oct-18 (5) +3 Nov-18 (6) +4 Dec-18 (7) +5 Jan-19 (8) +6 Feb-19 (9) (10) (11) (12) (13) (14) (15) (16) (17)																		
a. PM BASELINE (BEGIN OF PERIOD)																		
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																		
BCR-030-18-023R0 - Incorporate Drilling Campaign Planning																		
BCR-040-18-012R0 - RL-0040 Squid WBS Corrections																		
BCR-PRC-18-031R0 - Incorporate CO 327 Re-Plan Accelerated Shipment of Sludge																		
BCR-040-18-013R0 - Incorporate PUREX Tunnel 2 NTE Increase																		
BCRA-PRC-18-033R1 - HPIC Updates August 2018																		
BCR-PRC-18-032R0 - Undistributed Budget Adjustments August 2018																		
c. PM BASELINE (END OF PERIOD)																		
7. MANAGEMENT RESERVE																		
8. TOTAL																		

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA		FORECAST (Non-Cumulative)														AT COMPLETION (15)		
WBS.Resp Org Group ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS									
			+1 SEP 2018 (4)	+2 OCT 2018 (5)	+3 NOV 2018 (6)	+4 DEC 2018 (7)	+5 JAN 2019 (8)	+6 FEB 2019 (9)	MAR 2019 (10)	APR 2019 (11)	FY19 END (12)	FY19-LC (13)	ATCOMPLETE (14)					
			300 - Office of the President	7	801	6	0	0	0	0	0	0	0	0	0		0	0
303 - Internal Audit	4	524	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	529
304 - General Counsel	5	491	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	496
31 - Communications	8	1110	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1117
32 - Safety Health Security & Quality	56	7722	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7781
34 - Env Program & Strategic Plng	41	5247	44	0	0	0	0	0	0	0	0	1	0	0	1	0	0	5293
35 - Business Services	72	8376	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8438
36 - Prime Contract & Proj Integr	58	5719	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5777
38 - Project Technical Services	42	5956	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6000
3B - PFP Closure Project	189	51155	212	195	195	195	195	195	191	192	180	504	0	0	0	0	0	53214
3C - Waste & Fuels Management Project	365	53483	352	14	8	8	8	9	9	8	5	9	1	0	0	0	0	53905
3D - Soil & Groundwater Remediation	280	39309	287	8	6	5	4	3	4	3	19	29	0	0	0	0	0	39676
3G - K Basin Oper & Plateau Remediation Project	217	33922	231	13	13	10	7	6	5	4	14	0	0	0	0	0	0	34226
3H - River Risk Management Project	221	6016	230	21	16	13	10	9	8	8	8	5	0	0	0	0	0	6343
3K - Central Plateau Risk Reduction	141	17365	141	17	19	16	28	6	2	0	1	0	0	0	0	0	0	17596
g. TOTAL DIRECT	1707	237196	1741	267	256	247	253	224	219	203	557	35	0	0	0	0	0	241198

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) 2018/07/23		
b. LOCATION (Address and ZIP Code) Richland, WA 99354		b. NUMBER DE-AC06-08RL14788		b. PHASE Base		b. TO (YYYY/MM/DD) 2018/08/26			
		c. TYPE CPAF	d. SHARE RATIO		c. EVMS ACCEPTANCE 2009/09/18 NO YES X				
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI
Current:	52,856	45,959	51,552	(6,897)	-13.0%	(5,593)	-12.2%	0.87	0.89
Cumulative:	5,712,820	5,649,686	5,551,102	(63,134)	-1.1%	98,584	1.7%	0.99	1.02
	BAC	EAC	VAC in \$	VAC in %	TCPI				
At Complete:	5,958,928	5,902,616	56,313	0.9%	0.88				
Explanation of Variance/Description of Problem:									
<p>Current Period Schedule Variance: The current month (CM) negative schedule variance is primarily due to project breakdown structure (PBS) RL-0041 completion of scope ahead of schedule, including: backfill at the 618-10 Burial Ground completed ahead of schedule in early FY2018. Backfill was originally planned to be completed in the latter half of FY2018. Accelerated performance of the AB Waste Site remediation work scope contaminated soil excavation and disposal, planned in October 2017 through November 2018, was completed ahead of schedule in FY2016. Finally, the 183.2KE backfill started earlier than planned and was accelerated as a result of shorter turn-around times between pit 23 and waste site 183.2KE. Completion of the backfill of 183.2KE was originally planned to finish in August FY2018, and actual completion was in February FY2018.</p> <p>Also contributing to the negative schedule variance is the PBS RL-0040 delays experienced in the installation of the PUREX conveyance system and start-up of the mobile batch plant. The partial temporary authorization to install the conveyance system was not received until August 13, 2018, which impacted the critical path by ten working days. In addition, steam line crossover removals in 200 East and West areas contributed to the negative variance as resources necessary to support the work were assigned to higher priority work scope.</p> <p>Current Period Cost Variance: The CM negative cost variance is primarily due to PBS RL-0011 resumption actions and implementation of the new demolition requirements associated with a December 2017 contamination event. This includes fixative applications, performance of radiological surveys, revising radiological postings, infrastructure modifications, and stabilization activities to support resumption of PFP demolition. This also includes additional material and equipment purchases to support the revised demolition approach. As resumption corrective actions and mockups are performed, costs for labor, subcontracts, and material purchases add to the current month variance.</p> <p>Also contributing to the negative cost variance is the PBS-RL-0040 incurring change orders on the PUREX Tunnel 2 firm fixed price contract for the grout conveyance fabrication and installation including delay time and design change to the fabrication specifications. In addition, investigative entries were made into the B Plant Canyon and sampling of the B Plant filter media was performed for offsite analysis. The planning efforts and field work associated with the entries and sampling were unplanned and added to the negative variance.</p> <p>The negative cost variance is partially offset by PBS RL-0030:</p> <ul style="list-style-type: none"> The 200-ZP-1 Operations and Maintenance account experienced cost efficiencies when labor resources were loaned to other projects including modutank decanting, 300-FF-5 Stage B Uranium Sequestration, and Plutonium Finishing Plant (PFP) support and additional absences were incurred due to short term disabilities and unfilled positions. The performance of dowex and purolite resin has been greater than expected which has resulted in a reduced number of resin changes, eliminating the need for the planned material costs and labor support for those efforts. Environmental Integration experienced under-runs in several areas: non-essential Environmental Database maintenance was not performed as planned in order to fund higher priority work scope, Technical Integration experienced swings in costs due to prior month accrual errors, and Remediation Decision Support staff spent more time supporting projects. The GW Monitoring and Performance Assessment account continues to realize efficiencies in the geophysical logging subcontract that was competitively rebid with a subsequent reduction in contract costs. Sample packaging and shipments were performed efficiently, further contributing to the positive cost variance. These savings have been offset by increased efforts at modutanks to remove sediment and lower the water level. Ground Water Data Evaluation and Reporting realized a significant cost efficiency when it was determined that the Groundwater Monitoring Plans being prepared to support the RCRA Revision 9 Permit Modification did not require both an internal and regulator-review draft. <p>Cumulative Schedule Variance: The variance is within reporting thresholds.</p> <p>Cumulative Cost Variance: The variance is within reporting thresholds.</p>									
Impact:									
Current Period Schedule: The current month schedule variance is not expected to impact the overall contract schedule.									
Current Period Cost: Cost impacts are being estimated and will be incorporated in the project estimate to complete (ETC).									
Cumulative Schedule: N/A									
Cumulative Cost: N/A									

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

Corrective Action:

Current Period Schedule: No corrective actions have been identified.

Current Period Cost: CHPRC is supporting a DOE Headquarters led Independent External Review/Independent Cost Estimate review of the a proposed revised scope, cost and schedule baseline for the completion of the RL-0011.C2 project. This review is intended to validate CHPRC's RL-0011.C2 completion plan. Additionally, CHPRC submitted a Post Contract Baseline in July, which will be updated in September to incorporate RL.

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 scope within budget and is currently projecting a variance at completion (VAC) of \$56.3 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$119.6 million. For August, the project was 13.0 percent behind schedule and 12.2 percent over planned cost. Contract to date (CTD), the project was 1.1 percent behind schedule and 1.7 percent under planned cost.

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

There were three of the six BCRs in the period that impacted the PMB:

- BCR-040-18-013R0, Incorporate PUREX Tunnel 2 NTE Increase
- BCR-PRC-18-031R0, Incorporate CO #327 Re-Plan Accelerated Shipment of Sludge
- BCR-PRC-18-032R0, Undistributed Budget Adjustments August 2018

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 + \$56.31 million, +0.9% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

CPS - In Process		
	Total Authorized Unpriced Work	\$426,206
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	Grand Total Adjustments	\$426,206

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

Undistributed Budget Activity

BCR Number	Title	PBS	Fiscal Year	UB
BCR-PRC-18-032R0	<i>Undistributed Budget Adjustments August 2018</i>	RL-0012, RL-0013, RL-0040	2018	-\$3,859K

The Undistributed Budget decreased by \$3,859K.

Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
N/A	N/A	N/A	2018	N/A

Overall, there was no change in MR during August.

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

Fee Activity				
BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2018	N/A
Overall, there was no change to the Fee during August.				
<p>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 ECWR 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.</p>				
Prepared by: Project Control Staff		Date: 9/18/2018	Approved by:	Date:

** Per email direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, baseline change requests (BCRs) will be processed to align the PMB with the settlement values.*

Appendix B

Project Services and Support (WBS 000)



T. L. Vaughn
Vice President for
Safety, Health, Security
and Quality

M. A. Wright
Vice President for
Project Technical
Services

August 2018
CHPRC-2018-08, 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 (Acting)
Director of
Communications

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

T. A. Heidelberg
Vice President for
Business Services
Chief Financial Officer

This section is reported quarterly.

Appendix C

Capital Asset Projects

CH2MHILL
Plateau Remediation Company



August 2018
CHPRC-2018-08, 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



K. A. Wooley
Vice President for
Plutonium Finishing Plant
Closure Project

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

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

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

KEY ACCOMPLISHMENTS

RL-0011_C1 Accomplishments

- None

Once stabilization and implementation of new demolition requirements are complete, demolition on 234-5Z will resume. After completing lower risk demolition outside of Remote Mechanical A (RMA), glovebox HA-46 will be removed during higher risk demolition.

MAJOR ISSUES

On December 15, 2017, contamination was found outside of the established Plutonium Finishing Plant (PFP) radiological boundaries. On December 18, 2017, follow-up radiological surveys found additional contamination present in the administrative office area. CHPRC has identified resumption requirements based on a finalized root cause analysis (RCA). This will allow for the removal of the final glovebox remaining in 234-5Z.

CORRECTIVE ACTION LOG

Reference Appendix C.1 Format 5 for specific corrective actions for this CAP.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

Risk Title Risk Owner	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0011/WBS-011.05.01.01.06 (CAP.1)				
Explanation of major changes to the project monthly spotlight chart: No major changes to the spotlight chart in August.				
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 August.				
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 August.				
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 August.				
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in August.				

CRITICAL PATH SCHEDULE

The PFP Critical Path schedule begins with the continuation of resumption activities related to the December contamination event. After a completion of pre-start items identified during the management assessment (MA), the project will obtain DOE concurrence for resumption of low-risk demo activities. Debris disposition of the 234-5Z rubble piles will resume, starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of zones 2 and 7, with the exception of the drain line. Remote Mechanical C (RMC) process line and RMA process line demolition will begin after a second MA is completed and concurrence granted by DOE to resume higher-risk demolition activities. Working in parallel with RMA and RMC will be the completion of the basement of 234-5Z demolition and removal of HA-46. This leads to CD-4 declaration and confirmation of the completion worksheet. The CD-4 closeout completion milestone is scheduled for June 2, 2019.

SCHEDULE MARGIN/MANAGEMENT RESERVE

Reference Appendix C.1 Formats 1, 2, 3, and 5 for specific schedule margin/management reserve (MR) 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	11/30/17	06/02/19	Progress has been temporarily put on hold on work associated with CD-4 closure to remove the final glovebox from the 234-5Z Facility during demolition. On December 15, 2017, swing shift 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 order on demolition activities was declared and a critique was held to discuss the contamination spread, possible causes, and a path forward. An RCA has been conducted and resumption actions with expected completion dates have been identified. There was a 12-day loss since July as a result of additional corrective actions that were known at August month-end that have been incorporated into the resumption schedule to resume demolition activities. The total gloveboxes removed to date remains at 99 percent complete. Completion of CD-4 closure by November 30, 2017, was not achieved.

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

**Forecasted 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



August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC07-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

DOLLARS IN

Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD												
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2018 / 07 / 23												
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26												
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18												
5. CONTRACT DATA																		
a. QUANTITY 1	b. NEGOTIATED COST 330,987	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 9,878	e. TARGET PRICE 340,865	f. ESTIMATED PRICE 344,864	g. CONTRACT CEILING 340,865	h. ESTIMATED CONTRACT CEILING 344,864	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) Dickerson, Kala K		b. TITLE Prime Contract Compliance Manager										
a. BEST CASE 332,593						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)										
b. WORST CASE 334,991																		
c. MOST LIKELY 334,986		330,987		-3,999														
8. PERFORMANCE DATA																		
CAPN.PBS Control Account.PARS 2 WBS (2)		CURRENT PERIOD				CUMULATIVE TO DATE				REPROGRAMMING ADJUSTMENTS			AT COMPLETION					
ITEM (1)		BUDGETED COST		ACTUAL COST WORK PERFORMED		VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED		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)		ACTUAL COST WORK PERFORMED (9) SCHEDULE (10) COST (11)		COST VARIANCE (12a) SCHEDULE VARIANCE (12b) BUDGET (13)						
RL-0011 Nuclear Mat Stab & Disp PFP		0		0		0		0		0		0		0				
RL_0011_C1.02 Maintain Safe & Compliant PFP		0		0		0		0		0		0		0				
RL_0011_C1.05 Disposition PFP Facility		0		0		0		235,514		235,495		-19		-24,291				
RL_0011_C1.06 Project Management & Support		0		0		0		11,990		11,990		0		-487				
RL_0011_C1.90 Usage Based Services Distributions -PBS RL-11		0		0		0		7,221		7,221		0		-510				
RL_0011_C1.98 Ramp-up and transition		0		0		0		19,399		19,399		0		147				
RL_0011_C1.99 PBS RL-11 UBS, G-n-A, Direct Distrib		0		0		0		41,028		41,028		0		7,700				
b. COST OF MONEY		0		0		0		0		0		0		0				
c. GENERAL AND ADMINISTRATIVE		0		0		0		0		0		0		0				
d. UNDISTRIBUTED BUDGET		0		0		0		0		0		0		0				
e. SUBTOTAL		0		0		0		315,152		315,133		-19		-17,446				
f. MANAGEMENT RESERVE		0		0		0		0		0		0		2,393				
g. TOTAL		0		0		0		315,152		315,133		-19		-17,446				
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																		
a. VARIANCE ADJUSTMENT		0		0		0		0		0		0		0				
b. TOTAL CONTRACT VARIANCE		0		0		0		0		0		0		-15,048				

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

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		ADJUSTMENTS			BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)					
35 - Business Services	0	0	0	0	0	60,427	60,427	52,580	0	7,847	0	0	0	60,427	52,580	7,847		
3B - PFP Closure Project	0	0	0	0	0	254,725	254,706	279,999	-19	-25,293	0	0	0	254,725	280,013	-25,288		
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	332,593	-17,441		
f. MANAGEMENT RESERVE														2,393				
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545				

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> X <input type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18	

5. PERFORMANCE DATA															
WBS.Resp Org Group ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)											AT COMPLETION (15)	
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 SEP 2018 (4)	+2 OCT 2018 (5)	+3 NOV 2018 (6)	+4 DEC 2018 (7)	+5 JAN 2019 (8)	+6 FEB 2019 (9)	MAR 2019 (10)	APR 2019 (11)	FY19 END (12)	FY19-LC (13)	ATCOMPLETE (14)		
35 - Business Services	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
3B - PFP Closure Project	0	15441	0	0	0	0	0	0	0	1	0	0	0	0	15442
g. TOTAL DIRECT	0	15458	0	0	0	0	0	0	0	1	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) 2018/07/23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018/08/26	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2009 / 09 / 18			

Direct Projects

5. Evaluation	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	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	332,593	-17,441	-5.5%	-	1.37			

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 project baseline completion date is November 19, 2016. The current schedule now reflects a completion date of June 2, 2019. There was a 12-day loss since July as a result of corrective actions that were known at August month-end that have been incorporated into the current resumption schedule to resume demolition activities.

The current RL-11 performance schedule indicates that the PFP project will achieve slab-on-grade by May 29, 2019. On Friday, December 15, 2017 swing shift RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis has been conducted and recovery actions and expected completion dates have been identified. Efficiencies have previously been identified in readying the 234-5Z facility for demolition where NDA and characterization data supported leaving more piping and ducting in place for demolition. In addition, efficiencies were recognized in 236-Z (PRF) where work was performed on filter boxes in parallel with the gallery gloveboxes. This allowed for acceleration of the start of 236-Z demolition. This accelerated when additional field team resources were reallocated from 236-Z to 234-5Z to get the facility ready for demolition. This is partially offset by delay in readying the 234-5Z facility for demolition as a result of lack of RCT resources. 234-5Z contains the gloveboxes requiring removal to meet the end state of the KPP and TPA milestone. The regulators were notified in advance that the PFP Project would not meet the re-negotiated TPA milestone M-083-00A due date of 9/30/17 for achieving slab-on-grade. In addition, the December 30, 2017 CD-4 date was not achieved.

Cost Impact: The historical negative cost variance of ~\$17.5M and 5.5%, and CPI of .95 reflect impacts of the safety pauses, stop works, contamination events, and increased complexity of the HA-9A/HC-9B size reduction efforts and preparations and removal of the HA-7A, HC18M and HC-7C and 227S and 227T gloveboxes. This is partially offset by recognized efficiencies in cleaning up the RMA/RMC control rooms after completion of the size reduction efforts of the 9A/9B gloveboxes and removal of the three RADTU and HA-46 gloveboxes by demolishing them with the 234-5Z facility.

Cost variance is not considered recoverable as there is only a small amount of scope remaining to complete the KPP.

Corrective Action:

None at this time

No Corrective Actions Required

- Schedule Margin Analysis: There is no schedule margin associated with the RL-011.C1 capital asset account.
- IMS Data dictionary Changes: None in the month of August.
- Forecast Schedule with No Baseline: None in the month of August.
- UB Balance: None in the month of August.
- Negative ACWP: None in the month of August
- EAC Analysis: Best Case = \$332,593; Most Likely = \$334,986; Worst Case = \$334,991. 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 ECWR 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.
- Negative CV > 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.
- MR Transactions: None in the month of August.
- Freeze Period Changes: None in the month of August.
- Retroactive Changes: None in the month of August.
- EVT Changes: None in the month of August.

Prepared by: Cory McCoy

9/10/2018

Approved by:

Date:

Appendix C.2

Capital Asset Project

RL-0011.C2 - Demolition of PFP Facilities



K. A. Wooley
Vice President for
Plutonium Finishing Plant
Closure Project

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

On December 15, 2017, contamination was found outside of the established Plutonium Finishing Plant (PFP) radiological boundaries. On December 18, 2017, follow-up radiological surveys found additional contamination present in the administrative office area. Work was stopped after the second event, pending completion of a root cause analysis (RCA) and development of a resumption plan. CH2M Hill Plateau Remediation Company (CHPRC) finalized the Root Cause Evaluation (RCE) in April 2018 and is working with Department of Energy, Richland Operations Office (RL) and regulators to implement a plan to enable demolition activities to resume. Plutonium Reclamation Facility (PRF) debris, which had been loaded into super sacks prior to stopping work, has been loaded out, and adjustments to the work control zone and radiological buffer area (RBA) inside the work control zone are complete. Contamination Area/High Contamination Area (CA/HCA) postings have been revised and infrastructure modifications are being performed to support the resumption of demolition activities. A mockup and management assessment has been performed to ensure the project is prepared to resume demolition. Once all resumption pre-start items are complete, the project will begin demolition debris loadout.

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

KEY ACCOMPLISHMENTS

RL-0011_C2 Accomplishments

- Accomplishments to achieve stabilization following the December 2017 contamination event include:
 - Continued maintenance applications of fixative.
 - Routine radiological surveys.
 - Extra radiological surveys when sustained winds are 30 miles per hour or greater.
- Continued implementation of new demolition requirements associated with the December 2017 contamination event. Efforts include:
 - Completed retrofitting 2754W to accommodate new step-off pad.
 - Continued mockup of debris loadout.
 - Installed additional radiological monitoring equipment.

- o Placed and powered climate structures.
- o Supported management assessment to ensure project is prepared to resume lower risk work.
- o Completed set-up of canister transfer area for Environmental Restoration Disposal Facility (ERDF) waste.

MAJOR ISSUES

Issue:

On December 15, 2017, contamination was found outside of the established PFP radiological boundaries. On December 18, 2017, follow-up radiological surveys found additional contamination present in the administrative office area. CHPRC has identified resumption requirements based on a finalized RCA and working with RL and regulators to implement plan to enable demolition activities to resume.

Corrective Action:

Work was stopped after the second event, pending completion of pre-start resumption activities. Pre-start resumption activities include material relocation, waste shipments, and infrastructure modifications to support enhanced radiological postings. Demolition activities will resume after pre-start items are complete and the project is approved to initiate low-level debris loadout and demolition.

Status:

CHPRC has identified resumption requirements based on finalized RCA, and is working with RL and regulators to implement resumption plans to enable demolition activities to resume.

- Some of the activities that were performed during August were:
 - o Implementation of additional radiological monitoring (i.e., continuous air monitor [CAMs], cookie sheets).
 - o Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration.
 - o Application of fixatives (i.e., paints, stabilization agents) to items and areas in the PFP work control zone.
 - o Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.
 - o Continued mockup of debris loadout.
 - o Set-up of canister transfer area for ERDF waste.
 - o Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.).
 - o Completed retrofitting 2754W to accommodate new step off pad.

CORRECTIVE ACTION LOG

Reference Appendix C.2 Format 5 for specific corrective actions for this CAP.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0011/WBS-011.OA																			
Explanation of major changes to the project monthly stoplight chart:																			
No major changes to the stoplight chart in August. However, risk PFP-P1-001, <i>Deterioration of Super Sack's within the PFP Demolition Zone</i> , has been closed and will be removed from the stoplight prior to August reporting.																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
FY2018 Risk Triggers (Risk could be realized in FY2018)																			
PFP-P-004: Stop Work From Concerned Workers	Concerned workers results in a stop work to address an 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 Risk Handling Strategy: Probability: Very Likely (>90%) Worst Case Impacts: \$0, 52 days	●	↔	<p>Risk Event: During resumption of PFP demolition activities, an increase in stop works could result in delays.</p> <table border="1" 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>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> <p>Mitigation Assessment: No major changes in August. Increased communication and worker involvement to avoid confusion and concern in an effort to minimize stop works.</p>	Risk recovery 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
Risk recovery 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-005: Unexpected Contamination Event within Established Boundaries	During operational activities (i.e. execution of characterization, monitoring, disposition of chemicals, and shipment) a loss of contamination control within the newly established boundary is experienced. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 64 days	●	↔	<p>Risk Event: On May 19, 2018, low-level contamination was discovered during routine surveys. RCTs detected the contamination a few feet outside of the RBA south of 19th Street and Camden Avenue, but within the work control boundary. Since being detected, the sample decayed to 279 disintegrations per minute (dpm)/100 cm². The area is now controlled as a contamination area (CA), and additional surveys are planned. No workers were contaminated.</p> <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>Conduct air modeling.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Conduct large particle modeling.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Analyze data and use it to establish new boundaries for PFP demolition zone.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Establish and maintain new radiological boundaries</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in August. The area was posted as a Contamination area (CA) pending further investigation. With the contamination being discovered within the work control boundary, no workers were contaminated in this event. Applicable surveys were performed and work was not impacted.</p>	Risk recovery action(s)	FC Date	%	Conduct air modeling.	Ongoing	N/A	Conduct large particle modeling.	Complete	N/A	Analyze data and use it to establish new boundaries for PFP demolition zone.	Ongoing	N/A	Establish and maintain new radiological boundaries	Ongoing	N/A
Risk recovery action(s)	FC Date	%																	
Conduct air modeling.	Ongoing	N/A																	
Conduct large particle modeling.	Complete	N/A																	
Analyze data and use it to establish new boundaries for PFP demolition zone.	Ongoing	N/A																	
Establish and maintain new radiological boundaries	Ongoing	N/A																	

PFP-P1-003: Weather Impacts During Stabilization, Waste Disposition, & Support	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms will result in in-scope unplanned work and result in schedule impacts to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 24 days			<p>Risk Trigger: When sustained wind speeds are greater than 30 mph or gusts are above 40 mph, work will be stopped pending radiological surveys to confirm no contamination has spread beyond established boundaries.</p> <table border="1" data-bbox="860 294 1570 346"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Plan for 80% T.O.E.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in August. Wind has continued to impact progress on resumption activities at the expected rate. Surveys are being conducted more efficiently and are resulting in less time to recover from wind events, allowing work to resume sooner following an event.</p>	Mitigation action(s)	FC Date	%	Plan for 80% T.O.E.	Ongoing	N/A
Mitigation action(s)	FC Date	%								
Plan for 80% T.O.E.	Ongoing	N/A								
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										
No high threat risks identified in July.										
Unassigned Risks (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in July.										

CRITICAL PATH SCHEDULE

The PFP Critical Path schedule begins with the continuation of resumption activities related to the December contamination event. After a completion of pre-start items identified during the management assessment, the project will obtain DOE concurrence for resumption of low-risk demo activities. Debris disposition of the 234-5Z rubble piles will resume starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of zones 2 and 7, with the exception of the drain line. Remote Mechanical C process line demolition, Remote Mechanical A process line demolition, and loadout of glovebox HA-46, in parallel with completion of the basement of 234-5Z demolition, will begin after a second MA and concurrence is obtained to resume high-risk demo from DOE. The 234-5Z demolition is projected to complete March 28, 2019. The 236-Z canyon demolition will then resume with completion scheduled for May 29, 2019, meeting the requirements for the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-083-00A – PFP Facility Transition and Selection Disposition Activities. Completion of demolition is followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities completing in September 2019.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	* Due Date	**Forecast Date	Status/ Comment
RL-011.C2	Completion of Demolition of all PFP Facilities.	8/31/18	08/12/19	<p>Progress has been temporarily put on hold on PFP demolition activities. On December 15, 2017, during the swing shift, 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.</p> <p>A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and a path forward. An RCA has been conducted and resumption actions with expected completion dates were identified. There was a 12-day loss of schedule since July. This was a result of incorporation of the further revisions to the revised demo approach responding to the contamination event that occurred in December 2017. A management assessment was completed in August to review the project's readiness to reinitiate lower risk demolition work. Once pre-start corrective actions are complete and DOE provides approval to resume lower risk demolition, the project will begin debris loadout.</p>

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

DOE ACTIONS / DECISIONS

Working with RL on CD-4 closure actions.

Appendix C.2

RL-0011.C2 - Demolition of PFP Facilities

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC07-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD													
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2018 / 07 / 23													
b. LOCATION (Address and ZIP Code) Richland, WA		d. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26													
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18													
5. CONTRACT DATA																			
a. QUANTITY 1	b. NEGOTIATED COST 51,683	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 5,000	e. TARGET PRICE 56,683	f. ESTIMATED PRICE 149,658	g. CONTRACT CEILING 56,683	h. ESTIMATED CONTRACT CEILING 149,658												
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) Dickerson, Kala K		b. TITLE Prime Contract Compliance Manager												
a. BEST CASE		141,224			c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)												
b. WORST CASE		144,658																	
c. MOST LIKELY		144,658	51,683	-92,975															
8. PERFORMANCE DATA																			
CAPN.PBS Control Account.PARS 2 WBS (2)		CURRENT PERIOD				CUMULATIVE TO DATE				REPROGRAMMING ADJUSTMENTS			AT COMPLETION						
ITEM (1)		BUDGETED COST		ACTUAL		BUDGETED COST		ACTUAL		BUDGETED COST		ACTUAL		BUDGETED	ESTIMATED	VARIANCE			
		WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	(14)	(15)	(16)		
RL-0011 Nuclear Mat Stab & Disp PFP																			
RL_0011_C2.05 Disposition PFP Facility		0	0	5,727	0	-5,727	55,307	42,327	89,074	-12,980	-46,746	0	0	0	55,307	141,224	-85,917		
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		0	0	5,727	0	-5,727	55,307	42,327	89,074	-12,980	-46,746	0	0	0	55,307	141,224	-85,917		
f. MANAGEMENT RESERVE															3,434				
g. TOTAL		0	0	5,727	0	-5,727	55,307	42,327	89,074	-12,980	-46,746	0	0	0	58,741				
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																			
a. VARIANCE ADJUSTMENT																			
b. TOTAL CONTRACT VARIANCE										-12,980		-46,746		58,741		141,224		-82,482	

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

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

FORM APPROVED

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18	

WBS.Resp Org Group	CURRENT PERIOD						CUMULATIVE TO DATE					REPROGRAMMING			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		ADJUSTMENTS			BUDGETED	ESTIMATED	VARIANCE	
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	(14)	(15)	(16)	
3B - PFP Closure Project	0	0	5,727	0	-5,727	55,307	42,327	89,074	-12,980	-46,746	0	0	0	55,307	141,224	-85,917	
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	5,727	0	-5,727	55,307	42,327	89,074	-12,980	-46,746	0	0	0	55,307	141,224	-85,917	
f. MANAGEMENT RESERVE														3,434			
g. TOTAL	0	0	5,727	0	-5,727	55,307	42,327	89,074	-12,980	-46,746	0	0	0	58,741			

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group		ACTUAL CURRENT PERIOD	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)						ENTER SPECIFIED PERIODS				AT COMPLETION (15)	
ORGANIZATIONAL CATEGORY (1)				SIX MONTH FORECAST BY MONTH (Enter names of months)											
		(2)		+1 SEP 2018 (4)	+2 OCT 2018 (5)	+3 NOV 2018 (6)	+4 DEC 2018 (7)	+5 JAN 2019 (8)	+6 FEB 2019 (9)	MAR 2019 (10)	APR 2019 (11)	FY19 END (12)	FY19-LC (13)	ATCOMPLETE (14)	
3B - PFP Closure Project		141	2091	160	142	142	142	142	139	139	132	379	0	0	3607
g. TOTAL DIRECT		141	2091	160	142	142	142	142	139	139	132	379	0	0	3607

CLASSIFICATION (When Filled In)										
CONTRACT PERFORMANCE REPORT FORMAT 5 - Explanations and Problem Analysis									FORM APPROVED OMB No. 0704-0188	
1. CONTRACTOR	2. CONTRACT			3. PROGRAM			4. REPORT PERIOD			
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract			a. NAME RL_0011_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2018/07/23			
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788			b. PHASE			b. TO (YYYYMMDD) 2018/08/26			
	c. TYPE CPAF	d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2009 / 09 / 18						
Direct Projects										
5. Evaluation		Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:		0.0	0.0	5,726.8	0.0	-	-5,726.8	-	-	0.00
Cumulative:		55,306.9	42,327.2	89,073.5	-12,979.7	-23.5%	-46,746.4	-110.4%	0.77	0.48
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		55,306.9	141,223.9	-85,917.0	-155.3%	-	0.25			
Explanation of Variance/Description of Problem:										
Current Month:										
Schedule Variance: The schedule variance for the current month is within threshold.										
Cost Variance: The current month unfavorable variance are associated with impacts and resumption efforts from the contamination event that occurred on December 15, 2017. A root cause analysis has been finalized and corrective actions are being implemented prior to resumption of demolition activities. Costs include labor to perform mock-up activities, infrastructure modifications, equipment purchases, and sub-contracted support.										
Cumulative to Date:										
Schedule Variance: The cumulative unfavorable schedule variance is due to delay of demolition of ancillary buildings and 236-Z caused by resources being redirected to support higher priority critical path work associated with decommissioning of 234-5Z, 242-Z, and 236-Z, as well as ready for demo activities associated with impacts from 236-Z Canyon Crane failure, contamination impacts from an unplanned criticality alarm failure, contamination recovery in the duct level of 234-5Z (two week delay in July 2016), increased characterization efforts, weather delays (snow and wind), recovery from demolition contamination events, and greater efforts to complete 242-Z demolition than originally planned. In addition, the PUREX Tunnel collapse caused a four day delay due to closure of the Hanford site restricting access to PFP and a contamination event associated with removal of PRF gallery gloveboxes causing a 20 day delay of demolition activities on the 236-Z facility. Further, impacts associated with the Stop Work that was initiated by the Hanford Atomic Metals Trade Council (HAMTC) union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As a result of delays in the ready for demolition activities, completion of the C2 CD-4 has been delayed. TPA milestone M-083-00A due 9/30/2017 was not met. A BCR was processed in the month of September to draw down on DOE contingency to recover the direct cost impacts to the RL-0011 C.2 Project associated with realization of the DOE-RL risks. Areas that were impacted were associated with Weather Delays, Stop Works, PRF Contamination Events, and MSA Resources retained to prevent Bump and Roll impacts. A contamination event occurred on Friday, December 15, 2017 swing shift when RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis has been conducted and recovery actions and expected completion dates are identified. This is partially offset with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
Cost Variance: The cumulative negative cost variance is associated with MSA resources arriving to support PFP demolition that were planned as P/Q shift support with a baseline start date of February 2016. Additionally, Readiness Assessment activities lagged due to a delay in the start of 236-Z Demolition and increased requirements to show readiness resulting in increased costs due to additional time and effort required from subcontracted and direct labor resources. The apportioned project management activities (i.e. project oversight and planning) and support activities are ongoing, while a delay in the discrete field work is resulting in minimal apportioned BCWP. Demolition mobilization activities took longer than originally assumed because of recommendations made during the readiness assessment and purchasing unplanned PBS fixative to support 236-Z demolition. In addition, significant winter weather impacts (i.e., snow, wind, freezing rain, etc.) have been recognized on the Hanford Site. Site closures, freezing temperatures and significant snowfall that required clearing of the demolition zone rather than performing physical demolition on the facilities while a constant staff provides demolition support services is a contributing factor. Unplanned Management Assessment efforts for the 234-5Z and 291-Z facilities took longer than originally assumed. Impacts associated with the Stop Work that was initiated by the Hanford Atomic Metals Trade Council (HAMTC) union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As 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 G&A Rate for FY2017 resulted in a reduction to the 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 has been conducted and resumption actions and expected completion dates are identified. This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										

Impact:

Schedule Impact: Progress continued to work toward CD-4 closure as teams continued to ready the PFP facilities for demolition. The PRF facility initiated demolition on November 8, 2016. Demolition on the 291-Z facility commenced on June 30, 2017, and the 291-Z stack was demolished on July 15, 2017. The 234-5ZA facility was demolished in the month of August 2017 with loadout of waste completed in the month of September. Demolition of 234-5Z was initiated on September 13, 2017. Completion of all demolition activities are scheduled to occur in May 2019. The May date is reflective of the known actions and resumption efforts associated with a contamination event that occurred in December, 2017. The baseline completion date is not considered recoverable. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of November 30, 2017 was not met.

Cost Impact: Stop Works, Safety Pauses, weather impacts (i.e., unusual winter, heat, wind, etc.) multiple contamination events, the PRF Crane failure, and associated recovery actions have negatively impacted demolition of the PFP facilities. In addition, readiness activities took longer than originally assumed as a result of increased requirements required by the Readiness Assessment team to demonstrate readiness for demolition of the PRF facility and efforts to mobilize took longer than originally assumed as a result of implemented recommendations from the readiness assessment team. An unplanned Management Assessment for the 234-5Z and 291-Z facilities to incorporate lessons learned from the demolition of the 236-Z and 242-Z facilities are also contributing to the cost impacts. Finally, in the early stages of this project subcontracted MSA resources specializing in facility demolition charged the project until the ready for demo status was achieved. Unexpected contamination events that occurred during demolition of the PRF facility in January, June, and December, 2017, and delays with the 242-Z demolition has contributed to the cost impacts on this project. A Baseline Change Request (BCR) was processed in the month of September to draw down on DOE contingency to recover the direct cost impacts to the RL-0011 C.2 Project associated with realization of the DOE-RL risks. Areas that were impacted were associated with Weather Delays, Stop Works, PRF Contamination Events, and MSA Resources retained to prevent Bump and Roll impacts. This is partially offset by recognized efficiencies during the 291-Z demolition and 291-Z stack implosion as well as the 234-5ZA, 252-Z1, 2503-Z, and 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.

A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017. Partially offset by working one shift during demolition of 236-Z, 242-Z and 291-Z building and stack rather than two as planned in the PMB. Durations for the remainder of the 234-5Z and PRF demolitions activities have been adjusted to incorporate increased durations as a result of expected recovery actions from the contamination event that occurred in December. Upon completion of the recovery efforts associated with the December, 2017 contamination event, it is expected that DOE-RL will authorize CHPRC to restart demolition activities to safe/retire the project to slab on grade.

Corrective Action:

NOTE: Corrective actions associated with stop works/safety pauses, contamination events, and 236-Z Canyon Crane failure, and additional asbestos removal activities that impacted the ability to initiate demolition activities in the RL-011.C2 capital asset project were previously addressed in the Operations project corrective action plan.

Corrective actions associated with recovery actions from the contamination event that occurred on December 15, 2017 as described above have been developed and will be documented in future reporting periods. CHPRC has identified resumption requirements based on a finalized RCA and working with RL and regulators to implement resumption plan to enable demolition activities to resume.

• Some of the activities that were performed during August were:

- o Implementation of additional radiological monitoring (i.e., continuous air monitor [CAMs], cookie sheets).
- o Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration.
- o Application of fixatives (i.e., paints, stabilization agents) to items and areas in the PFP work control zone.
- o Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.
- o Continued mock-up of debris loadout.
- o Set-up of canister transfer area for ERDF waste.
- o Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.).
- o Completed retrofitting 2754W to accommodate new step off pad.

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

The following items are addressed, as applicable, per the EVMSIH:

1. Schedule Margin Analysis: In the EAC there is currently no remaining schedule margin in this capital asset account. Schedule margin was lost in February 2016 as a result of impacts from stop works associated with PremAire breathing air issues related to size reduction of the HA-9A glovebox and impacts from a safety pause associated with a PremAire Breathing Air radiological event resulting in increased survey requirements for PPE and a requirement for removing additional asbestos in the 234-5Z facility prior to demolition activities commencing.
2. IMS Data dictionary Changes: No change in the month of August
3. Forecast Schedule with No Baseline: No change in the month of August
4. UB Balance: No change in the month of August
5. Negative ACWP: No change in the month of August
6. EAC Analysis: Best Case = \$141,224; Most Likely = \$144,658; Worst Case = \$144,658. 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 ECWR 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 August
8. MR Transactions: No change in the month of August
9. Freeze Period Changes: No change in the month of August
10. Retroactive Changes: No change in the month of August
11. EVT Changes: No change in the month of August

Prepared by: Cory McCoy

Date: 09/10/18

Approved by:

Date:

Appendix C.3
Capital Asset Project
RL-0012_C1_1 - Sludge Retrieval Project
15-D-401

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Sludge Transport & Storage Container (STSC) 2 was disconnected and prepped for shipment on August 3, 2018, and the second shipment of sludge was placed in interim storage at T Plant on August 8, 2018. The third STSC is forecast to be placed in interim storage at T Plant in September.

Project breakdown structure (PBS) RL-0012 scope is 99.2 percent complete, with a cumulative schedule performance index (SPI) of 1.00 and a cost performance index (CPI) of 1.04.

KEY ACCOMPLISHMENTS

KW Basin Sludge Removal

- The 100K Operations support team performed preventive maintenance and calibrations on both Engineered Container Retrieval and Transfer System (ECRTS) components and Annex Utility System components.
- STSC 2 was placed in interim storage at T Plant on August 8, 2018.

MAJOR ISSUES

No major issues to report at this time.

CORRECTIVE ACTION LOG

Reference Appendix C.3 Format 5 for specific corrective actions for this CAP.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change



Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.



Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.



Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.



Increased Confidence



No Change



Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0012/WBS-012 (CAP)				
Explanation of major changes to the project monthly spotlight chart:				
No major changes in August.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
No realized risks identified in August.				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
No critical risks identified in August.				
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)				
FY2017 Risk Triggers (Risk could be realized in FY2017)				
No high risk threat value risks identified in August.				
Unassigned Risks (Pending ownership of identified threats/opportunities)				
No unassigned risks identified in August.				

CRITICAL PATH SCHEDULE

The project critical path schedule runs through completion of retrieval operations, including the filling of STSCs with sludge, transporting to T Plant, and placement in T Plant cell. Tri-Party Agreement milestone M-016-176, Complete Sludge Removal from 105KW Fuels Storage Basin, is required by December 2019.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	*Due Date	**Forecast Date	Status/ Comment
15-D-401	CD-4, Project Completion	11/30/19	5/22/18 (A)	The forecast date includes a schedule margin from the project's risk analysis.

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

None currently identified.

Appendix C.3

RL-0012_C1_1 – Sludge Retrieval Project 15-D-401

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



August 2018
CHPRC-2018-08, 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 15_D_401 KW Basin Sludge Removal Project		a. FROM (YYYYMMDD)	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		2018 / 07 / 23	
		c. TYPE CPAF		d. SHARE RATIO		b. TO (YYYYMMDD)	
				e. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18		2018 / 08 / 26	

5. CONTRACT DATA								
a. QUANTITY 1	b. NEGOTIATED COST 295,873	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 7,950	e. TARGET PRICE 303,823	f. ESTIMATED PRICE 296,690	g. CONTRACT CEILING 303,823	h. ESTIMATED CONTRACT CEILING 296,690	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)	
a. BEST CASE 283,318						b. TITLE Prime Contract Compliance Manager	
b. WORST CASE 288,740						c. SIGNATURE	
c. MOST LIKELY 288,740		295,873		7,133		d. DATE SIGNED (YYYYMMDD)	

8. PERFORMANCE DATA																	
CAPN.PBS Control Account.PARS 2 WBS (2)		CURRENT PERIOD						CUMULATIVE TO DATE				REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
ITEM (1)	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)							
RL-0012 SNF Stabilization & Disp																	
RL_0012_C1_1.16 Sludge Treatment Project	0	0	0	0	0	156,861	156,861	156,786	0	75	0	0	0	156,861	156,786	75	
RL_0012_C1_1.17 D-401 KW Basin Sludge Removal Project	0	0	-115	0	115	133,421	133,421	126,532	0	6,888	0	0	0	133,421	126,532	6,888	
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	0	0	-115	0	115	290,282	290,282	283,318	0	6,963	0	0	0	290,282	283,318	6,963	
f. MANAGEMENT RESERVE														5,421			
g. TOTAL	0	0	-115	0	115	290,282	290,282	283,318	0	6,963	0	0	0	295,703			
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																	
a. VARIANCE ADJUSTMENT																	
b. TOTAL CONTRACT VARIANCE																	
											0	6,963		295,703	283,318	12,385	

CLASSIFICATION (When Filled In)

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 15_D_401 KW Basin Sludge Removal Project		a. FROM (YYYYMMDD) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED	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)										
3G - K Basin Oper & Plateau Remediation Project	0	0	-115	0	115	290,282	290,282	283,318	0	6,963	0	0	0	290,282	283,318	6,963		
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
d. UNDISTRIBUTED BUDGET																		
e. SUBTOTAL (Performance Measurement Baseline)	0	0	-115	0	115	290,282	290,282	283,318	0	6,963	0	0	0	290,282	283,318	6,963		
f. MANAGEMENT RESERVE														5,421				
g. TOTAL	0	0	-115	0	115	290,282	290,282	283,318	0	6,963	0	0	0	295,703				

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 15_D_401 KW Basin Sludge Removal Project		a. FROM (YYYYMMDD) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X 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 SEP 2018 (4)	+2 OCT 2018 (5)	+3 NOV 2018 (6)	+4 DEC 2018 (7)	+5 JAN 2019 (8)	+6 FEB 2019 (9)	MAR 2019 (10)	APR 2019 (11)	FY19 END (12)	FY19-LC (13)	ATCOMPLETE (14)		
3G - K Basin Oper & Plateau Remediation Project	-2	7630	0	0	0	0	0	0	0	0	0	0	0	0	7630
g. TOTAL DIRECT	-2	7630	0	0	0	0	0	0	0	0	0	0	0	0	7630

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 012- RL-12 SNF Stabilization and Disposition			a. FROM (YYYYMMDD) 2018/07/23		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD)		
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes			(YYYYMMDD) 2009 / 09 / 18 2018/08/26		

5. Evaluation

Direct Projects

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	0.0	0.0	-114.9	0.0	-	114.9	-	-	-
Cumulative:	290,281.7	290,281.7	283,314.2	0.0	0.0%	6,967.4	2.4%	1.00	1.02
	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:	290,281.7	283,314.2	6,967.4	2.4%	0.00	-			

Explanation of Variance/Description of Problem:

Current Period:

Schedule Variance: Within Threshold.

Cost Variance: Within Threshold. Negative costs are associated with labor corrections for hours charged to Capital accounts following the transition to Operations.

Cumulative To Date:

Schedule Variance: Within Threshold.

Cost Variance: Within Threshold.

Impact:

Schedule Impact: Within Threshold

Cost Impact: Within Threshold

Corrective Action:

Schedule: N/A

Cost: N/A

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

PROJECT IS COMPLETE

- Schedule Margin Analysis: None
- IMS Data dictionary Changes: None
- Forecast Schedule with No Baseline: None
- UB Balance: None
- Negative ACWP: Negative ACWP is due to cost transfers for labor incorrectly charged to Capital accounts following transition to Operations
- EAC Analysis: Best Case = \$283.3M; Most likely = \$288.7M; Worst Case = \$288.7M. 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 ECWR 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. The Project is complete as of June month end, therefore Best Case, Most Likely, and Worst Case EACs are equal.
- Negative CV > VAC: None
- MR Transactions: None
- Freeze Period Changes: None
- Retroactive Changes: None
- EVT Changes: None

Prepared by: R. Lehman

9/18/2018

Approved by:

Date:

Appendix C.4
Capital Asset Project
RL-0041_C1 – Project 618-10, 316-4 and
600-63 Waste Sites

CH2MHILL
Plateau Remediation Company



T. L. Hobbes
Vice President for
618-10 Burial Ground

August 2018
CHPRC-2018-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The 618-10 Burial Ground Project formally transmitted the cleanup verification package to RL.

KEY ACCOMPLISHMENTS

618-10 Burial Ground Cleanup Verification Package

- Formally transmitted the Cleanup Verification Package (CVP) to RL on August 2, 2018.

River Corridor Contract Critical Decision (CD)-4, Project Completion, and Documentation

- Completed the CD-4 Lessons Learned document.

MAJOR ISSUES

Issue

The completion date for infrastructure demobilization has been pushed to September 2018 due to a delay with Mission Support Alliance, LLC (MSA) in removing the power poles going out from the 618-10 Burial Ground complex to the 400 Area. MSA is required to have an ecological/cultural review done before they can perform the work. The fire season is also affecting the completion of the power pole removal.

Corrective Action

The 618-10 Burial Ground management is communicating with MSA to minimize any additional impacts to cost or schedule over what has already been forecasted.

Status

The 618-10 Burial Ground management has verified that MSA will not need any CHPRC personnel on site when they are able to complete the work. As a result, the 618-10 Burial Ground project completed ramp-down of staff and continues closeout of other contracts. MSA communicated that they have received the ecological/cultural review and are working with the fire marshal for clearance to complete the work before the end of September.

CORRECTIVE ACTION LOG

Reference Appendix C.4 Format 5 for specific corrective actions for this Capital Asset Project (CAP).

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-0041/WBS-041			
Explanation of major changes to the project monthly spotlight chart: No major changes in August.			
Realized Risks (Risks that are currently impacting project cost/schedule)			
No realized risks identified in August.			
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)			
No critical risks identified in August.			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)			
Lifecycle Risk Triggers (Risk could be realized at any point of the project)			
Unassigned Risks (Pending ownership of identified threats/opportunities)			
No unassigned risks identified in August.			

CONTRACT-TO-DATE

WBS 041/ RL-0041 Capital Asset 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	68.1	68.6	46.5	0.4	0.6%	22.1	32.2%	68.9	47.0	0.5	21.9

Numbers are rounded to the nearest \$0.1 million

Reference Appendix C.4 Format 5 for narrative on Contract-to-Date performance analysis.

CRITICAL PATH SCHEDULE

The critical path flows through 618-10 Burial Ground power pole removal and CD-4 activities.

SCHEDULE MARGIN/MANAGEMENT RESERVE

Reference Appendix C.4 Formats 1, 2, 3, and 5 for specific schedule margin/management reserve utilization for this CAP.

CRITICAL DECISION (CD) MILESTONE STATUS

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
KPP 1	Complete the 618-10 Burial Ground Remediation	1/31/2020	8/2/2018 (A)		The 618-10 Burial Ground CVP was issued on August 2, 2018, completing requirements of KPP 1.
KPP 2	Complete the Remediation of the 316-4 and 600-63 Waste Sites	1/31/2020	1/25/2018 (A)		The 316-4 Waste Site CVP was issued on January 25, 2018, completing requirements of KPP 2.
	CD-4 Closeout	1/31/2020		9/30/2018	

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

DOE ACTIONS / DECISIONS

None to report at this time.

Appendix C.4

RL-0041_C1 – Project 618-10, 316-4 and 600-63 Waste Sites

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



August 2018
CHPRC-2018-08, 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 PARS II - RL-0041.C1 Base Funded Nuc Fac D&D River Corr				a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fac D&D River Corr				a. FROM (YYYYMMDD) 2018 / 07 / 23							
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18				b. TO (YYYYMMDD) 2018 / 08 / 26							
c. TYPE CPAF		d. SHARE RATIO															
5. CONTRACT DATA																	
a. QUANTITY 1	b. NEGOTIATED COST 0	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 68,921	d. TARGET PROFIT/FEE 0	e. TARGET PRICE 0	f. ESTIMATED PRICE 46,979	g. CONTRACT CEILING 0	h. ESTIMATED CONTRACT CEILING 46,979	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) Dickerson, Kala K			b. TITLE Prime Contract Compliance Manager								
a. BEST CASE 46,979						c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)								
b. WORST CASE 46,979																	
c. MOST LIKELY 46,979		0		-46,979													
8. PERFORMANCE DATA																	
CAPN.PBS Control Account.PARS 2 WBS (3)		CURRENT PERIOD				CUMULATIVE TO DATE				REPROGRAMMING ADJUSTMENTS			AT COMPLETION				
ITEM (1)	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)							
RL-0041 Nuc Fac D&D - RC Closure Proj																	
RL_0041_C1.05.02 618-10 Burial Ground	2,086	614	80	-1,472	533	55,245	55,676	41,777	431	13,899	0	0	0	56,014	42,250	13,765	
RL_0041_C1.05.03 316-4 Waste Site	0	0	0	0	0	11,183	11,183	4,259	0	6,924	0	0	0	11,183	4,259	6,924	
RL_0041_C1.05.04 600-63 Waste Site	0	0	0	0	0	1,611	1,611	445	0	1,167	0	0	0	1,611	445	1,167	
RL_0041_C1.05.06 RCC CD 4 Closeout and Doc	16	16	3	0	13	97	97	13	0	84	0	0	0	112	25	87	
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	2,102	630	83	-1,472	546	68,136	68,568	46,494	431	22,073	0	0	0	68,921	46,979	21,942	
f. MANAGEMENT RESERVE														0			
g. TOTAL	2,102	630	83	-1,472	546	68,136	68,568	46,494	431	22,073	0	0	0	68,921			
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																	
a. VARIANCE ADJUSTMENT																	
b. TOTAL CONTRACT VARIANCE													431	22,073	68,921	46,979	21,942

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 PARS II - RL-0041.C1 Base Funded Nuc Fac D&D River Corr		a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fact D&D River Corr		a. FROM (YYYYMMDD) 2018 / 07 / 23	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 08 / 26	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18			

WBS.FOC Control Account.PARS 2 WBS (3) 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)						
041.6 - 618 10 Projects																
RL_0041_C1.05.02 618-10 Burial Ground	2,086	614	80	-1,472	533	55,245	55,676	41,777	431	13,899	0	0	0	56,014	42,250	13,765
RL_0041_C1.05.03 316-4 Waste Site	0	0	0	0	0	11,183	11,183	4,259	0	6,924	0	0	0	11,183	4,259	6,924
RL_0041_C1.05.04 600-63 Waste Site	0	0	0	0	0	1,611	1,611	445	0	1,167	0	0	0	1,611	445	1,167
RL_0041_C1.05.06 RCC CD 4 Closeout and Documenta	16	16	3	0	13	97	97	13	0	84	0	0	0	112	25	87
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET																
e. SUBTOTAL (Performance Measurement Baseline)	2,102	630	83	-1,472	546	68,136	68,568	46,494	431	22,073	0	0	0	68,921	46,979	21,942
f. MANAGEMENT RESERVE														0		

CONTRACT PERFORMANCE REPORT													Form Approved OMB No. 0704-0188			
FORMAT 3 - BASELINE										DOLLARS IN THOUSANDS						
1. CONTRACTOR CH2M HILL Plateau Remediation Company			2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL 14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM PARS II - RL-0041.C1 Base Funded Nuc Fact D&D River Corr a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009			4. REPORT PERIOD a. FROM: 2018/07/23 b. TO: 2018/08/26						
5. CONTRACT DATA																
a. ORIGINAL NEGOTIATED COST 0			b. NEGOTIATED CONTRACT CHANGE \$0		c. CURRENT NEGOTIATED COST (A + B) \$0		d. ESTIMATED COST AUTH UNPRICED WORK \$68,921		e. CONTRACT BUDGET BASE (C + D) \$68,921		f. TOTAL ALLOCATED BUDGET \$68,921		g. DIFFERENCE (E - F) \$0			
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2018		k. CONT COMPLETION DATE 9/30/2018			l. EST COMPLETION DATE 9/30/2018						
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 (16)	TOTAL BUDGET (17)
			+1 Sep-18 (4)	+2 Oct-18 (5)	+3 Nov-18 (6)	+4 Dec-18 (7)	+5 Jan-19 (8)	+6 Feb-19 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)		
a. PM BASELINE (BEGIN OF PERIOD)	66,035	2,102	785	0	0	0	0	0	0	0	0	3,497	47,591	17,833	0	68,921
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																
RL_0041_C1.05.02 618-10 Burial Ground																
None at this time													0	0	0	0
RL_0041_C1.05.03 316-4 Waste Site																
None at this time													0	0	0	0
RL_0041_C1.05.04 600-63 Waste Site																
None at this time													0	0	0	0
c. PM BASELINE (END OF PERIOD)	68,136	2,102	785	0	0	0	0	0	0	0	0	3,497	47,591	17,833	0	68,921

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 041.6 - 618 10 Projects			a. FROM (YYYYMMDD) 2018 / 07 / 23		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2018 / 08 / 26		
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2009 / 09 / 18					

5. Evaluation

Direct Projects

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	2,101.8	629.5	83.4	-1,472.2	-70.0%	546.1	86.7%	0.30	7.54
Cumulative:	68,136.4	68,567.5	46,494.2	431.1	0.6%	22,073.3	32.2%	1.01	1.47
	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:	68,920.9	46,978.6	21,942.3	31.8%	0.02	0.73			

Explanation of Variance/Description of Problem:

CURRENT MONTH
The current month schedule variance is due to the 618-10 Burial Ground backfill completing ahead of schedule when it was planned to be performed in the current period. The current month cost variance is due to resource sharing and staff attrition that resulted in a reduction in staffing.

CONTRACT TO DATE
The cumulative schedule variance is within reporting thresholds. The cumulative favorable cost variance is partially due to the sharing of resources and materials among the projects, which has resulted in fewer purchased materials and lower labor costs. Attrition has led to a reduction in staffing and in cost with work still being completed as planned with the resources left. In addition, excavation efficiencies at the 316-4 Waste Site reduced the total volume of soil to be removed, and the availability of existing crews to perform backfill scope at both the 316-4 Waste Site and the 618-10 Burial Ground instead of hiring a separate subcontractor resulted in cost savings.

VARIANCE AT COMPLETION
The favorable variance at completion reflects the efficient use of shared resources and materials amongst the 618-10 Burial Ground Complex projects. Attrition has also led to a reduction in staffing and in cost with work still being completed as planned with the resources left. Excavation efficiencies and the ability to use existing crews to perform backfill instead of hiring a separate subcontractor at the 618-10 Burial Ground and 316-4 Waste Site reduced the total cost to complete the project, and the optimization of resources and equipment at the 618-10 Burial Ground Complex reduced the total cost to complete excavation at the 600-63 Waste Site.

IMPACTS
There are no current impacts to the project schedule or cost.

Corrective Action:
Corrective Action:
None.

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

- Schedule Margin Analysis: N/A, pending definitization of the scope.
- IMS Data dictionary Changes: None in the month of August.
- Forecast Schedule with No Baseline: None in the month of August.
- UB Balance: N/A
- Negative ACWP: None in the month of August.
- EAC Analysis: Best Case: \$47.0M; Most Likely: \$47.0M; Worst Case: \$47.0M. 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 ECWR 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.
- Negative CV > VAC: N/A
- MR Transactions: None in the month of August.
- Freeze Period Changes: None in the month of August.
- Retroactive Changes: None in the month of August.
- EVT Changes: None in the month of August.