

Monthly Performance Report

May 2019

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

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

CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

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APPROVED
By Janis D. Aardal at 3:02 pm, Jun 20, 2019

Release Approval

Date

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CH2MHILL
Plateau Remediation Company



L. Ty Blackford
President and Chief
Executive Officer

Monthly Performance Report

U.S. Department of Energy Contract,
DE-AC06-08RL14788
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May 2019
CHPRC-2019-05, Revision 0

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EXECUTIVE SUMMARY

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

- Waste and Fuels Management Project:** At the Waste Encapsulation Storage Facility (WESF), the W-135 Management of the Cesium (Cs) and Strontium (Sr) Capsules project team completed the final design for the Cask Storage System (CSS) and associated transfer of the equipment. The draft statement of work for the capsule storage area construction subcontract was distributed for internal review and comment. The request for proposal package for the construction of the Maintenance and Storage Facility (MASF) Cs/Sr capsule handling mockup facility was issued on May 16, 2019. At WESF, crews completed the transfer of the liquid removed from Tank (TK)-100 to the Effluent Treatment Facility for treatment and final disposition, completing TK-100 work. Also at WESF, the project made canyon entries to continue work on maintenance of the 15-ton canyon crane. The project also completed the teardown and decontamination of the load block components from the 15-ton crane and the 226-B laydown yard cleanup. The sludge receipt team continues to receive sludge transport and storage containers (STSCs) from the 100K West Reactor Basin for interim storage at T Plant. STSC 12 was received on April 24, 2019, STSC 13 was received on May 7, 2019, and STSC 14 was received on May 20, 2019.
- Soil and Groundwater Remediation Project:** In the 100 Areas, operations crews completed operations acceptance testing of new injection wells MJ29 and MJ30 at the 100-DX Pump and Treat (P&T) Facility and performed a planned outage at the 100-HX P&T to complete the stainless steel upgrade to feed the pump discharge header. At the 200 West Area, crews completed cleaning of injection wells YJ1 and YJ2, replaced the flow control valve in injection well YJ14 and placed the well back in service, and completed repairs on the failed flow control valve for transfer line A to Injection Transfer Building 2. Drilling crews completed drill-to-depth of 3 monitoring wells and one extraction well, one each at the 200-BP-5, 200-UP-1, and 300-FF-5 Operable Units (OUs) and the extraction well at the 200-ZP-1 OU. Construction and development were completed on the remaining 100-HR-3 four wells, completing the 10-well campaign. Remedy Selection and Implementation (RS&I) project teams delivered the 100-BC-5 Proposed Plan, Draft Revision 0 to RL for delivery to U.S. Environmental Protection Agency (EPA) and provided the 100-KR-1, 100-KR-2, and 100-KR-4 OUs decisional draft feasibility study to RL for review. RS&I teams supported CHPRC certification of the engineering evaluation reports for Dangerous Waste Management Units 216-A-29 Ditch and 216-A-37-1, and completed an evaluation showing an 11.6 percent reduction of the 100-HR-3 chromium plume, which completed the Key Performance Goal “Reduce the 100-HR-3 chromium plumes by 10%.” Environmental Program & Strategic Planning submitted the Draft A Cumulative Impact Evaluation Technical Approach Document to RL for review and delivery to EPA and State of Washington Department of Ecology (Ecology) for review.
- Plutonium Finishing Plant (PFP) Closure Project:** The PFP Closure Project team successfully completed the required independent management assessment of project readiness to restart higher risk work. The assessment team was very complimentary of the actions taken as the PFP team prepares to resume higher-risk demolition, and noted in its final report that “the actions taken to prepare to commence [the higher-risk] phase of the demolition work are completed and effective.” The PFP team completed demolition of the PFP vault and load out of the associated debris. Thirteen containers of existing demolition debris and 117 containers of



Crews at 100-HX successfully completed the stainless steel upgrades on the pump and treat system. The project was completed in multiple phases to minimize downtime and maximize efficiency.

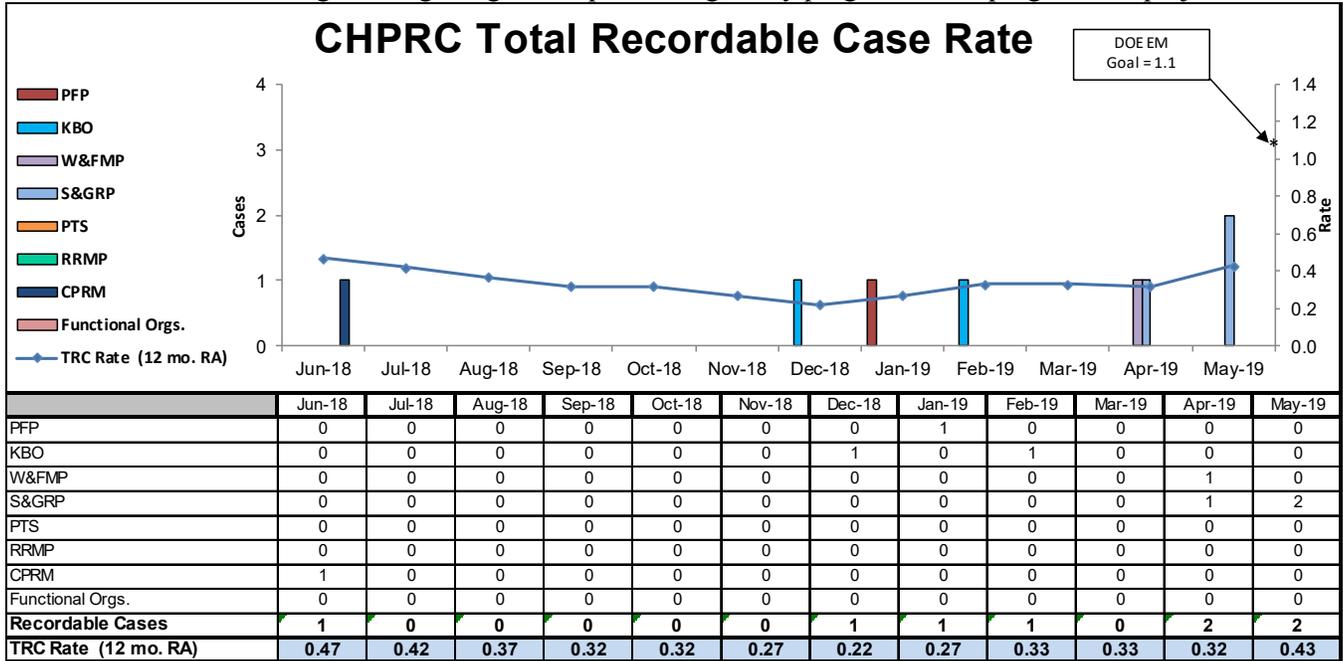
low risk demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal. Set-up for demolition on remaining lower-risk portion of the Main Processing Facility was initiated.

- K Basins Operations: 100K Operations staff safely filled STSCs 13 and 14 with 105KW Basin engineered container sludge and delivered STSCs 12, which was filled with EC sludge in April, and STSCs 13 and 14 to T Plant on April 24, 2019, May 7, 2019, and May 20, 2019, respectively. The 100K Closure Basin Deactivation team continued characterization and inventory of below water debris and packaged and shipped basin floor settled solids to the 222-S Laboratory. Contracts were awarded for the fabrication of the sand filter media removal system equipment and the removal of oily water from the 165-K East Fuel Storage Bunker.
- River Risk Management Project: Several facility structures, systems and components that require preventative maintenance (PM) were prioritized for the month of May. Many of these PMs required reduced ventilation that prevented concurrent project activities in Zone 2 ventilation areas. The remote excavator arm (REA) was used to load 16 bins of debris in the B Cell. Of these, eight were weighed and assayed in the airlock and moved into D Cell for future load out. Box shielding was installed on three 9x5x5 waste boxes and grouted into place for forthcoming B Cell debris load out. Thirteen geoprobes were removed from under B Cell to allow micropile installation, grout injection and soil excavation inside B Cell. The soil stabilization test at Pit 6 was concluded and disposal of grouted test soil was initiated. The micropile design was received from the contractor and is currently under review with CHPRC.
- Central Plateau Risk Management (CPRM) Project: CPRM personnel completed mercury vapor sampling and monitoring in the Reduction-Oxidation (REDOX) second floor, all floors of the Silo (with the exception of the sixth floor Sample Gallery) and are approximately halfway complete with the third floor Operating Galleries. Workers completed stabilization of Plutonium Uranium Extraction Plant (PUREX) Tunnel 2 with grout and demobilization of the subcontractor from the worksite. Demobilization of asbestos removal crews and equipment was completed from the steam line road crossovers removal effort in the 200 East Area and steam line asbestos insulation abatement commenced between REDOX and U-Canyon in the 200 West Area. Personnel completed mechanical cold and dark isolations, initiated removal of hazardous material/equipment, and prepped for asbestos abatement removal in 242-B/BL.

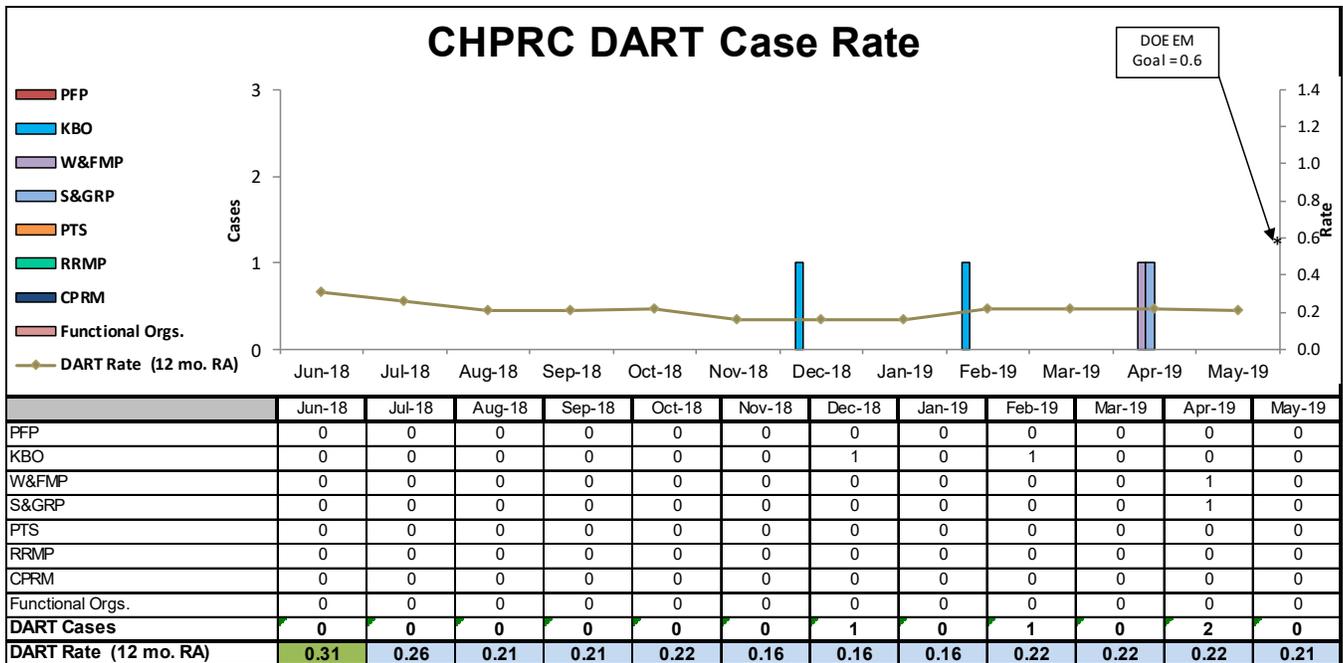
- The President’s Zero Accident Council (PZAC) meeting for May was hosted by K Basin Operations. The three main ideas were:
 - o Electrical safety at work.
 - o Electrical safety at home.
 - o Have you Hugged an Electrician Today?
- Four “*Thinking Target Zero*” (TTZ) bulletins were published to convey important occupational, safety, health, and environmental messages:
 - o Environmental Management System (EMS) audits.
 - o Hydration.
 - o Travel safety tips.
 - o Heat stress prevention.
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
 - o Four Lessons Learned:
 - OPEXShare: INL-2019-0016 Kubota Safety – Read Operations Manuals to Avoid Incidents (Idaho National Laboratory).
 - OPEXShare: 24590-WTP-LL-MGT-17-0004 Permanent Plant Equipment Shipped Without Final Receipt Inspection (Bechtel Waste Treatment Plant).
 - OPEXShare: NREL-FY19-S-001-MAY Mindfulness in the Workplace – National Renewable Energy Laboratory (NREL).
 - OPEXShare: WRPS-JIT-19-001 Importance of Periodic Inspections of Long Standing Fixtures (Washington River Protection Solutions, LLC).
 - o Injuries.
 - o Weekly Ethics Moments.
 - o Vehicle Events.
 - o Safety Week 2019.
 - o Jacobs Daily Themes.
 - o Safe by Choice.
 - o Electrical Safety Month.
 - o Badge Replacement.
 - o Importance of Hydration.
 - o Summer Travel Season.
 - o Motorcycle Safety.
 - o Summer Safety Campaign 2019.
 - o Welcome Back! Safety Re-Focus.
 - o Transition Communication.
 - o Procedure Changes.

TARGET ZERO PERFORMANCE

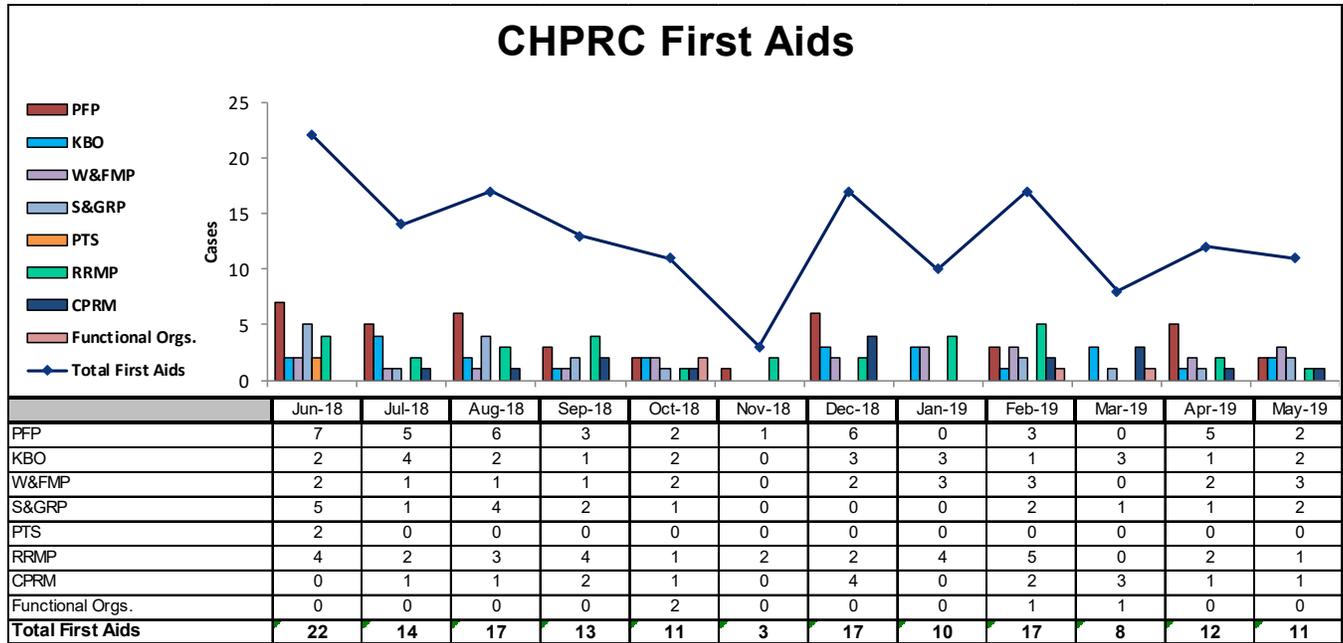
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.43 is based on a total of eight Recordable injuries. May had two 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. May had no reported DART cases.



First Aid Case Summary: CHPRC reported eleven first aid cases in May. The contributors were four sprains/strains/pains, three abrasions/bruises/contusions, two insect bites, one cut/laceration/puncture and one foreign body/irritation in the eye injury. There were three self-treat cases reported in May.

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

MAJOR ISSUES

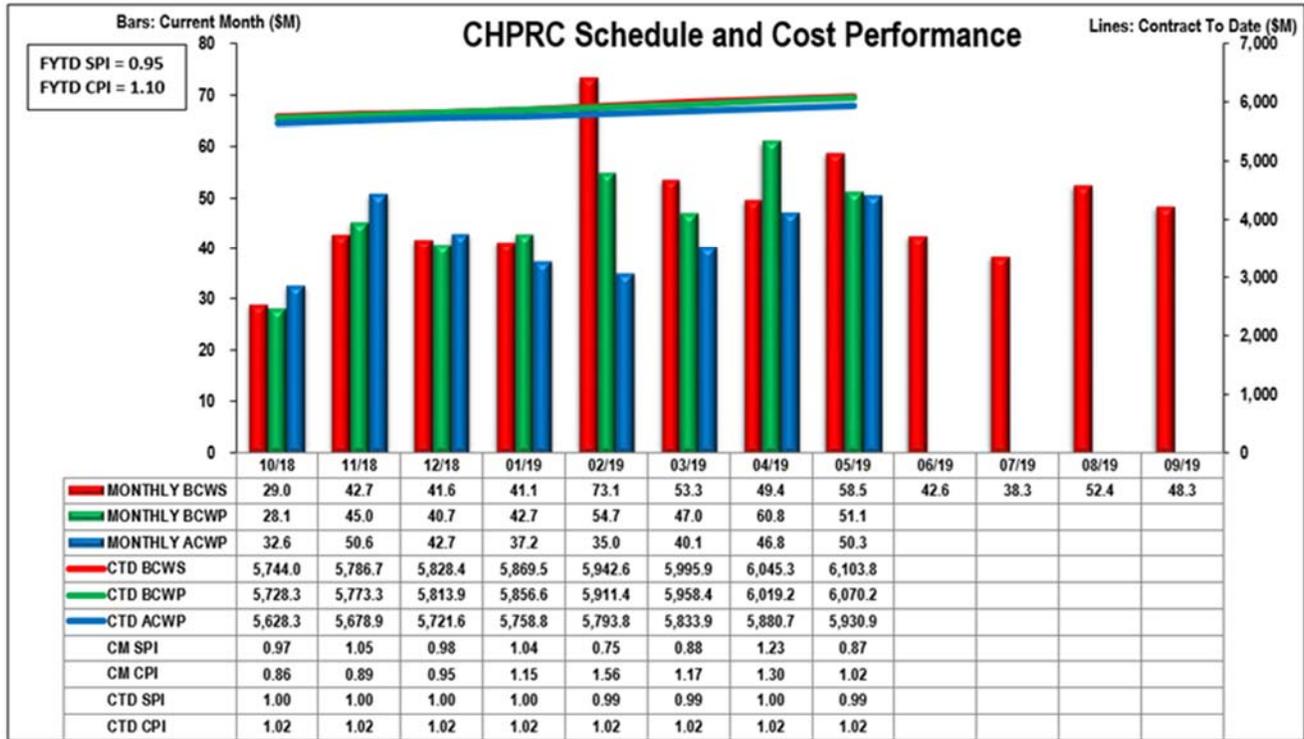
Projects

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

Project Services and Support

- No Major Issues to report for May.

EARNED VALUE MANAGEMENT



	\$M					\$M					\$M		
	Current Period					Contract to Date					Contract Period		
	Budgeted Cost		Actual Cost	Variance		Budgeted Cost		Actual Cost	Variance		BAC	EAC	Variance
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost			
RL-0011 - Nuclear Materials Stab & Disp PFP	7.8	5.0	6.2	(2.8)	(1.3)	1095.0	1085.7	1181.2	(9.3)	(95.5)	1,122.9	1,225.6	(102.7)
RL-0012 - SNF Stabilization & Disposition	1.8	2.0	1.5	0.2	0.5	754.8	753.9	724.3	(0.9)	29.6	761.1	730.0	31.1
RL-0013 - Solid Waste Stab & Disposition	16.4	16.2	12.9	(0.2)	3.3	1430.2	1427.8	1338.3	(2.4)	89.5	1,484.6	1,393.1	91.6
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	13.8	12.8	10.9	(1.0)	1.9	1602.1	1599.8	1543.2	(2.3)	56.6	1,645.0	1,583.7	61.3
RL-0040 - Nuc Fac D&D - Remainder	7.1	4.5	7.1	(2.6)	(2.6)	541.1	535.3	514.9	(5.8)	20.4	554.9	539.4	15.4
RL-0041 - Nuc Fac D&D - RC Closure Project	11.4	10.4	11.5	(1.0)	(1.1)	653.2	640.2	605.9	(13.0)	34.3	696.1	658.7	37.4
RL-0042 - Nuc Fac D&D - FFTF Project	0.2	0.2	0.2	0.0	(0.0)	27.5	27.5	23.1	0.0	4.4	28.1	24.1	4.0
Total	58.5	51.1	50.3	(7.5)	0.8	6,103.8	6,070.2	5,930.9	(33.6)	139.3	6,292.7	6,154.6	138.1

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

Performance Summary

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion of \$138.1 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$201.4 million. For May, the project was 12.7 percent behind schedule and 1.6 percent under planned cost. Contract to date; the project was 0.6 percent behind schedule and 2.3 percent under planned cost.

The current month negative schedule variance (SV) is primarily due to project breakdown structure (PBS) RL-0011 delayed completion of 235-Z low-risk demolition. The project is taking a deliberate approach to demolition and loadout activities. Performance taken on demolition completion of the vault was offset by budgeted cost of work scheduled created by the implementation of Baseline Change Request BCR-PRC-011C-19-002R0 to draw down RL contingency to address delays due to stop works, the loss of the Decontamination & Decommissioning (D&D) crews to other Hanford Contractor hiring actions, and impacts from adverse weather in February and early March. The impacts were planned as stand alone activities in April to early August to allow the necessary schedule extension, but were stasured as complete in April as the risk was experienced in FY2018.

Also contributing to the negative current month SV is PBS RL-0040 performing the stabilization of PUREX Tunnel 2 well ahead of the baselined schedule dates; therefore causing a negative variance due to lagging budgeted cost of work scheduled. In addition, the PUREX office trailer installation is behind schedule as the vendor backlog for delivery of the new trailers is approximately three months later than anticipated. The discovery of mercury on the seventh floor of the REDOX silo gallery continues to cause delays as air sampling continues and worker safety documentation is updated to account for the presence of mercury. Finally, the incorporation of industrial hygiene controls allowing the use of additional size reduction tools has slowed progress of combustible removals from the REDOX canyon.

The current month cost variance is within thresholds.

FUNDING ANALYSIS

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

PBS	Project	FY2019		Variance
		Projected Funding	Spending Forecast	
Estimate at Complete				
RL-0011	Nuclear Materials Stabilization and Disposition	70.0	65.2	4.8
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	17.0	3.1
RL-0012	15-D-401 Sludge Retrieval Project	11.3	0.0	11.3
RL-0013	Waste and Fuels Management Project	173.5	151.4	22.2
RL-0013	Management of Cesium and Strontium Capsules	6.6	3.3	3.3
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	115.7	17.3
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	76.6	5.2
RL-0041	Nuclear Facility D&D, River Corridor	148.3	132.6	15.8
RL-0042	Fast Flux Test Facility Closure	4.3	2.5	1.8
Total Estimate at Complete		649.0	564.2	84.7
Scope Pending Change Management				
RL-0013	Waste and Fuels Management Project	0.0	2.7	(2.7)
RL-0030	Soil, Groundwater and Vadose Zone Remediation	0.0	1.8	(1.8)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	2.5	(2.5)
RL-0041	Nuclear Facility D&D, River Corridor	0.0	0.3	(0.3)
Total Incremental Work Scope		0.0	7.2	(7.2)
Total Fiscal Year Spend Forecast				
RL-0011	Nuclear Materials Stabilization and Disposition	70.0	65.2	4.8
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	20.1	17.0	3.1
RL-0012	15-D-401 Sludge Retrieval Project	11.3	0.0	11.3
RL-0013	Waste and Fuels Management Project	173.5	154.0	19.5
RL-0013	Management of Cesium and Strontium Capsules	6.6	3.3	3.3
RL-0030	Soil, Groundwater and Vadose Zone Remediation	132.9	117.4	15.5
RL-0040	Nuclear Facility D&D, Remainder of Hanford	81.8	79.1	2.7
RL-0041	Nuclear Facility D&D, River Corridor	148.3	132.9	15.4
RL-0042	Fast Flux Test Facility Closure	4.3	2.5	1.8
Total		649.0	571.5	77.5

Funds/Variance Analysis

For May, there was no change to overall FY2019 projected funding of \$649 million. The increase in the FY2019 Spending Forecast is mainly due to the addition of buyback scope items not previously planned to be performed in FY2019.

BASELINE CHANGE REQUESTS

In May 2019, CHPRC approved and implemented one Baseline Change Request (BCR) into the performance measurement baseline (PMB) budget. This BCR did not impact the PMB. Each change request is identified in the tables below:

Change Request #	Title	PBS	Summary of Change
BCRA-PRC-19-015R0	<i>HPIC Updates May 2019</i>	000s, RL-0011, RL-0030, RL-0040, RL-0042	This BCR incorporated May FY2019 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

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

Undistributed Budget (UB) Activity

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

There was no change to UB in May.

Management Reserve Activity

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

There was no change to MR in May.

Fee Activity

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

There was no change to fee in May.

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 following tables (dollars in thousands).

May 2019 Summary of Changes (\$M)

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	FY2019	FY2020	Contract Period Total	Total PMB
April 2019 Estimate											
PMB	3,391.48	391.65	471.32	504.83	485.03	470.65	2,323.48	570.46	7.32	6,292.73	6,292.73
MR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.28	0.00	63.28	63.28
Fee	155.50	14.32	14.50	27.80	10.61	18.86	86.10	13.17	0.00	254.77	254.77
Total	3,546.98	405.98	485.82	532.63	495.64	489.51	2,409.58	646.90	7.32	6,610.78	6,610.78
May 2019 Change											
PMB											
<i>Change to PMB</i>	0	0	0	0	0	0	0	0	0	0	0
MR											
<i>Change to MR</i>	0	0	0	0	0	0	0	0	0	0	0
Fee											
<i>Change to Fee</i>	0	0	0	0	0	0	0	0	0	0	0
Total Change	0	0	0	0	0	0	0	0	0	0	0
May 2019 Estimate											
PMB	3,391.48	391.65	471.32	504.83	485.03	470.65	2,323.48	570.46	7.32	6,292.73	6,292.73
MR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.28	0.00	63.28	63.28
Fee	155.50	14.32	14.50	27.80	10.61	18.86	86.10	13.17	0.00	254.77	254.77
Total	3,546.98	405.98	485.82	532.63	495.64	489.51	2,409.58	646.90	7.32	6,610.78	6,610.78

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

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

SELF-PERFORMED WORK

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

Contract-to-Date Actual Awards & Mods (\$M) 10/1/2008 - 5/31/2019					
Reporting Category					
	\$ Value	%	Goal %		
SB	\$1,603.59	55.94%	49.3%	PRC clause H.20b small business requirement	
SDB	\$291.04	10.15%	8.2%	≥ 17% of CHPRC Contract Price performed by SB.	
SWOB	\$294.47	10.27%	7.5%	CHPRC Contract Value:	\$6,468.42
HUB	\$91.16	3.18%	2.2%	SB actual:	\$1,603.59
VOSB	\$245.22	8.55%	3.5%	SB Performed %:	24.79%
SDVO	\$154.83	5.40%	1.3%	PRC clause H.20a max self performed requirement	
NAB	\$82.24	2.87%	N/A	≤ 65% of Contract Price Self Performed	
Large	\$761.69	26.57%	N/A	CHPRC Contract Value:	\$6,468.42
UNK	\$0.01	0.00%	N/A	CHPRC Self Performed:	\$3,832.58
GOVT	\$5.15	0.18%	N/A	CHPRC Self Performed %:	59.25%
GOVT CONT	\$483.21	16.86%	N/A		
EDUCATION	\$0.17	0.01%	N/A		
NONPROFIT_	\$4.34	0.15%	N/A		
FOREIGN	\$8.62	0.30%	N/A		
Total	\$2,866.77	100.00%	N/A		

Notes:

1. Since the CHPRC contract award in October 2008, CHPRC has subcontracted more than \$2.8 billion in goods and services, with more than 55 percent going to small businesses. All subcontracting goals have been exceeded.
2. Approximately 91 percent of the total dollars arise from service and staffing contracts and contract amendments, with six percent of the remaining expenditures arising from PCard purchases and three percent from the balance in purchase orders for materials and equipment.
3. Data 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 locations. RL is the authorized shipper, acts as signatory on the shipping papers and ensures compliance with DOE Manual 460.2-1. RL arranges for Commercial Motor Vehicle Safety Alliance Level VI Vehicle Inspections and verifies that the government drivers meet the applicable Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or Transportation Safety Document requirements.	Ongoing.
J.12/C.2.3.6	PBS-13, 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.	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



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

May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The Plutonium Finishing Plant (PFP) team successfully completed the independent management assessment (MA) required prior to restart of higher-risk work. The assessment team was complimentary of the actions taken as the PFP team prepares to resume higher-risk demolition, and noted in its final report that “the actions taken to prepare to commence [the higher-risk] phase of the demolition work are completed and effective.” The PFP team also completed demolition of the vault and loaded out all associated debris. Thirteen containers of existing demolition debris and 117 containers of low-risk demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal. Set-up for demolition on remaining lower-risk portion of the Main Processing Facility is underway, beginning with Stairwell 2.

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	89.8 m ³
Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped	0	5,014 m ³
LLW/MLLW Shipped	910 m ³	19,027 m ³

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-PFP-OBJI-P1	Improve compliance, Environmental Management System (EMS) awareness, employee involvement	Four EMS presentations at minimum; involve one to two employees in compliance review; and facility walk-downs	9/30/19	80%

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	2	41	<p>5/10/2019 - Employee sustained a minor abrasion to his right shin area and a minor bump-like (abrasion) injury to their left shin area after walking into the extended outriggers of the portable light plant and falling to the ground. The employee was taken to HPM Corporation (HPMC) for evaluation and treatment, returned to work with no medical restrictions, and was instructed to follow the company protocol for wound protection. (25169)</p> <p>5/28/2019 - Employee suffered a minor ankle sprain after inadvertently stepping on a rock and rolling their left ankle when walking to a conex. Employee was taken to HPMC for evaluation/treatment and returned to work with no restrictions. (25179)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments:

- Successfully completed the MA of readiness to restart higher-risk demolition activities for which the U.S. Department of Energy Richland Office (RL) provided oversight. Some activities were observed by representatives from RL, the Defense Nuclear Facilities Safety Board and the regulatory agencies. The MA was designed to verify project team readiness to begin higher-risk demolition activities. For over two weeks, the independent assessment team interviewed dozens of PFP employees, observed an emergency drill and a waste-loading exercise, reviewed hundreds of documents, and evaluated implemented controls, and other activities. The assessment team was complimentary of the actions taken in preparation to resume higher-risk demolition. The team was encouraged by actions taken to enhance training, worker involvement, and monitoring. PFP will work closely with DOE and the regulators over the next several weeks to address the follow-on corrective actions identified by the MA, with a goal of gaining approval to begin the higher-risk work this summer.
- Shipped 130 containers of demolition debris to ERDF, completing loadout of vault debris.
- Prepared to begin demolition on Stairwell 2, including setting-up elevated water cannon placements.
- Continued removing high-efficiency particulate air filters from the ion exchange exhauster units and installing/calibrating gauges. The ion exchange exhauster units will be used in high-risk demolition activities.

Project Technical Services Support:

- Performed full up drill at PFP exercising the field teams in response to a simulated loss of contamination control and an injured worker to support the PFP MA for readiness to recommence higher-risk demolition. The PFP Facility Emergency Response Organization and decontamination and decommissioning (D&D) worker responses were commensurate with expectations and reflected the capability to appropriately respond to upset conditions and prioritize response actions.

MAJOR ISSUES

None currently identified.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0011/WBS-011.OA																			
Explanation of major changes to the project monthly stoplight chart: Risks PFP-P2-002, <i>Weather Impacts During 235-Z Debris Disposition</i> , and PFP-P-014, <i>Bump and Roll, Labor Assets Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit Employees Affecting Productivity</i> , were removed from the stoplight chart, but will continue to be monitored throughout the remainder of the risk life cycle.																			
Realized Risks (Risks that are currently impacting project cost/schedule)																			
No realized risks identified in <i>May</i> .																			
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
No critical risks identified in <i>May</i> .																			
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																			
No high risk threat values identified in <i>May</i> .																			
FY2019 Risk Triggers (Risk could be realized in FY2019)																			
PFP-P-004: Stop Work From Concerned Workers	Concerned workers result in a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project. Risk Handling Strategy: Accept Probability: Very Likely (>90%) Worst Case Impacts: \$0, 52 days			<p>Risk Trigger: 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; margin-top: 10px;"> <thead> <tr> <th style="width: 70%;">Mitigation action(s)</th> <th style="width: 15%;">FC Date</th> <th style="width: 15%;">%</th> </tr> </thead> <tbody> <tr> <td>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 <i>May</i>. Increased communication and worker involvement to avoid confusion and concern in an effort to minimize stop works has continued; stop works may impact the project schedule going forward.</p>	Mitigation action(s)	FC Date	%	Update communications as positions change.	Ongoing	N/A	Provide new maps, with entry/exit instructions when boundaries are revised.	Ongoing	N/A	Encourage additional worker involvement	Ongoing	N/A	Increase frequency of post-job reviews.	Ongoing	N/A
Mitigation action(s)	FC Date	%																	
Update communications as positions change.	Ongoing	N/A																	
Provide new maps, with entry/exit instructions when boundaries are revised.	Ongoing	N/A																	
Encourage additional worker involvement	Ongoing	N/A																	
Increase frequency of post-job reviews.	Ongoing	N/A																	

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

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled (BCWS)	Budgeted Cost of Work Performed (BCWP)	Actual Cost of Work Performed (ACWP)	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	7.8	5.0	6.2	(2.8)	-35.9%	(1.3)	-25.2%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Variance: (-\$2.8M/-35.9%)

The CM negative schedule variance is primarily attributed to delayed completion of 235-Z low-risk demolition. The project is taking a deliberate approach to demolition and loadout activities. Performance taken on demolition completion of the vault was offset by budgeted cost of work scheduled (BCWS) created by the implementation of Baseline Change Request BCR-PRC-011C-19-002R0 to draw down RL contingency to address delays due to stop works, the loss of the D&D crews to other Hanford Contractor (OHC) hiring actions, and impacts from adverse weather in February and early March. The impacts were planned as stand alone activities in April to early August to allow the necessary schedule extension, but were stauted as complete in April as the risk was experienced in FY2018.

CM Cost Variance: (-\$1.3M/-25.2%)

The CM negative cost variance is primarily attributed to the accruing of labor costs for lagging performance on demolition activities. Demolition of the remaining PFP structures have been slower than planned due to a deliberate rate of demolition and debris loadout being used, as well as the diversion of resources to support the MA to verify readiness to begin higher-risk demolition activities. A deliberate rate of demolition is appropriate to allow for proper sequencing and critical consideration of activities being performed.

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

WBS 011/ RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,095.0	1,085.7	1,181.2	(9.3)	-0.8%	(95.5)	-8.8%	1,122.9	1,225.6	44.4	(102.7)

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Variance: (-\$9.3M/-0.8%)

The CTD schedule variance is within threshold.

CTD Cost Variance: (-\$95.5M/-8.8%)

The negative CTD cost variance is primarily a result of 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 radiological control technicians (RCTs) and D&D workers assigned to PFP; additional resources to recover schedule from 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.

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

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

The negative cost variance is partially offset by using fewer breathing air suits (three suits per day versus five) and fewer hoses than originally planned for 242-Z entries. This is a result of fewer fieldwork team members being required to perform hands-on work in 242-Z due to the confined space. 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 were more efficient than originally planned (i.e., using powerful fans to assist with vertical fixative flow up the stack). 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 (VAC): (-\$102.7M/-9.1%)

The unfavorable 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, approximately 10,000 additional feet of asbestos was discovered 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 used to ready the 234-5Z Facility for demolition by September 2017 and unplanned work on the HDPE water loop contributed 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.

After a stop work was called due to the December 2017 contamination event, the estimate at completion (EAC) and VAC was adjusted to reflect the projected date to reach slab-on-grade in October 2019. The EAC is reflective of resumption activities, impacts of craft personnel awarded positions to Washington River Protection Solutions LLC, and revised demolition approach implementation.

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

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	FY2019		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	70.0	65.2	4.8
RL-0011 - Total	70.0	65.2	4.8

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

Fiscal year (FY) 2019 spending forecast for PBS RL-0011 is \$65.2 million for continuation of demolition activities to achieve slab-on-grade. Projected funding is \$70.0 million.

Critical Path Schedule

The PFP critical path schedule begins with completion of demolition of core stabilization zone (CSZ) 2.3 (including the stairwells), followed by the remaining sections of Zones 2, 3, 4 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 RL concurrence of the MA to resume high-risk demo is obtained. The 234-5Z demolition is projected to complete September 30, 2019. The 236-Z canyon demolition will then resume with completion scheduled for December 2, 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 late February 2020.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-083-00A	PFP Facility Transition and Selection Disposition Activities	9/30/2017		12/2/2019	Demolition on 234-5Z progressing – five week slip due to deliberate approach to demolition and attention to the MA for higher-risk activity resumption.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS / DECISIONS

DOE activities supporting approval for ancillary facility status change forms are in progress.

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Sludge Transport and Storage Container (STSC) 12, which was filled with Engineered Container (EC) sludge from the 105KW fuel storage basin in reporting month April, was shipped to T Plant on April 24, 2019. This was followed by filling STSCs 13 and 14 with EC sludge their shipment to T Plant on May 7, 2019, and May 20, 2019, respectively.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	1	20	5/2/2019 – An employee suffered a contusion on the right hip when a chair tipped over. The employee was examined and returned to work with no restrictions. (25166)
Near Misses	0	1	N/A

KEY ACCOMPLISHMENTS

100K Operations

- The 100K Area operations group maintained facilities in a safe and compliant condition. Crews continue to sort, characterize, and relocate/containerize the high-dose sludge material in the center bay.

KW Basin Sludge Removal

- The 100K Area operations group performed preventive maintenance and calibrations on both engineered container retrieval and transfer system (ECRTS) components and annex utility system components.
- STSC 12, which was filled with EC sludge from the 105KW fuel storage basin in reporting month April, was shipped T Plant on April 24, 2019. This was followed by filling STSCs 13 and 14 with EC sludge and their shipment to T Plant on May 7, 2019, and May 20, 2019, respectively.

MAJOR ISSUES

Issue:

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

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

Corrective Action:

Video inspections to estimate current volumes of each of the sludge ECs has been completed. Engineering personnel, completed evaluation of settled density values in EC-250, KE sludge, and final recommendations on the estimated number of STSCs to complete the sludge campaign was set at 20 to 25 vessels. For risk mitigation, the project is proceeding to procure material for two additional STSCs.

Status:

100K engineering personnel believe the sludge density is between the design basis density and the average archived sample density established in PNNL-27704. White Paper PRC-STP-01119 was developed and details the current engineering knowledge from the first 12 STSCs and makes projections for the number of STSCs that may be required to complete the sludge campaign. The White Paper has determined that 20 to 25 STSCs may be required to finish the campaign. Uncertainty remains due to the wide range of sample densities for the EC-260 material, the much lower observed inferred density, the inability to effectively monitor the volumetric removal from EC-260 as retrieval progresses, and because no sludge has been removed from EC-220 or EC-240 as of May 20, 2019.

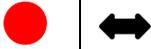
RISK MANAGEMENT STATUS

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: No major changes to the stoplight chart in May .																						
Realized Risks (Risks that are currently impacting project cost/schedule)																						
STP-152: Attrition, Acquisition, & Retention of Qualified Employees	Improving job markets/funding unainties or sitewide priorities results in competition for key resources, resulting in schedule delays to the project. Additionally, higher-than-anticipated attrition impacts project baseline costs. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$500K, 36 days	●	↑	<p>Risk Event: Due to the current job market, K Basin Operations (KBO) personnel have elected to leave the project to pursue other opportunities.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk Recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Monitor employee job satisfaction to evaluate/maintain morale.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Actively pursue filling open positions and train/qualify personnel.</td> <td>6/31/19</td> <td>95</td> </tr> <tr> <td>Establish enhanced work schedule. (KWD7442)</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in May. Since the initiation of sludge removal activities in June 2018, there has been greater than 25 percent attrition of qualified Nuclear Chemical Operators and radiological control technicians. The loss of qualified personnel has negatively impacted achieving sludge removal schedule goals. Both operations and radiation protection management have backfilled open positions. Training and qualification is largely complete at this point. The team has been able to work five days a week and holdovers, when necessary, using the benefits of a larger staff during the processing of STSCs 12 and 13.</p>	Risk Recovery action(s)	FC Date	%	Monitor employee job satisfaction to evaluate/maintain morale.	Ongoing	N/A	Actively pursue filling open positions and train/qualify personnel.	6/31/19	95	Establish enhanced work schedule. (KWD7442)	Complete	100						
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Actively pursue filling open positions and train/qualify personnel.	6/31/19	95																				
Establish enhanced work schedule. (KWD7442)	Complete	100																				
STP-153: Sludge Engineered Container End Point Criteria	ECF-100KR2-12-0040 Calculation for 105 KW Substructure Demolition Rubble Environmental Restoration Disposal Facility Compliance specifies the volume of residual sludge that is acceptable to leave in ECs following sludge removal operations. It is possible that the end point criteria cannot be achieved without extensive cost and schedule implications. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$200K, 64 days	●	↑	<p>Risk Triggers: During execution of the sludge removal campaign, personnel have come to understand that standard methods of sludge removal are not able to efficiently achieve EC sludge end point criteria.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk Recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Perform periodic video camera inspections throughout the sludge removal campaign to plan retrieval strategies.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Develop and submit Documented Safety Analysis/Technical Safety Requirement revisions that facilitate layering KW sludge (SCS-CON-210/220) with KE sludge (SCS-CON-240/250/260).</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Consider sampling heels in ECs to facilitate achieving end point criteria using more accurate source term.</td> <td>6/30/19</td> <td>5</td> </tr> <tr> <td>Use EC-250 as proof of process to ensure end point criteria can be achieved.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in May. A work package was executed to remove the EC-210 lid to facilitate characterization and/or sampling of the heel. This information confirmed that a substantial portion of the remaining 76 gallons must be retrieved to achieve end point in that EC. In parallel, engineering and nuclear safety personnel have prepared a safety document revision that will facilitate layering EC-210/220 sludge with KE sludge. This safety document revision is approved and is in the process of being implemented. A continuing discussion between 100K Closure, U.S. Department of Energy, Richland Operations Office (RL), and the U.S. Environmental Protection Agency is ongoing to redefine the end point criteria for the ECs in the basin. If this discussion is successful, the team will be able to consider EC-250 in its current state (approximately 35 gallons remaining) to be at end point criteria. Operations has removed the lid for EC-230 to aid in transferring the remaining sludge from that container as well. Following the discovery of debris in EC-230 in mid-May that are beyond the capability of the ECRTS system to transfer, the project made the decision to move on with transfer of material</p>	Risk Recovery action(s)	FC Date	%	Perform periodic video camera inspections throughout the sludge removal campaign to plan retrieval strategies.	Ongoing	N/A	Develop and submit Documented Safety Analysis/Technical Safety Requirement revisions that facilitate layering KW sludge (SCS-CON-210/220) with KE sludge (SCS-CON-240/250/260).	Complete	100	Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)	Complete	100	Consider sampling heels in ECs to facilitate achieving end point criteria using more accurate source term.	6/30/19	5	Use EC-250 as proof of process to ensure end point criteria can be achieved.	Complete	100
Risk Recovery action(s)	FC Date	%																				
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Remove EC-210 lid to facilitate characterization and sampling. (KWD8955)	Complete	100																				
Consider sampling heels in ECs to facilitate achieving end point criteria using more accurate source term.	6/30/19	5																				
Use EC-250 as proof of process to ensure end point criteria can be achieved.	Complete	100																				

Unmitigated Risk Impacts	Assessment		Comments																		
	Month	Trend																			
RL-0012/WBS-012																					
			from container 220. It is anticipated that one additional vessel will be required to reach end point in EC-230 following manual separation and retrieval of debris from EC-230.																		
<p>STP-156: Sludge Removal Campaign Impacted by Variations in Engineered Container Sludge Density/Volume</p>	<p>The actual mass of sludge stored in the 105KW Basin ECs is not consistent with the mass assumed in the SRP technical basis, resulting in cost and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$1,600K, 48 days</p>		<p>Risk Triggers: The actual sludge mass in the ECs (mass = density x volume = $\rho \cdot V$) is greater than the mass currently projected in source documents, resulting in the need for additional STSCs to remove and store the remaining sludge.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Complete visual inspections of sludge stored in ECs SCS-CON-210/220/230 (at a minimum) to assess volume information specified in technical basis documents.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Evaluate and implement feasible opportunities to more efficiently disposition remaining EC sludge. (KWD7442)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Complete bulk sludge removal from EC-250, which will facilitate establishment of KE Basin sludge density. (KWD6580)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Revisit Sludge Removal Project Basis Document HNF-SD-SNF-TI-015 R28, Spent Nuclear Fuel Project Technical Databook, Volume 2, Sludge, and HNF-41051 R13, STP Container and Settler Sludge Process Description and Material Balance based upon PNNL-27769, STP K Basin Sludge Sample Archive Status FY2018. Determine if document revisions are required to complete sludge removal campaign. (KWD9010)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Issue final sludge density evaluation, establishing total number of STSC necessary to complete sludge removal.(KWD9010)</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: Engineering personnel are reviewing SRP basis documents to determine how the baseline project assumptions were impacted by sludge density assumptions. After the final review of the documents and completion of visual inspections of sludge currently stored in ECs SCS-CON-210/220/230, set points were evaluated in February. It was determined that the set points for current loading will not change, however, the blending of EC-210/220 with EC-240/250/260 sludge is being added to the baseline document. Following the completion of EC-250, the densities of the sludge materials were re-evaluated and a projection of the number of STSCs required to complete the campaign was developed. This evaluation will continue to be updated as the campaign continues. Processing activities in May did not change the evaluation. The data book and other baseline documents may need to be updated for any additional sludge material that is added to the engineered containers.</p>	Risk Recovery action(s)	FC Date	%	Complete visual inspections of sludge stored in ECs SCS-CON-210/220/230 (at a minimum) to assess volume information specified in technical basis documents.	Complete	100	Evaluate and implement feasible opportunities to more efficiently disposition remaining EC sludge. (KWD7442)	Complete	100	Complete bulk sludge removal from EC-250, which will facilitate establishment of KE Basin sludge density. (KWD6580)	Complete	100	Revisit Sludge Removal Project Basis Document HNF-SD-SNF-TI-015 R28, Spent Nuclear Fuel Project Technical Databook, Volume 2, Sludge, and HNF-41051 R13, STP Container and Settler Sludge Process Description and Material Balance based upon PNNL-27769, STP K Basin Sludge Sample Archive Status FY2018. Determine if document revisions are required to complete sludge removal campaign. (KWD9010)	Complete	100	Issue final sludge density evaluation, establishing total number of STSC necessary to complete sludge removal.(KWD9010)	Complete	100
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Issue final sludge density evaluation, establishing total number of STSC necessary to complete sludge removal.(KWD9010)	Complete	100																			
<p>STP-156-C: Sludge Removal Campaign Extended Due to Discovery of High Dose Material</p>	<p>Additional high-dose “sludge-like” material is discovered on the 105KW Basin floor during 100K Closure Project characterization activities that is best dispositioned with the EC sludge waste stream. Adding this additional “sludge-like” material to the SRP campaign negatively impacts existing SRP cost and/or the schedule baseline.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Very Likely (>90%)</p> <p>Worst Case Impacts: \$500K, 24 days</p>		<p>Risk Triggers: Additional sludge may be discovered that must be put into ECs and processed with the balance of the EC sludge as 100K Closure Project personnel conduct characterization efforts in the 105KW Basin.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continue to monitor conditions identified by the baseline characterization efforts.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Collect and quantify the volume and weight of the high-dose material in the 105 KW Basin. (KWD90111)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90276)</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Complete floor surveys to identify any additional material that may need to be added to EC-230. (KWCH1120)</td> <td>7/18/2019</td> <td>25</td> </tr> </tbody> </table> <p>Mitigation Assessment: During May, 100K Closure personnel added (double barrel fuel canister) high-dose material collected from the center bay into EC-230 to be removed from the 105KW Basin via STSCs. Additional floor surveys are ongoing and may locate additional material that should be added to EC-230.</p>	Risk Recovery action(s)	FC Date	%	Continue to monitor conditions identified by the baseline characterization efforts.	Ongoing	N/A	Collect and quantify the volume and weight of the high-dose material in the 105 KW Basin. (KWD90111)	Complete	100	Update Sludge Campaign Documentation to disposition recently discovered high-dose material. (KWD90276)	Complete	100	Complete floor surveys to identify any additional material that may need to be added to EC-230. (KWCH1120)	7/18/2019	25			
Risk Recovery action(s)	FC Date	%																			
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Complete floor surveys to identify any additional material that may need to be added to EC-230. (KWCH1120)	7/18/2019	25																			
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																					
No critical risks identified in May.																					
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																					
No high threat value risks identified in May.																					
FY2019 Risk Triggers (Risk could be realized in FY2019)																					

Unmitigated Risk Impacts	Assessment		Comments																		
	Month	Trend																			
RL-0012/WBS-012																					
<p>STP-073-C: Processing Efficiency - Retrieval & Shipping</p> <p>The realized processing efficiency associated with sludge retrieval and shipping operations does not match the baseline plan.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$0K, 54 days</p>	●	↔	<p>Risk Triggers: Actual processing efficiency associated with sludge retrieval and shipping operations does not match baseline assumptions. This risk will continue in FY2019 during operations campaign.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish a production control center to facilitate maximum efficiency integrating SRP operations and maintenance activities.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Review operations and maintenance activities required to produce each sludge STSC and establish a "typical" schedule integrating all activities in the most efficient sequence possible.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Revise plan to establish the appropriate campaign schedule.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in May. Project personnel completed a revised plan to establish the appropriate campaign schedule, taking into account ion exchange module (IXM) change outs and performance of preventive maintenance activities. Additionally, KBO put the sludge removal campaign personnel on a five-day work week (minimum), effective February 2019. The team has recently initiated transfers from EC-260, and the material handling is different from previous ECs. The team will continue to monitor the efficiency associated with the sludge retrieval process.</p>	Mitigation action(s)	FC Date	%	Establish a production control center to facilitate maximum efficiency integrating SRP operations and maintenance activities.	Complete	100	Review operations and maintenance activities required to produce each sludge STSC and establish a "typical" schedule integrating all activities in the most efficient sequence possible.	Complete	100	Revise plan to establish the appropriate campaign schedule.	Complete	100						
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Revise plan to establish the appropriate campaign schedule.	Complete	100																			
<p>STP-108: STP Annex Equipment and ECRS/Ancillary System Reliability</p> <p>Required corrective maintenance on the STP annex and the ECRS equipment is higher than planned due to one-of-a-kind system design or sludge characteristics, resulting in cost and schedule impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$400K, 66 days</p>	●	↑	<p>Risk Triggers: Required corrective maintenance on the SRP and ancillary equipment is higher than planned.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct full-scale testing at the Maintenance and Storage Facility to determine baseline for Corrective Maintenance and Preventative Maintenance program.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>The project will provide spare parts for critical or long-lead components.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Develop PM activities prior to construction completion to optimize maintenance costs.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform reliability, availability, and maintainability analysis.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Modifications to the skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90076, 86, and 91)</td> <td>7/3/19</td> <td>75</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in May. Due to IXM system challenges (potential unavailability), an alternate water supply modification has been generated and hardware procured. Plans are to install this modification in the future to mitigate unavailability of IXM system impact on sludge removal.</p>	Mitigation action(s)	FC Date	%	Conduct full-scale testing at the Maintenance and Storage Facility to determine baseline for Corrective Maintenance and Preventative Maintenance program.	Complete	100	The project will provide spare parts for critical or long-lead components.	Complete	100	Develop PM activities prior to construction completion to optimize maintenance costs.	Complete	100	Perform reliability, availability, and maintainability analysis.	Complete	100	Modifications to the skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90076, 86, and 91)	7/3/19	75
Mitigation action(s)	FC Date	%																			
Conduct full-scale testing at the Maintenance and Storage Facility to determine baseline for Corrective Maintenance and Preventative Maintenance program.	Complete	100																			
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Modifications to the skimmer pump and IXM pump to accommodate an alternative IXM water source. (KWD90076, 86, and 91)	7/3/19	75																			
Unassigned Risks (Pending ownership of identified threats/opportunities)																					
No unassigned risks identified in May .																					

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	1.8	2.0	1.5	0.2	11.3%	0.5	26.4%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (+\$0.2M/+11.3%)

The variance is within reporting thresholds.

CM Cost Performance (+\$0.5M/+26.4%)

Sludge removal operations team shipped STSC 12, which was filled with EC sludge from the 105KW fuel storage basin in reporting month April, was shipped to T Plant on April 24, 2019. This was followed by filling STSCs 13 and 14 with EC sludge and their shipment to T Plant on May 7, 2019, and May 20, 2019, respectively. The loading and shipment of each of the 3 containers in approximately 2 weeks per container was a shorter duration than planned. This efficiency allowed for the recovery of some prior negative schedule variance, resulting in significant positive cost variance.

Contract-to-Date (CTD)

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	754.8	753.9	724.3	(0.9)	-0.1%	29.6	3.9%	761.1	730.0	5.7	31.1

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$0.9M/-0.1%)

The variance is within reporting thresholds.

CTD Cost Performance (+\$29.6M/+3.9%)

The variance is within reporting thresholds.

Variance at Completion (+\$31.1M/+4.1%)

The variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2019		Variance
	Projected Funding	Spending Forecast	
Expense – Spending Forecast	20.1	17.0	3.1
Incremental Scope Pending Change Management	0.0	0.0	0.0
Expense – Subtotal	20.1	17.0	3.1
Line Item (LI)	11.3	0.0	11.3
Incremental Scope Pending Change Management	0.0	0.0	0.0
LI – Subtotal	11.3	0.0	11.3
RL-0012 – Total	31.4	17.0	14.4

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

FY2019 funding for PBS RL-0012 is \$31.4 million. FY2019 funding aligns with the RL Integrated Priority List. The variance primarily reflects funding for line item work scope that was completed in FY2018.

Critical Path Schedule

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

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-176	Complete Sludge Removal	12/31/2019		09/18/2019	On Schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

None currently identified.

Section C

Solid Waste Stabilization and Disposition (RL-0013)

CH2MHILL
Plateau Remediation Company



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

May 2019
CHPRC-2019-05, 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 May reporting period, April 22 – May 26, 2019, Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. The River Risk Management Project operated the Environmental Restoration Disposal Facility (ERDF) and continued document preparation for the Integrated Disposal Facility (IDF) permits.

This month:

- At the Waste Encapsulation Storage Facility (WESF), the W-135 Management of the Cesium (Cs) and Strontium (Sr) Capsules project team has completed the final design for the Cask Storage System (CSS) and transfer of the equipment. Completed the supplemental thermal analysis required to reduce the Cs salt interface temperature within a loaded cask to 270 degrees Celsius or lower. The subcontractor is in the final process of incorporating CHPRC final design comments for the WESF modifications. Once transmitted, CHPRC will complete the final review, approval and issue the design documents. The draft of the statement of work (SOW) for capsule storage area (CSA) construction has been transmitted for internal review. The request for proposal (RFP) package for the construction of the Maintenance and Storage Facility (MASF) Cs/Sr capsule handling mockup facility was issued on May 16, 2019. Also at WESF, crews completed the transfer of the Tank (TK)-100 liquid to Effluent Treatment Facility (ETF) for treatment and final disposition, completing TK-100 work.
- The sludge receipt team continues to receive sludge transport and storage containers (STSC) from the 100K West Reactor Basin for interim storage at T Plant. STSC 12 was received on April 24, 2019, STSC 13 was received on May 7, 2019, and STSC 14 was received on May 20, 2019.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-WFMP-OBJ1-P1	Receive 10 STSC sludge shipments at T Plant.	T Plant Complex will receive 10 STSC sludge shipments.	9/30/2019	100%
19-EMS-WFMP-OBJ2-P1	Complete and issue the Preoperational Environmental CSA.	Perform sampling and analysis, if needed, as determined by DOE to support the preparation and issuance of the Preoperational Environmental Survey for the CSA. Complete and issue the Preoperational Environmental Survey Report for the CSA.	9/30/2019	100%
19-EMS-WFMP-OBJ3-P1	Complete the CSB Programmable Logic Controller (PLC) Upgrade Project to better avoid exceedance of the air operating permit limits.	Complete PLC Upgrade Project fieldwork. Complete the PLC Upgrade Project test report and final documentation.	9/30/2019	100%
19-ERDF-OBJ1-P1	Track maintenance recycling activities at ERDF.	Monitor and evaluate ERDF maintenance recycling activities for compliance with CHPRC procedures and complete annual review of recycling activities.	9/30/2019	56%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred (DART)	0	1*	*1 DART, PTS in support of RL-0013.
Total Recordable Injuries	0	1*	*1 Recordable Injury, PTS in support of RL-0013.
First Aid Cases	4	25	<p>5/2/2019 – Employee attempted to pull a heater toward them with their body improperly positioned and strained their lower back. Employee was taken to HPM Corporation (HPMC) for evaluation and was released back to work with no restrictions. (25164)</p> <p>5/7/2019 – Employee was walking when employee’s foot slipped off the edge of the sidewalk, causing employee to fall and scrape left knee. Employee was examined at HPMC and released back to work with no restrictions. (25167)</p> <p>5/16/2019 – Employee was handling a piece of equipment when the employee received a slight cut to the right finger, presumably due to sharp edge of the machined part. Employee received wound skin care and released back to work with no restrictions. (25175)</p> <p>5/20/2019 – Employee stood up from sitting position when the employee felt and heard a “pop” from left knee. Employee was examined at HPMC and given a knee brace and restricted to not walk/work on uneven surfaces until follow-up with HPMC provider. (25176)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- Continued detailed planning for the CHPRC Post Contract Baseline deliverable to U.S. Department of Energy (DOE) Richland Operations Office (RL) addressing fiscal years (FY) 2020, FY2021, and FY2022.
- Distributed final responses for the CSA security and preparedness and prevention addenda to the state of Washington Department of Ecology (Ecology). The revised documents include Ecology’s comments.
- Distributed the redline edits and comment responses for the Low Level Burial Grounds (LLBG) Green Islands Security addendum for joint RL review on May 22, 2019. The revised document incorporates Ecology’s comments.
- Completed implementation of the revised Washington Administrative Code (WAC) requirements for waste generators, including new hazard labeling requirements on April 28, 2019. This included issuance of procedure changes and completion of container labeling.

13.02 Capsule Storage & Disposition

- Completed two operational drills and one emergency preparedness drill at WESF.
- Continued canyon entries in support of the W-135 project to perform maintenance work on the 15-ton canyon crane. Completed block teardown and decontamination of load block.
- Completed the transfer of the TK-100 liquid to ETF for treatment and final disposition, completing TK-100 work.
- Completed 226-B laydown yard cleanup at WESF.
- Completed 55 preventative maintenance (PM) packages.

13.03 Canister Storage Building

- Completed one operational drill and one emergency preparedness drill at CSB.
- Completed multi-canister overpack (MCO) port seal testing with a vendor. The MCO port seal testing is to validate the number of cycles that the MCO port seals can be operated and meet the required leak tightness specification. Initiated engineering analysis of test data and report preparation.
- Completed 22 PM packages.

13.06 Transuranic Repackaging

- Completed repackaging of 63.7 cubic meters of transuranic mixed (TRUM) and transuranic (TRU) waste in May, for a total of 322.9 cubic meters fiscal year to date (FYTD).

M-091-52:

- Drafts of the contact-handled (CH)/remote handled retrieval engineering evaluation/cost analysis (EE/CA) and mission needs statement (CD-0) for CH processing have been transmitted to RL for review. These documents support closure of M-091-51-T02 and M-091-52-T03.

13.07 Waste Receiving and Processing (WRAP)

- Completed installation of the WRAP stack ladder platform.
- Initiated WRAP laydown area cleanup.
- Completed 271 surveillances and 18 PM packages.

13.08 T Plant

- Completed transfer of 1,700 gallons and 600 gallons from 2706TA sump to 225WA lift station.
- Completed Master Safeguards & Security Agreement/technical safety equipment revision 12A implementation that will allow receipt of STSCs with blended engineered container retrieval and transfer system contents.
- Initiated repair on stairs H3, H5, and H7.
- Completed installation of a new radio in the crane cab.
- Completed 499 surveillances and 25 PM packages.

Sludge Receipt

- Received STSC 12 on April 24, 2019, STSC 13 on May 7, 2019, and STSC 14 on May 20, 2019, from 105KW and placed them into interim storage in the T Plant Canyon.

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

- Completed re-lamping of outside light poles at Mixed Waste Trench (MWT) 31 and MWT 34.
- Completed 301 surveillances and 37 PM packages.
- Received 16 standard waste boxes from Perma-Fix Northwest (PFNW) into CWC in four shipments.
- Received two drums from Diversified Scientific Services, Inc. into CWC in one shipment.
- Shipped three Super 7As from CWC to PFNW in three shipments.

13.15 TRU Disposition

- Continuing enhancement of acceptable knowledge on TRU-waste streams. Completed the first four waste streams. The fifth waste stream is 70 percent complete, and the sixth waste stream is 90 percent complete.

13.16 Offsite Spent Nuclear Fuel Disposition

- Maintained coordination of offsite spent nuclear fuel disposition.

13.21 Mixed Waste Disposal Trenches

- Completed 220 surveillances.
- Received nine boxes from PFNW into MWT 31 in three shipments.

13.24 Management of Cesium and Strontium Capsules Project

- The subcontractor is in the final process of incorporating CHPRC final design comments for the WESF modifications. Once transmitted, CHPRC will complete the final review, approval, and issue the design documents.
- Completed the draft of the SOW for CSA construction and transmitted it for internal review.
- The RFP package for the construction of the MASF Cs/Sr capsule handling mockup facility was issued.

13.25 Capsules Interim Storage Operations

- Completed the final design for the CSS and transfer of the equipment.

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

- Received 14,949 tons of waste for disposal in May.
- Received 90,872 tons of waste for disposal FYTD.
- Received 152 shipments (2,109 tons) of Plutonium Finishing Plant waste using the new enhanced radiological controls during disposal operations.

13.12 Integrated Disposal Facility (IDF)

- Completed May monthly inspections.
- Continued annual calibrations.
- IDF Operational Readiness Resource Conservation and Recovery Act (RCRA) Permit Modifications.
 - Completed internal review and initiated comment resolution for RCRA Permit Addenda C, Process Information; Addenda H, Closure Plan; and Addenda B, Waste Analysis Plan, and the waste acceptance criteria to support IDF RCRA permit modifications.
 - Determined there is no need to revise the air operating permit.
 - Completed comment resolution of Addenda G, Training; Addenda K, Post-Closure; Addenda I, Inspection; and Addenda F, Preparedness and Prevention.
 - Initiated development of strategy with Environmental Program and Strategic Planning for obtaining an in-trench treatability variance for IDF.
 - Initiated the 90 percent design for construction of infrastructure.

Project Technical Services Support**T Plant West Face Exterior Stairs and Firestop Wall Repair**

- Completed firestop repair in the head end basement area.

CWC/WRAP and T Plant Roof Repair

- Mobilized the contractor.
- Commenced roof repair work to building 214T.
- Completed inspections to the 2404WB facility roof.

MWT 31 and 34 Survey

- Mobilized the contractor.
- Commenced topographical survey of trenches and surrounding area.

WESF Metal Shed and Kitchen Remodel

- Initiated engineering packages for electrical and shed foundation.

MAJOR ISSUES

Issue:

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

Corrective Action:

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

Status:

The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information as agreed in the permitting plan. Ecology's completeness review for the WESF permit modification request was received on February 5, 2018. Ecology's completeness review for the Capsule Interim Storage (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. On January 31, 2019, Ecology issued a completeness determination for the CSA permit application. Ecology determined that based on additional information submitted by the permittees, the permit application is complete. In conjunction with the letter, Ecology provided formal copies of the technical comments on the addenda. W&FMP personnel are working to resolve the technical comments. The Capsule Storage Area Final Design Report was provided to Ecology on May 2, 2019.

Issue:

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

Corrective Action:

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

Status:

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

Issue:

TK-100 is a collection tank located underground to the south of the 225B Building and collects miscellaneous contaminated or potentially contaminated waste liquids. TK-100 has an approximate capacity of 4,000 gallons. The volume of liquid contained in TK-100 at the time of identification of this issue was approximately 3,400 gallons. Recent sampling of TK-100 indicated a Cs-137 sample result higher than the acceptance criteria at the ETF. As a result, disposal of the tank contents via the normal route to the ETF via tanker truck may not be possible.

Corrective Action:

Determine the most cost effective path forward for disposal of the TK-100 contents.

Status:

The TK-100 contents has been transferred to the ETF via polar tanker truck. This activity is considered complete and the issue closed. This will no longer be reported as a major issue and will be removed from future reports.

Issue:

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

Corrective Action:

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

Status:

The vendor communication resulted in the need to evaluate the replacement of the gearbox gears due to a LL failure with a crane of similar construction/vintage. This evaluation may include performance of a non-destructive evaluation (NDE) of the various gearbox components. In parallel, procurement of replacement gearbox gears is in progress. W-135 Project facility preparation work has been re-sequenced.

Issue:

On August 14, 2018, notification was received (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 transmitted a response letter to RL in October 2018. CHPRC will revise the Hastelloy emissivity for the strontium cask and evaluate increasing the operating margin for the cesium casks. Results of the emissivity change will be incorporated into the final design and analysis of increasing the operating margin will be completed after the CSS final design has been approved.

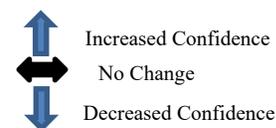
Status:

Analysis of the Hastelloy emissivity has been completed resulting in one additional strontium cask. Analysis for increasing the cesium thermal storage margin indicates three additional Cs casks will be required to reduce the salt-metal interface temperature to 269 degrees. CHPRC is preparing a letter to RL with the preliminary results and requesting direction to implement the new operating temperature.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0013/WBS-013										
Explanation of major changes to the project monthly stoplight chart: No major changes to the stoplight chart in May.										
Realized Risks (Risks that are currently impacting project cost/schedule)										
13-RCRA-REV9-001: RL-13 - Additional DWMUs	Unplanned Dangerous Waste Management Units (DWMUs) are added to the scope requiring additional document support, impacting the project in both cost and schedule. Risk Handling Strategy: Accept Probability: Very likely (>90%) Worst Case Impacts: \$0K, 48 days			<p>Risk Event: Ecology provided technical comments on permit addendum expanding the number of DWMUs.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Incorporating changes to respond to comments.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in May. The impacts associated with the realization of this risk are ongoing. As such, this risk will continue to be reported for visibility until it no longer poses a threat to the project.</p>	Risk Recovery Action(s)	FC Date	%	Incorporating changes to respond to comments.	Ongoing	N/A
Risk Recovery Action(s)	FC Date	%								
Incorporating changes to respond to comments.	Ongoing	N/A								
13-RCRA-REV9-003: RL-13 - Ecology Delays	Scope supported by Ecology is impacted by delays in Ecology review time that do not align with the Permit Management Schedule. This requires recovery actions to be taken by the project that results in schedule impacts. Risk Handling Strategy: Accept Probability: Very likely (>90%) Worst Case Impacts: \$0K, 96 days			<p>Risk Event: Ecology's review time is impacting the Permit Management Schedule.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in May. Preparing resources to respond to comments when they are received. The impacts associated with the realization of this risk are ongoing. As such, this risk will continue to be reported on for visibility until it no longer poses a threat to the project.</p>	Risk Recovery Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Risk Recovery Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
WSD-138: Regulatory document (closure plan with ecology) results in significant comments from the regulator	Significant comments from the regulator on closure plans submitted for approval results in non-approval of the permit or rework, causing schedule impacts to the project. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$0K, 96 days			<p>Risk Event: Eight closure plans were formally resubmitted to Ecology in August 2018 and November 2018. In January 2019, Ecology provided additional comments changing the closure strategy for several units.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in May. RL informed Ecology that additional document revisions would not be completed at this time. The impacts associated with the realization of this risk are ongoing. As such, this risk will continue to be reported on for visibility until it no longer poses a threat to the project.</p>	Risk Recovery Action(s)	FC Date	%	None identified at this time.	N/A	N/A
Risk Recovery Action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No critical risks identified in May.										
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0013/WBS-013																
WSD-013B: TRU Waste Volumes or Characteristics - Processing	TRU waste not identified in records or higher-than-planned volumes due to inaccurate records or unexpected soil contamination impacts TRU processing. This waste is derived from retrieval of waste; non-compliant newly generated waste received from generators; TRU waste that is determined to be low-level and requires further treatment; or more waste is generated than in the plan, resulting in unplanned in-scope cost impacts. Risk Handling Strategy: Accept Probability: Medium (26% to 74%) Worst Case Impacts: \$2 million, 0 day			<p>Risk Trigger Metric: A significant volume of newly generated waste is received or nonconforming waste results in the need for new capabilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. The destruction of two drums with oil from large box shipment TC158 was not performed at the offsite processing facility due to backlog. An exception to 0063 and a waste profile were approved to temporarily store the waste at CWC until the offsite facility is ready to treat the waste.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A						
Mitigation Action(s)	FC Date	%														
None identified at this time.	N/A	N/A														
WSD-097: Major Equipment Failure – T Plant	T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$3 million, 96 days			<p>Risk Trigger Metric: During planned facility operation activities, a suspected system component is discovered that requires attention or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC (September 30, 2019) contract.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Identify and procure critical spare parts for the T Plant crane.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Implement aggressive CM/PM program.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. The project has put into place mitigating strategies (i.e., aggressive surveillance and maintenance activities) to help reduce this risk. Mechanical maintenance on the canyon crane was completed in November. The annual electrical crane maintenance, including the camera cable, was completed in February. The canyon crane is currently operational and spare parts have been procured for most critical spares.</p>	Mitigation Action(s)	FC Date	%	Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A	Implement aggressive CM/PM program.	Ongoing	N/A			
Mitigation Action(s)	FC Date	%														
Identify and procure critical spare parts for the T Plant crane.	Ongoing	N/A														
Implement aggressive CM/PM program.	Ongoing	N/A														
WSD-136: CWC/WRAP Components Fail	CWC facilities and components may reach their end of life. These items will need to be replaced and/or repaired outside of planned funding profiles, resulting in cost impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$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>Conduct fieldwork for 2727W deactivation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Conducting doorframe replacements and electrical equipment repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. 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. Additional Fire Alarm Control Units spare parts were obtained from the deactivation of 2727W.</p>	Mitigation Action(s)	FC Date	%	Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A	Conduct fieldwork for 2727W deactivation.	Complete	100	Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A
Mitigation Action(s)	FC Date	%														
Floor repairs, Master Documented Safety Analysis (MDSA) container stacking requirements, replacement of exhaust fans.	Ongoing	N/A														
Conduct fieldwork for 2727W deactivation.	Complete	100														
Conducting doorframe replacements and electrical equipment repairs as necessary.	Ongoing	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0013/WBS-013																						
WSD-CSA-006: Ecology Temporary Authorization contingent on 90% Design for CSA RCRA Permit Application	Ecology will, as a pre-condition to approve the temporary authorization (TA) for CSA construction, require that the CSA 90 percent detailed design package to be incorporated into the CSA RCRA permit application (to issue for public comment), thereby delaying the TA and impacting the CSA construction schedule. Risk Handling Strategy: Accept Probability: Very Likely (>90%) Worst Case Impacts: \$0, 96 days			<p>Risk Trigger Metric: Ecology requires the 90 percent design package for the CSA to be completed prior to issuing the permit for public comment.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. The project received a determination of incompleteness on February 13, 2018, primarily associated with the need for additional design information. CHPRC/RL submitted supplemental design information for the WESF modifications and CSA to RL in May. Ecology has determined that the permit application is now complete. Ecology is reviewing the 90 percent design package that was submitted on May 2, 2019. CHPRC is currently resolving Ecology comments on the Part B permit application. CHPRC is preparing the Temporary Authorization to begin CSA construction ahead of the full permit approval since it will not be issued before planned start of CSA construction.</p>	Mitigation Action(s)	FC Date	%	None identified at this time.	N/A	N/A												
Mitigation Action(s)	FC Date	%																				
None identified at this time.	N/A	N/A																				
WSD-125: Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues	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. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$3 million, 0 day			<p>Risk Trigger Metric: Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procuring stainless steel 85-gallon over-packs for alternative storage of containers that show signs of degradation.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>FY2019 Over-packs planned: 200</td> <td>9/25/2019</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. The project continued to perform container surveillances in May to identify container and container cover abnormalities. RL authorized additional FY2019 TRU commercial repacking, allowing shipments to PFNW for repackaging to continue. The remaining containers will continue to require surveillance and enhanced monitoring.</p>	Mitigation Action(s)	FC Date	%	Perform daily/weekly waste container surveillances to identify container abnormalities.	Ongoing	N/A	Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.	Ongoing	N/A	Process waste packages at a rate funded by RL.	Ongoing	N/A	Procuring stainless steel 85-gallon over-packs for alternative storage of containers that show signs of degradation.	Complete	100	FY2019 Over-packs planned: 200	9/25/2019	0
Mitigation Action(s)	FC Date	%																				
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Process waste packages at a rate funded by RL.	Ongoing	N/A																				
Procuring stainless steel 85-gallon over-packs for alternative storage of containers that show signs of degradation.	Complete	100																				
FY2019 Over-packs planned: 200	9/25/2019	0																				
WSD-W135-19: Unexpected Contamination is Found in the WESF Facility	More contamination is found at WESF, resulting in the need to clean it up to reduce worker exposure or requiring more worker protection. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$2,000K, 32 days			<p>Risk Trigger Metric: During WESF preparations for equipment installation (in the G Cell, the canyon, or the truckport) contamination is found that requires decontamination. During equipment installation, contamination is encountered that requires cleanup (e.g. anchoring of equipment inside WESF causes release of contamination).</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Implement lessons learned.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Continuously utilize respiratory protection.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. Waste packaging in the canyon is substantially complete; however, waste removal is impacted by WESF canyon crane and truckport cover block weight issues. To date, no excessive contamination has been discovered in the canyon. Decontamination efforts in G Cell are complete.</p>	Mitigation Action(s)	FC Date	%	Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.	Ongoing	N/A	Implement lessons learned.	Ongoing	N/A	Continuously utilize respiratory protection.	Ongoing	N/A						
Mitigation Action(s)	FC Date	%																				
Hire additional supervisor and RADCON workers to remain in compliance with stringent rad controls.	Ongoing	N/A																				
Implement lessons learned.	Ongoing	N/A																				
Continuously utilize respiratory protection.	Ongoing	N/A																				

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
RL-0013/WBS-013																			
WSD-W135-31: Canyon Crane non-functional/not Serviceable	<p>The existing WESF crane was put back into limited usage for the W-130 Project; however, the crane is found to be unserviceable, cannot be repaired for use, or fails during the W-135 operational activities.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$300K, 96 days</p>	●	↔	<p>Risk Trigger Metric: The canyon crane fails during use or cannot be returned to service after maintenance.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure new crane hook and block.</td> <td>9/30/18</td> <td>100</td> </tr> <tr> <td>Perform preventive/corrective maintenance procedures (i.e. replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.</td> <td>9/30/19</td> <td>50</td> </tr> <tr> <td>Refurbish current crane block.</td> <td>9/30/20</td> <td>0</td> </tr> <tr> <td>Procure critical spares.</td> <td>9/30/21</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. Performance of the full annual preventive maintenance package is complete. As part of mitigation actions for the canyon crane capacity issue, the manufacturer was consulted to gain insight on any issues with this make/model of crane. Manufacturer does not have data on the WESF crane, but recommended inspection of the gears for stress fractures given crane history and usage. The project is pursuing parallel paths for detailed inspection and/or in-situ NDE testing of gears and full replacement of gears. A contract has been placed for technical support for the inspection to be conducted in June. Wire rope removal is complete; new wire rope installation is on hold pending completion of gear box activities. Decontamination of gear box is in progress. If full refurbishment of the crane is unsuccessful, replacement of the canyon crane as a like-for-like is not possible, as the original manufacturer is no longer in business. A similar replacement hook and block have been procured.</p>	Mitigation Action(s)	FC Date	%	Procure new crane hook and block.	9/30/18	100	Perform preventive/corrective maintenance procedures (i.e. replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.	9/30/19	50	Refurbish current crane block.	9/30/20	0	Procure critical spares.	9/30/21	0
Mitigation Action(s)	FC Date	%																	
Procure new crane hook and block.	9/30/18	100																	
Perform preventive/corrective maintenance procedures (i.e. replacement of the wire rope and hook) on the crane early to identify corrective maintenance issues.	9/30/19	50																	
Refurbish current crane block.	9/30/20	0																	
Procure critical spares.	9/30/21	0																	
WSD-CSS-002: Subcontractor Change Orders and Claims	<p>The CSS construction contractor submits excessive change orders and claims, resulting in schedule delays and increased subcontractor cost.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$2,900K, 24 days</p>	●	↔	<p>Risk Event: The CSS construction contractor will fabricate CSS equipment under a fixed price contract. If changes to the design are found to be necessary during fabrication, change orders may be submitted by the fabricator.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Bid award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure scope is understood and estimated correctly.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Scope of each task will be reviewed prior to initiation to ensure contractor is in alignment for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for face to face interface meetings.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No significant changes in May. CSS final design has been issued. The contractor is currently obtaining fixed price bids for fabrication, due in June. Contract awards will be made after submittal to CHPRC, review and approval process, and RL consent is obtained; planned for September. Fabrication of CSS equipment is not planned until FY2020.</p>	Risk Recovery Action(s)	FC Date	%	Bid award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure scope is understood and estimated correctly.	Complete	100	Scope of each task will be reviewed prior to initiation to ensure contractor is in alignment for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for face to face interface meetings.	Ongoing	N/A						
Risk Recovery Action(s)	FC Date	%																	
Bid award will be based on best value approach to allow selection of the best qualified contractor. Contractor selection will be handled by formal evaluation processes to ensure scope is understood and estimated correctly.	Complete	100																	
Scope of each task will be reviewed prior to initiation to ensure contractor is in alignment for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for face to face interface meetings.	Ongoing	N/A																	
WSD-CSS-011: Greater than Expected Comments on CSS Design are Received	<p>The CSS design receives more comments than originally expected, resulting in schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$600K, 48 days</p>	●	↑	<p>Risk Trigger Metric: CSS final design review comment resolution exceeds the time planned due to volume or difficulty in comments.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>CHPRC will provide recommendations for comment resolution, minimizing the effort to respond.</td> <td>4/30/19</td> <td>100</td> </tr> <tr> <td>CHPRC will work closely with NAC during comment resolution to ensure all comments are understood.</td> <td>4/30/19</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. The CSS final design has been issued. Some comments generated during the final design review necessitate additional analysis to resolve. These additional analyses are necessary for WESF DSA development and will be completed in parallel with analysis necessary to increase operational margin for cesium casks.</p>	Mitigation Action(s)	FC Date	%	CHPRC will provide recommendations for comment resolution, minimizing the effort to respond.	4/30/19	100	CHPRC will work closely with NAC during comment resolution to ensure all comments are understood.	4/30/19	100						
Mitigation Action(s)	FC Date	%																	
CHPRC will provide recommendations for comment resolution, minimizing the effort to respond.	4/30/19	100																	
CHPRC will work closely with NAC during comment resolution to ensure all comments are understood.	4/30/19	100																	
Unassigned Risks (Pending ownership of identified risks/opportunities)																			
No unassigned risks identified in May .																			

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	16.4	16.2	12.9	(0.3)	-1.5%	3.3	20.5%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$0.3M/-1.5%)

The CM schedule variance is within threshold.

CM Cost Performance (+\$3.3M/+20.5%)

The CM positive cost variance is a result of an accrual reversal from a prior period due to a duplicate accrual for the CSS final design subcontract. In addition, the thermal analysis effort was originally planned for three separate iterations to get to a 270 degree marker; however, the subcontract was able to reach a 270 degree temperature in one iteration, which resulted in a cost efficiency.

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	1,430.2	1,427.8	1,338.3	(2.4)	-0.2%	89.5	6.3%	1,484.6	1,393.1	54.8	91.6

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$2.4M/-0.2%)

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$89.5M/+6.3%)

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

Variance at Completion (+\$91.6M/+6.2%)

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

Contract Performance Report Formats are provided in Appendix A

FUNDS vs. SPEND FORECAST (\$M)

WBS 013/RL-0013	FY2019		Variance
	Projected Funding	Spending Forecast	
Waste Stabilization & Disposition	173.5	151.4	22.2
Management of Cesium and Strontium Capsules (Line Item)	6.6	3.3	3.3
Incremental Scope Pending Change Management	0.0	2.7	(2.7)
RL-0013 – Total	180.1	157.3	22.8

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The FY2019 projected funding level for PBS RL-0013 of \$180.1 million is based on the RL integrated priority list. The FY spending forecast of \$157.3 million reflects FYTD efficiencies and the current cost projection as of May work to be complete in FY2019.

Critical Path Schedule

Critical path analysis will be provided upon request.

MILESTONE STATUS

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-53	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste	5/31/2019		5/31/2019	Negotiation extended.

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 compliance with DOE Manual 460.2-1. RL arranges for Commercial Motor Vehicle Safety Alliance Level VI vehicle inspections and verifies that the government drivers meet the applicable DOT Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or treatment, storage, and disposal requirements.	Ongoing
J.12/C.2.3.6	PBS-RL-0013, Transuranic Waste Certification	WIPP provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable, and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office.	No WIPP shipments are planned within the remaining contract period of performance.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
CSB – Obtain RL DSA Approval	1/31/2018 (A)	7/11/2019
CSA CD2/3 – RL: Review/Approve PDSA (1 st FY)	6/13/2019	8/25/2019
DOE Review IDF DSA	6/24/2019	8/20/2019
DOE Final IDF DSA Review and SER Prep	9/3/2019	9/30/2019

Section D

Soil and Groundwater Remediation Project (RL-0030)

CH2MHILL
Plateau Remediation Company



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

M. A. Wright
Vice President for
Project Technical
Services

May 2019
CHPRC-2019-05, 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 May 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	27.6	208.6	1.9	19.1						
HX P&T	21.8	174.4	1.9	16.7						
KR-4 P&T	11.9	88.6	0.4	1.1						
KW P&T	11.2	93.1	0.9	3.9						
KX P&T	40.4	310.3	2.5	17.8						
200 West P&T	96.3	716.5	7.1	60.3	171	1,327	1.7x10 ¹¹	1.42x10 ¹²	8.5	56.6
Combined	209.2	1,591.5	14.7	118.9	171	1,327	1.7x10¹¹	1.42x10¹²	8.5	56.6
FY2019 KPG	--	1,800.0	--	N/A	--	N/A	--	N/A	--	N/A

Well Drilling Completion by Area*	FY2019 Planned	Current Calendar Month	FY2019 Cumulative
100-KR-4	2	0	2
100-HR-3	10	4	10
200-BP-5	4	0	0
200-UP-1	3	0	0
200-ZP-1	5	0	1
M-24 Milestone	5	0	0
100-F/1U	6	0	0
Total Wells	35	4	13
Site Wide Boreholes	9	0	9

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

EMS Objectives and Target Status

Objective Action Plan #	Objective	Due Date	Status
19-EMS-SGRP-OBJ1-P1	Reduce adverse environmental impact to health and the environment by monitoring and confirming low-carbon tetrachloride emissions at the 200 West P&T Facility. Evaluate treated off-gas analytical results from compliance sampling and process sampling each quarter.	7/31/2019	75%
19-EMS-SGRP-OBJ2-P1	Installation and testing of a high-density polyethylene (HDPE) pipeline between Modular Storage Units (MSU) and the 200 West P&T. Objective will eliminate the need to truck the MSU water to the P&T and thereby reduce greenhouse gas emissions and other waste production from vehicle use.	12/31/2018	100%
19-EMS-SGRP-OBJ3-P1	Use of electronically completed Groundwater Sampling Reports (GSR) in FLEDGE 3.0. This will lead to a reduction in paper use and waste through completion and record storage of GSRs electronically.	9/30/2019	90%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	2	3	<p>5/8/2019 – Employee was replacing plastic piping with stainless steel. A piece of debris got into employee's eye. Employee was referred by HPM Corporation (HPMC) to a private doctor, where the fragment was removed by a specialized professional and antibiotic eye drops were prescribed. (25170)</p> <p>5/29/2019 – Employee opened a metal grating from a spill container when he experienced a burning sensation in the eye. Employee was referred by HPMC to a private doctor, who prescribed eye drops. (25183)</p>
First Aid Cases	2	19	<p>5/28/2019 – Nuclear Chemical Operator (NCO) was seated in front of a valve at the KW P&T. The employee leaned forward to reach down to grab a sampling bottle and struck their head on the t-handle of the valve. The NCO sustained a minor abrasion near the hairline of the left side of their forehead. The NCO reported the event and photographs were taken of the area and injury. The employee was taken to HPMC and then released to work without restrictions. (25181)</p> <p>*5/29/2019 – While walking from a personal car to a lunch trailer, employee stopped to allow traffic to pass. When a car drove by, debris went into the right eye of employee. Employee was taken to HPMC and was referred to an eye clinic. After evaluation from eye clinic, employee was restricted from work until May 30, 2019, with a scratched cornea. Employee was released to work without restrictions on May 30, 2019, by eye clinic and HPMC. *PTS in support of RL-30 (25182)</p>
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Strategic Integration

- Initiated cumulative impacts evaluation (CIE) demonstration model runs using the new production computing system (Gaia). The demonstration model run outputs will be used to estimate the cumulative impacts in groundwater for two waste site disposition scenarios (action case and no further action case) and provide a CIE informational briefing to RL at the end of fiscal year (FY) 2019.
- Environmental Program & Strategic Planning submitted the Cumulative Impact Evaluation Technical Approach Document (DOE/RL-2018-69, Draft A) to RL for review and delivery to EPA and Ecology.

River Corridor**300-FF-5 Operable Unit (OU)**

- Issued the report titled “Sampling Results for Unplanned Release of Groundwater during Uranium Sequestration Stage B Operations in the 300-FF-5 OU” (SGW-63235) on May 9, 2019. This report summarizes the results of the soil sampling to investigate the unplanned release. No further action is required to address the unplanned release.

100-BC-5 OU

- Provided the Draft Revision 0, Proposed Plan (PP) to RL on April 30, 2019.
- RL forwarded the Draft Revision 0, PP to the local Environmental Protection Agency (EPA) office on April 30, 2019, for delivery to EPA Headquarters (HQ).

100-FR-3 OU

- Received cultural resource clearance for the installation, operation, sampling, maintenance and decommissioning of groundwater wells, associated pads and access for the 100-FR-3 drilling campaign on May 20, 2019, which will allow drilling to commence.

100-HR-3 OU

- Well development was completed at four 100-HR-3 OU wells, completing the FY2019 10-well drilling campaign.
- Completed the Key Performance Goal to “Reduce the 100-HR-3 chromium plume by 10 percent” on May 23, 2016. Comparing the 2017 and 2018 groundwater plumes resulted in a plume size reduction of approximately 11.6 percent.

100-KR-4 OU

- Provided the Feasibility Study (FS) for the 100-KR-1, 100-KR-2, and 100-KR-4 Operable Units, Decisional Draft, to RL for review on May 13, 2019.

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

- Completed drilling of monitoring well 299-E28-34 on May 21, 2019.

200-UP-1 OU

- Completed drilling of monitoring well 299-W19-131 on May 20, 2019.

200-ZP-1 OU

- Completed construction of monitoring well 699-46-61 on April 23, 2019.
- Completed drilling of extraction well 699-48-70 and monitoring well 699-44-70B on May 14, 2019.
- Briefed state of Washington Department of Ecology (Ecology) on 200-ZP-1 Remedy Update and Optimization on May 22, 2019. The purpose was to introduce Ecology to the 200-ZP-1 record of decision modification approach, which proposes the development and implementation of an Optimization Test Plan for bypassing fluidized bed reactors/membrane bio-reactors for nitrate treatment to accelerate the removal of carbon tetrachloride and increase the current treatment capacity by adding an additional air stripper tower and optimizing the well network.

200-EA-1 OU

- Resolved polychlorinated biphenyl (PCB)/congener issue with Ecology on May 16, 2019. The members of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) agreed to test for congeners if PCB analysis by EPA method 8082 are above the practical quantification limit.
- Resolved the Central Plateau recharge issue on May 16, 2019. The members of the Tri-Party Agreement agreed to maintain the current long-term infiltration rate of 4 mm/yr.

Central Plateau Closure Plans

- Received Ecology concurrence to proceed with developing the 216-S-10 Pond and Ditch Closure Plan based on storyboard review on April 30, 2019.
- Received Ecology concurrence to proceed with developing the 216-B-63 Ditch Closure Plan based on storyboard review on May 14, 2019.

Groundwater Sciences

- Certified and delivered to RL the Engineering Evaluation Reports for 216-A-29 Ditch, and 216-A-37-1.

Project Technical Services Support

- Training and Procedures worked with project subject matter experts to update well inspection criteria in accordance with Washington Administrative Code and new Resource Conservation and Recovery Act permitting requirements.
- Project Delivery
 - Commenced work package planning activities for 100-HR-3 OU wells 699-97-47-C and 199-H1-12.
 - 699-48-70/699-47-78B
 - Completed layout and bonding of 699-48-70 high density polyethylene (HDPE) pipe up to tie-in point.
 - Completed equipment installation in Extraction Transfer Building 1 for 699-48-70 up to tie-in point (80 percent complete).
 - Commenced layout and bonding of 699-47-78B well HDPE pipe up to tie-in point (100 percent complete).
 - Initiated and completed mobilization of well pad racks/eco blocks for 699-47-78B up to tie-in point.
 - Completed 699-47-78B well weather head installation to disconnect box.
 - Electrical Utilities completed utility tie-in work for 699-47-78B well.
 - Initiated and completed pulling of Beldon cable for 699-47-78B up to tie-in point.
 - Greenfield work is 90 percent complete for permanent power for Mobile Office 651.

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

- Operated the 200 West P&T at an average of 2,157 gallons per minute (gpm) in May.

100 Area P&Ts

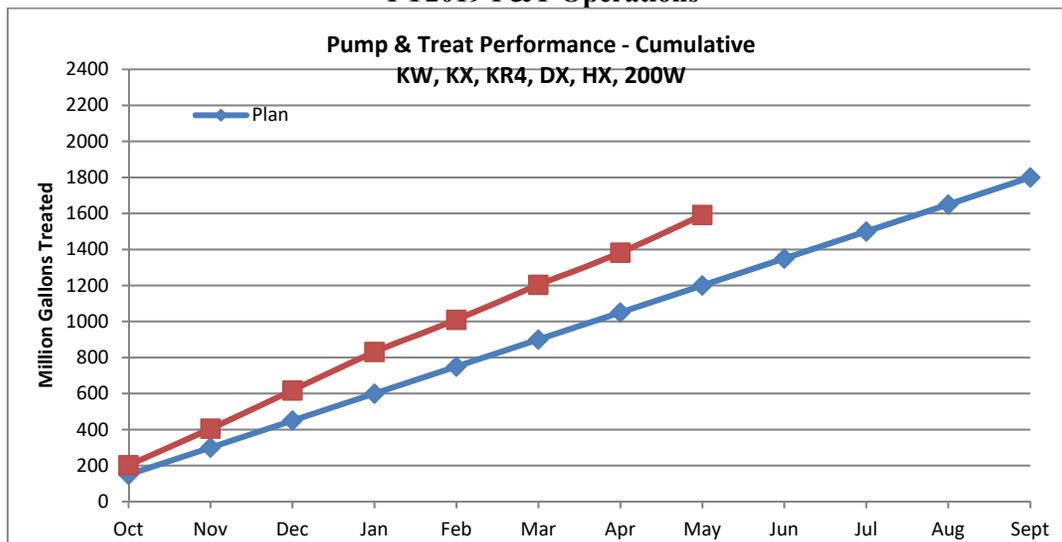
- Operated the DX P&T at 619 gpm, below the facility capacity of 775 gpm.
 - Completed operations acceptance testing of injection wells 199-H4-82 and 199-H1-5.
- Operated the KR-4 P&T at 266 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 252 gpm, below the facility capacity of 330 gpm.
- Operated the KX P&T at 904 gpm, above the facility capacity of 900 gpm.

- Operated the HX P&T at 489 gpm, below the facility capacity of 900 gpm.
 - o Completed stainless steel piping upgrade of the feed pump discharge header.

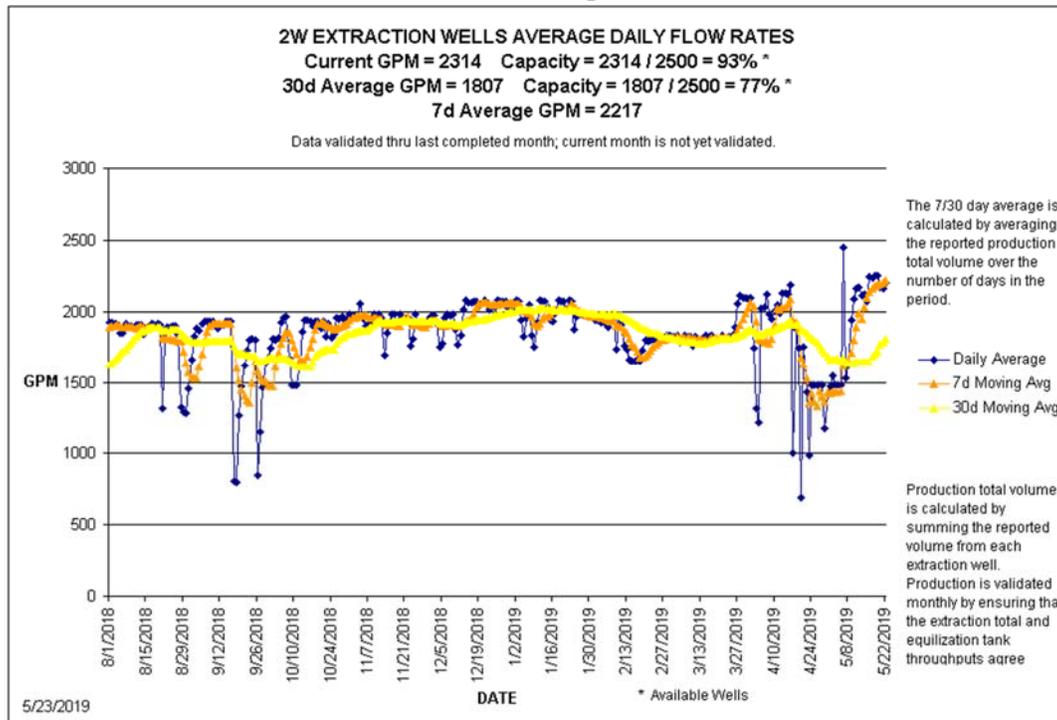
Groundwater P&T Facilities

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

FY2019 P&T Operations



200 West P&T Operations



MAJOR ISSUES

Issue:

On March 7, 2019, EPA notified RL that EPA HQ requires a review of the Draft Revision 0, 100-BC-5 OU PP prior to the initiation of the public comment period. This requirement was not included in the FY2019 planning assumptions because an EPA HQ review has not been historically required. EPA HQ’s review will delay completion of the PP and may prevent achieving the 2019 Key Performance Goal (KPG), *Initiate 100-BC-5 Proposed Plan Public Review*.

Corrective Action:

The unplanned EPA HQ review is outside of CHPRC control. CHPRC will maintain contact with RL and EPA to monitor progress of EPA HQ review of the document, and evaluate and report impacts to the project.

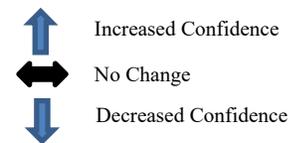
Status:

RL transmitted the Draft Revision 0, PP to the local EPA on April 30, 2019, for a 90 calendar day review period by EPA HQ. The 90 calendar day review period is not formally mandated by EPA, but rather, was a duration agreed to by RL and the local EPA as a means to track/monitor this activity. The local EPA is scheduled to provide a summary briefing of the PP to EPA HQ on June 28, 2019.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
Explanation of major changes to the project monthly spotlight chart:										
No major changes in May.										
Realized Risks (Risks that are currently impacting project cost/schedule)										
No realized risks identified in May.										
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
SGW-BC5-06DOE: BC5 – Regulator Delays Impact KPG	Completion of the PP is delayed as a result of an extended regulator review leading to schedule delays that will prevent completion of RL’s KPG Initiate 100-BC-5 Proposed Plan Public Review.	●	↔	<p>Risk Triggers: EPA HQ review of Draft Revision 0 PP is extended beyond the 75-day review calendar.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Mitigation action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">None identified at this time.</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: Although actions are in place to maintain close contact with RL and EPA to monitor progress of the EPA HQ review, CHPRC’s position is that this risk is out of CHPRC’s ability to manage; therefore, this risk has been transferred to RL for evaluation and monitoring.</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								
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)										

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0030/WBS-030										
SGW-BC5-01: BC5 – Greater Than Expected Comments from RL or Regulators	Comments from RL and/or regulators on CERCLA documents submitted for review/approval are excessive, need multiple rounds of comment resolution, and are global in nature, causing both cost and schedule impacts to the project. Risk Handling Strategy: Accept Probability: Very Likely (>90%) Worst Case Impacts: \$30K, 64 days		Risk Triggers: Additional rounds of comments are required to support completion of CERCLA documentation.							
			<table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td colspan="3">None identified at this time.</td> </tr> </tbody> </table>		Mitigation action(s)	FC Date	%	None identified at this time.		
			Mitigation action(s)	FC Date	%					
None identified at this time.										
Mitigation Assessment: No major changes in May . Due to additional review of the PP by EPA HQ, CHPRC will be required to perform, at a minimum, one additional round of comment incorporation. The extent of impact associated with this additional round of comment incorporation is yet to be determined, as CHPRC will not receive comments from EPA HQ until late summer (August FY2019). Once comments are received, this risk may be elevated to the realized risk section.										
FY2019 Risk Triggers (Risk could be realized in FY2019)										
No FY2019 risk triggers identified in May .										
Unassigned Risks (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in May .										

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

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	13.8	12.8	10.9	(1.0)	(7.2%)	1.9	15.1%

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$1.0M/-7.2%)

Primary drivers for the negative current period schedule variance (SV) include:

- Construction activities supporting the 100-KR-4 soil-flushing project and P&T optimization well realignment were performed ahead of schedule. Early completion of other S&GW projects provided for resources to be available ahead of plan. The SV is now returning to zero.
- Design changes for the hypochlorite injection system eliminated the need for several activities that were planned to be performed in May. The project expects those activities will be removed from the performance measurement baseline with FY2019 definitization.
- The selected subcontractor for the M-24-00 five-well campaign submitted an amended drilling schedule with a later start date than planned (for their convenience), resulting in the delay of subcontractor mobilization and initiation of drilling. Schedule will be recovered by the end of the FY.
- Drilling of three 200-UP-1 performance monitoring wells has been delayed due to the subcontractor’s lack of available qualified personnel. This has resulted in the campaign being performed with one drill rig instead of two, as was submitted in the proposal, causing drilling to progress slower than planned.
- Activities completing the 200-ZP-1 Focused FS have been deferred to allow time for collection of additional information needed to complete the FS, which is expected to recommence in FY2022-2024.

- The procurement process for the 200-ZP-1 drilling subcontract was delayed due to limited subcontract interest in the subcontract award. The campaign will recover schedule by the end of the FY.

The negative schedule variances described above have been offset, in part, by:

- All of this year's water level measurements (in wells) were completed in May due to optimal river stage, causing positive schedule variance.
- 100-HR-3 P&T optimization well realignment activities are continuing to progress ahead of schedule as a result of work starting sooner than planned, made possible by the early completion of fabrication of mechanical racks and the re-sequencing of fieldwork between the OUs.

CM Cost Performance (+\$1.9M/+15.1%)

Primary drivers to the positive current period cost variance include:

- 100-HR-3 well realignment locations were finalized at closer locations than planned, allowing the project to use existing racks, piping, and cable, and eliminating the need for road crossings, resulting in a reduction in required labor, material, and subcontractor costs.
- The 100K P&T facilities have required less preventative and corrective maintenance than planned, allowing shared operations crews to be diverted to support repairs and upgrades at other P&T facilities.
- The sample analyses suites required for the routine sampling performed in May were less costly than the average sample costs planned in the baseline.
- The 200-UP-1 firm-fixed-price drilling subcontract was awarded at much less than planned due to competitive procurement process, resulting in cost savings.
- The 200-ZP-1 drilling campaigns were also competitively bid and awarded less than planned, and the efficient progress of the campaigns have resulted in reduction to both labor and geosciences subcontract support during drilling.
- Well maintenance required less roads and grounds maintenance to access this year's well locations due to the better than anticipated condition of the roads.
- The 200W P&T Facility experienced cost underrun in preventative, corrective maintenance, and operations accounts due to prior year modifications to the plant, which have improved the reliability of the facility and have driven down operations and maintenance costs.
- Less Mission Support Alliance, LLC support for training and fleet vehicle rentals was required in May than was planned.

Contract-to-Date (CTD)

(\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,602.1	1,599.8	1,543.2	(2.3)	(0.1%)	56.6	3.5%	1,645.0	1,583.7	40.5	61.3

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$2.3M/-0.1%)

The CTD negative schedule variance is within reporting thresholds.

CTD Cost Performance (+\$56.6M/+3.5%)

The CTD positive cost variance is within reporting thresholds.

Variance at Completion (+\$61.3M/+3.7%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST

(\$M)

RL-0030 Soil and Groundwater Remediation	FY2019		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	132.9	115.7	17.3
Incremental Scope Change Pending Change Management	0.0	1.8	(1.8)
RL-0030 - Total	132.9	117.4	15.5

Numbers are rounded to the nearest \$0.1 million

Funds/Variance Analysis

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

Critical Path 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-024-58L	Initiate Discussions of Well Commitments	6/1/2019	5/15/2019 (A)		Completed
M-024-70-T01	Conclude Discussions of Well Commitments Initiated Under M-024-58	8/1/2019	5/20/2019 (A)		Completed
M-024-70	Complete the Construction of All Wells Listed for CY19 and Before	12/31/2019	5/2/2019 (A)		Completed

Milestones at Risk					
M-015-93C	Initiate Characterization Field Work for 200-SW-2 Operable Unit Landfills	9/30/2018		TBD	In Dispute
M-015-98	Complete Remedial Investigation of U Plant Related Waste Sites located in 200-WA-1	6/30/2019		TBD	At Risk. Limited work funded in FY2019 (Electrical resistivity tomography surveys only).
M-085-70	Submit to Ecology a Remedial Investigation/Feasibility Study WP for 200-CB-1	9/30/2019		TBD	At Risk. Work not funded in FY2019.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review of 100-NR-2 RI/FS Decisional Draft B	3/4/2019 (A)	6/28/2019
RL Review of Biomobilization and Biointrusion Sampling and Analysis Plan (SAP) Decisional Draft	3/7/2019 (A)	6/20/2019
RL Review 200-BP-5 Groundwater Monitoring Plan Rev 1 Decisional Draft	4/12/2019 (A)	6/13/2019
RL Review 200-ZP-1 Remedial Design Remedial Action Work Plan (RD/RAWP) Rev 1	4/22/2019 (A)	5/30/2019
RL Review of 100-KR-4 FS Decisional Draft B	5/10/2019 (A)	6/8/2019
RL Review 100-KR-4 FY2020 Drilling SAP Addendum Draft	5/27/2019	6/25/2019

Description	CHPRC Delivery Date	Expected RL Due Date
RL Transmit 216-B-3 Pond Engineering Evaluation Report Revision 0 to Ecology	5/28/2019	6/10/2019
RL Review 100-KR-4 Explanation of Significant (ESD) Decisional Draft	5/28/2019	5/31/2019
RL Submit 100-HR-3 SAP Draft A to Ecology for Review	5/31/2019	6/17/2019
RL Transmit 200-UP-1 Performance Measurement Plan Draft A Revision 1 to Regulators for Review	6/3/2019	6/9/2019
RL Transmit Rev 0 216-A-29 Ditch Engineering Evaluation Report to Ecology	6/11/2019	6/24/2019
RL Review 100-NR Biovent Characterization SAP Decisional Draft	6/11/2019	7/10/2019
RL Review 100-KR-4 Drilling SAP Decisional Draft	6/11/2019	7/10/2019
RL Transmit 200-UP-1 Cr Remedy Remedial Design Investigation Report Draft Revision 0 to Regulators for Check Review	6/12/2019	6/26/2019
RL Review 100-NR Biovent Characterization Cultural Resource Review (CRR)	6/12/2019	6/17/2019
RL Review 100-HR-3 FY20 Drilling SAP Addendum Revision A	6/21/2019	7/20/2019
RL Transmit 100-NR Biovent Characterization Revised CRR to SHPO/Tribes	6/22/2019	6/25/2019
RL Review 100-KR-4 Waste Management Plan Draft	6/25/2019	7/24/2019
RL Submit 100-BC-5 RI/FS Rev 0 Report to Regulators	6/27/2019	7/11/2019
RL Transmit 100-HR-3 RD/RAWP Draft Revision 0 to Regulators for Review	6/28/2019	7/1/2019
RL Certify New NRDWL Information & Submit to Ecology	6/30/2019	7/4/2019
RL Review 100-HR-3 Final Closeout Forms	7/1/2019	7/22/2019
RL Transmit NRDWL/SWL - Engineering Evaluation Report - Revision 0 to Ecology	7/2/2019	7/11/2019
RL Transmit Draft A Ringold A Data Quality Objective SAP to Regulator	7/3/2019	7/10/2019
RL Transmit 200-DV-1 Treatability Laboratory Test Plan Decisional Draft A to Ecology/EPA for Review	7/9/2019	7/20/2019
RL Review 100-HR-3 Tri-Party Agreement Change Notice to SAP for FY2019 Wells	7/9/2019	8/2/2019
RL Review 100-HR-3 Tri-Party Agreement Change Notice to Waste Management Plan to Add FY2020 Drilling Waste	7/9/2019	8/2/2019
RL Validates 100-KR-4 Feasibility Study (FS) Draft B per Review Comment Record (RCR) Comments from Decisional Draft B	7/9/2019	7/24/2019
RL Transmit 200-BP-5 Proposed Plan Draft A to Regulators For Review	7/11/2019	7/14/2019
RL Review 100-KR-4 Tri-Party Agreement Change Notice to SAP for FY2019 Wells	7/16/2019	7/30/2019
RL Approve 100-KR-4 ESD	7/17/2019	7/23/2019
RL Transmit Regulatory Review Draft 216-B-63 Trench - Engineering Evaluation Report to Ecology for Review	7/19/2019	7/19/2019
RL Review TPA-CN Soil Flushing SAP	7/23/2019	7/29/2019
RL Transmit 200-BP-5 Proposed Plan Draft Rev 0 to Regulator for Approval	7/24/2019	7/26/2019
RL Transmit 200 EA-1-RI/FS Work Plan Draft Rev 0 to Regulators	7/24/2019	7/31/2019
RL Transmit 200-UP-1 Draft Revision 0 Central Plateau Tracer Study-Sample Analysis Plan to Regulators	7/25/2019	8/7/2019
RL Review 100-KR-4 Proposed Plan Decisional Draft	7/30/2019	8/28/2019
RL Review of 100-NR Biovent Characterization Revised Final CRR	7/31/2019	8/5/2019

Description	CHPRC Delivery Date	Expected RL Due Date
RL Transmit 200-UP-1 Performance Measurement Plan Revision 1 Document to EPA for Approval	8/9/2019	8/15/2019
RL Review of 100-NR Biovent Characterization Memorandum of Agreement (MOA)	8/12/2019	8/13/2019
RL Transmit 200-ZP-1 O&M Plan Draft A to EPA	8/14/2019	8/27/2019
RL Review of 100-KR-4 RI Draft Revision 0	8/14/2019	8/21/2019
RL Transmit 100-HR-3 RD/RAWP Revision 0 to Ecology for Review	8/15/2019	8/29/2019
RL Review of Revised 100-BC-5 PP with incorporated EPA HQ comments	8/19/2019	8/22/2019
RL Transmit 100-NR Biovent Characterization MOA to SHPO/Tribes	8/19/2019	8/20/2019
RL Transmit Revised 200-ZP-1 Draft A RD/RAWP Rev 1 to EPA	8/21/2019	9/3/2019
RL Transmit 200-BP-5 GWMP Rev 1 Draft A To Regulators	8/27/2019	9/9/2019
RL Review 200-UP-1 Remedial Design/ Remedial Action Work Plan Rev II Decisional Draft	8/30/2019	9/28/2019

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

May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

M. A. Wright
Vice President for
Project Technical
Services

PROJECT SUMMARY

Final grout placement in the Plutonium Uranium Extraction Plant (PUREX) Tunnel 2 and demobilization of the contractor was completed, including removal of the mobile concrete batch plant, conveyances, and power drop at the Integrated Disposal Facility (IDF). Procurement of a six-wide office trailer for use at PUREX was initiated with an expected arrival in August 2019 and installation in September 2019. Mercury vapor sampling and monitoring throughout Reduction-Oxidation (REDOX) continued this month, as well as patching repairs on the north and south annex roofs to mitigate water intrusion. Demobilization of asbestos removal crews and equipment was completed from the steam line road crossovers removal effort in the 200 East Area and steam line asbestos insulation abatement commenced between REDOX and U-Canyon in the 200 West Area. Hazmat removal and asbestos abatement activities continued in 242-B/BL to keep the project on track to begin demolition in late July.

EMS Objectives and Target Status

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

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	1	16	5/28/2019 – Employee was stung by a scorpion on their right ankle and right hip. (25178)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0040 Accomplishments

CPRM Surveillance and Maintenance (S&M)

- Completed annual surveillance of 216-Z-9 and 241-Z-361.
- Supported shipment of two roll-on/roll-off containers from PUREX Tunnel 2 demobilization to the Environmental Restoration Disposal Facility (ERDF).
- The radiation area remedial action (RARA) radiological control team performed confirmation surveys at Waste Information Data System (WIDS) site UPR-200-W-164 after an equipment incursion disturbed the soil surface and assisted with postings repair.
- RARA team completed the bi-annual (first of two) presumed asbestos-containing material (PACM) WIDS site surveillances.
- Completed annual stack instrumentation calibration.
- Performed troubleshooting of B Plant mobile office trailer jack assemblies.
- Completed PUREX 202-A VELTRON and VELTRON II transmitter calibration.
- Performed trouble shooting of instrument panel light at 242-B/BL and removed wiring/components from inside the panel.
- Completed tank 216-A-TK-2 level check.

PUREX Tunnel 2 Stabilization Project

Project Technical Services Support

- Completed final grout placement at PUREX Tunnel 2.
- Completed demobilization of the contractor, including the mobile batch plant, conveyances, and power drop at the IDF.

PUREX Canyon Mobile Office and Shower Trailers Installation

- Continued planning with installation subcontractor.
- Initiated procurement of six-wide PUREX office trailer.

REDOX Canyon Risk Mitigation

- Continued mercury vapor sampling and monitoring in REDOX.
- Revised chemical draining work package controls for inclusion of mercury.
- Completed patching repairs on north and south annex roofs to mitigate water intrusion.
- Identified additional potential water ingress point for north sample gallery.
- Obtained mercury amalgamation kits and commenced planning for removal of bottles from seventh floor sample gallery.
- Performed cold and dark ground scans.
- Completed installation of radio communications hardware.
- Completed job hazard analysis for seventh floor sampling.
- Completed size reduction work package job hazard analysis and routed for approval.
- Transferred excess equipment from Plutonium Fishing Plant to REDOX in order to repurpose for decontamination and deactivation (D&D) support.
- Revised as low as reasonably achievable (ALARA) management worksheet (AMW) and radiological work permit (RWP) to incorporate additional respiratory equipment to support mercury vapor sampling throughout REDOX.
- Completed AMW and RWP to incorporate additional tools to be used in size reduction activities.

242-B/BL Demo Preparation

- Completed mobile trailer installations near 242-B/BL.
- Completed mechanical isolations and validation of hazardous energy isolation walk down.
- Made significant progress on the hazmat and asbestos removal.

- Initiated preparations for mockup activities to de-water the 242-BL basin.

Steam Line Removal

- Demobilized asbestos removal crews and equipment from the steam line road crossovers removal effort in the 200 East Area and relocated them to support steam line asbestos insulation abatement in 200 West Area.
- Completed demolition phase of REDOX Zone 2.
- Completed asbestos insulation abatement of 200 West Section 2 (Crossover 12 to 11).
- Completed demolition phase of 200 West Section 1 (REDOX to Crossover 12).

MAJOR ISSUES

Issue

On January 11, 2018, the state of Washington, Department of Ecology (Ecology) Nuclear Waste Program performed a Dangerous Waste Compliance Inspection at B Plant. During 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 CH2M HILL Plateau Remediation Company (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, CHPRC will determine if designation can be accomplished in the required 90-day period and notify RL if an extension is needed.

Status

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

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

Issue

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

Corrective Action

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

Status

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

Issue

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

Corrective Action

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

Status

Structural integrity analysis is ongoing with a final report expected to complete by May 30, 2019. The project continues to track the water level in a catch tank; current water level tracks are consistent with rainfall.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
RL-0040/WBS-040																						
Explanation of major changes to the project monthly stoplight chart: No major changes to the stoplight in May.																						
Realized Risks (Risks that are currently impacting project cost/schedule)																						
PRXT-S2-010: Inclement Weather	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, 68 day			<p>Risk Event: The work was assumed to be performed in fall weather conditions per the contract with the grouting contractor.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Purchase freeze protection equipment.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Drain booms after each shift.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Running extension boom heater off shift.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Renegotiate unit rate with contractor for grout placement.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Negotiate cost impacts to grout contractor for inclement weather delays.</td> <td>August 2019</td> <td>0</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in May. To mitigate potential bad weather, grout placement worked a 5/10 schedule. Additionally, the</p>	Risk Recovery action(s)	FC Date	%	Purchase freeze protection equipment.	Complete	100	Drain booms after each shift.	Ongoing	N/A	Running extension boom heater off shift.	Ongoing	N/A	Renegotiate unit rate with contractor for grout placement.	Complete	100	Negotiate cost impacts to grout contractor for inclement weather delays.	August 2019	0
Risk Recovery action(s)	FC Date	%																				
Purchase freeze protection equipment.	Complete	100																				
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0040/WBS-040																
				<p>project team and grout contractor worked with facility support (radiological controls) in order to perform startup and shut down sequence of activities as efficiently as possible, thus maximizing the hours available to grout during the shift. CHPRC procurement and the grout contractor renegotiated the unit rate for grout placement after December 9, 2018. The contract change was initiated to incorporate impacts for cold weather grout placement and redefine standby/conveyance system maintenance usage and rates in an attempt to minimize stand down/delay time change orders but still incentivize the contractor to complete as quickly as possible.</p> <p>Due to adverse winter weather conditions, the grout placement was put on a temporary hold from February 4 through March 11, 2019. CHPRC project management and the grout contractor proactively worked to mitigate cost impacts, which included layoffs of drivers and cancellation of some equipment rentals. The stand down time is estimated at 23 working days. The final cost impact remains to be negotiated with CHPRC procurement.</p> <p>Based on current project status, this risk was closed. As such, it will be removed from the stoplight chart prior to June reporting.</p>												
<p>REDOX-01: Resource Availability</p>	<p>Other higher CHPRC priority work results in reallocation of resources, improving job markets, in addition to other factors, result in competition for key resources. In addition, higher-than-anticipated attrition impacts project cost.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$90K, 48 day</p>			<p>Risk Event: Other Hanford contractors (OHC) and higher CHPRC priority work has impacted the resource availability for REDOX. OHCs impacted work through the labor asset management program (LAMP) taking skilled and trained Decontamination and Decommissioning (D&D) workers.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Identify and hire temporary employees (D&D, asbestos workers, Radiological Control Technicians) early in the fiscal year.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Meet with other CHPRC projects in attempts to spread resources appropriately between projects.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct ongoing full time equivalent analyses to ensure staffing is adequate.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in May. D&D workers were hired in late January and completed the required training at the HAMMER Federal Training Center in Richland. Currently, the D&D workers are gaining field experience.</p>	Risk Recovery action(s)	FC Date	%	Identify and hire temporary employees (D&D, asbestos workers, Radiological Control Technicians) early in the fiscal year.	Complete	100	Meet with other CHPRC projects in attempts to spread resources appropriately between projects.	Ongoing	N/A	Conduct ongoing full time equivalent analyses to ensure staffing is adequate.	Ongoing	N/A
Risk Recovery action(s)	FC Date	%														
Identify and hire temporary employees (D&D, asbestos workers, Radiological Control Technicians) early in the fiscal year.	Complete	100														
Meet with other CHPRC projects in attempts to spread resources appropriately between projects.	Ongoing	N/A														
Conduct ongoing full time equivalent analyses to ensure staffing is adequate.	Ongoing	N/A														
<p>REDOX-06: Impacted by OHC (Other Hanford Contractors) or Other CHPRC Projects</p>	<p>Delays by Other Hanford Contractors (OHCs), or other CHPRC projects impacts the schedule and technical approach due to inconsistencies with CHPRC execution, resulting in recovery actions, causing unplanned, in-scope work and impacting the schedule.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$100K, 24 day</p>			<p>Risk Event: Impacts from OHC would impact the ability for work to progress at REDOX due to conflicts with close neighbors (222-S Lab).</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communication plan and outreach efforts will be developed and executed throughout the project.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Establish north side road parking lot and trailer access to avoid interferences with Mission Support Alliance and Washington River Protection Solutions LLC (WRPS) work to the south.</td> <td>July 2019</td> <td>35%</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in May. Construction of an access road connecting the north side of REDOX to Beloit Avenue will reduce the interaction between REDOX and 222-S Lab. Additionally, a four-wide trailer is in the process of being procured to move personnel from MO409 to the north side of REDOX, reducing the amount of personnel interacting with 222-S Lab.</p>	Risk Recovery action(s)	FC Date	%	Communication plan and outreach efforts will be developed and executed throughout the project.	Ongoing	N/A	Establish north side road parking lot and trailer access to avoid interferences with Mission Support Alliance and Washington River Protection Solutions LLC (WRPS) work to the south.	July 2019	35%			
Risk Recovery action(s)	FC Date	%														
Communication plan and outreach efforts will be developed and executed throughout the project.	Ongoing	N/A														
Establish north side road parking lot and trailer access to avoid interferences with Mission Support Alliance and Washington River Protection Solutions LLC (WRPS) work to the south.	July 2019	35%														
<p>REDOX-07: Building Accessibility due to Water Intrusion</p>	<p>Extensive leaks are experienced in the galleries due to the current state of the annex areas and silo roof, resulting in schedule delays to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$0K, 32 day</p>			<p>Risk Event: Leaking roofs have allowed water to accumulate in areas of the facility that prohibits personnel in certain areas of the building. Due to electrical concerns, personnel at REDOX have not been able to access the west end of the North Sample Gallery.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Spray roof with engineered roofing sealant prior to the rainy season, in an effort to minimize leaks.</td> <td>July 2019</td> <td>0</td> </tr> <tr> <td>Patch existing roof vulnerabilities.</td> <td>July 2019</td> <td>0</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in May. Work plans involving the electricians to enter the North Sample Gallery to collect samples of the water that has accumulated are underway. Work packages are being modified</p>	Risk Recovery action(s)	FC Date	%	Spray roof with engineered roofing sealant prior to the rainy season, in an effort to minimize leaks.	July 2019	0	Patch existing roof vulnerabilities.	July 2019	0			
Risk Recovery action(s)	FC Date	%														
Spray roof with engineered roofing sealant prior to the rainy season, in an effort to minimize leaks.	July 2019	0														
Patch existing roof vulnerabilities.	July 2019	0														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
RL-0040/WBS-040																
REDOX-08: Regulatory Documents Delayed	Regulatory documents, specifically the Removal Action Work Plan (RAWP) and the Sample Analysis Plan (SAP) that grant authorization for deactivation and decommissioning activities within 202-S REDOX, are delayed resulting in loss in schedule and cost. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0K, 48 day	●	↓	<p>and hazard identifications are being worked to address the water in the west end of the North Sample Gallery.</p> <p>Risk Event: Regulatory documents (RAWP and the SAP) have been delayed resulting in schedule impacts because demolition preparations activities would not start. A significant amount of unexpected liquids was discovered in Tank 604 in the silo. The delay in regulatory documents would delay the ability to drain and dispose of the liquid.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Work closely with the appropriate organizations responsible for managing the development of the various regulatory documents to ensure the documents are scheduled to be developed sufficiently early to obtain needed RL or regulator approvals prior to planned start of work.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Establish routine status meetings with these organizations to provide early warning if documents are being delayed. Status meetings will help develop acceptable work-arounds in order to minimize the schedule impact.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in May. Ongoing interfaces and meetings with DOE to discuss the status of the RAWP and the SAP are taking place so all interested parties understand the consequences of delayed regulatory documents.</p> <p>Regulatory documents were signed in May. As such, this risk will be removed from the stoplight chart prior to June reporting.</p>	Risk Recovery action(s)	FC Date	%	Work closely with the appropriate organizations responsible for managing the development of the various regulatory documents to ensure the documents are scheduled to be developed sufficiently early to obtain needed RL or regulator approvals prior to planned start of work.	Ongoing	N/A	Establish routine status meetings with these organizations to provide early warning if documents are being delayed. Status meetings will help develop acceptable work-arounds in order to minimize the schedule impact.	Ongoing	N/A			
Risk Recovery action(s)	FC Date	%														
Work closely with the appropriate organizations responsible for managing the development of the various regulatory documents to ensure the documents are scheduled to be developed sufficiently early to obtain needed RL or regulator approvals prior to planned start of work.	Ongoing	N/A														
Establish routine status meetings with these organizations to provide early warning if documents are being delayed. Status meetings will help develop acceptable work-arounds in order to minimize the schedule impact.	Ongoing	N/A														
REDOX-11: Unexpected Discovery - Hazmat	Unexpected or late discovery of hazardous material is discovered during deactivation and decommissioning of 202-S REDOX. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$11K, 48 day	●	↓	<p>Risk Event: During D&D activities, there is an unexpected discovery of hazardous material.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform investigative entries into silo, North Sample Gallery, and canyon.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Characterization in progress.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Innovative methods (i.e., robots) to further understand conditions.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in May. Investigative entries and characterizations are furthering the understanding of the current conditions of REDOX.</p>	Risk Recovery action(s)	FC Date	%	Perform investigative entries into silo, North Sample Gallery, and canyon.	Ongoing	N/A	Characterization in progress.	Ongoing	N/A	Innovative methods (i.e., robots) to further understand conditions.	Ongoing	N/A
Risk Recovery action(s)	FC Date	%														
Perform investigative entries into silo, North Sample Gallery, and canyon.	Ongoing	N/A														
Characterization in progress.	Ongoing	N/A														
Innovative methods (i.e., robots) to further understand conditions.	Ongoing	N/A														
REDOX-16: Facility Integrity	Problems with aging building systems/components (e.g. roofing/structures, etc.) result in inoperability or requires unscheduled maintenance/outages impacting planned D&D activities resulting in schedule delays and cost impacts. Risk Handling Strategy: Transfer Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 0 day	●	↔	<p>Risk Event: Leaking roof results in unsafe working conditions for personnel.</p> <table border="1"> <thead> <tr> <th>Risk Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform cold and dark activities to shut off building power.</td> <td>Sep 2019</td> <td>35</td> </tr> <tr> <td>Repair minor roof defects.</td> <td>May 2019</td> <td>25</td> </tr> </tbody> </table> <p>Risk Action Assessment: No major changes in May. Integrity failures could lead to water issues within radiological contaminated areas causing a hazard to personnel. Going cold and dark will minimize the risk for electrical shock due to water. Making minor repairs to leaking parts of the roof can significantly reduce water intrusion.</p>	Risk Recovery action(s)	FC Date	%	Perform cold and dark activities to shut off building power.	Sep 2019	35	Repair minor roof defects.	May 2019	25			
Risk Recovery action(s)	FC Date	%														
Perform cold and dark activities to shut off building power.	Sep 2019	35														
Repair minor roof defects.	May 2019	25														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments		
		Month	Trend			
RL-0040/WBS-040						
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)						
REDOX-05: Collapse of Sand Filter Risk Handling Strategy: Control Probability: Very Low (<10%) Worst Case Impacts: \$260K, 48 day	Due to the close proximity of equipment driving by (cranes, forklifts for waste loadout, steam lines), age, and structural integrity, the project experiences a collapse of a sand filter, resulting in cost and schedule impacts to the project.			Risk Triggers: Due to the close proximity of equipment driving by (cranes, forklifts for waste loadout, steam lines), age, and structural integrity, the project experiences a collapse of a sand filter.		
				Mitigation Action(s)	FC Date	%
				Establish project boundary.	August 2019	50%
				Use bracing when digging.	Not yet digging	N/A
				Implement communication plan between OHC and other CHPRC projects.	Ongoing	NA
				Engineering to conduct structural integrity and equipment stand-off evaluations.	Ongoing	NA
				Follow the critical lift process, and hoisting and rigging manual.	Ongoing	NA
Mitigation Assessment: No major changes in May . The project is working to ensure that the steam line removal efforts consider sand filters while planning. The project continues to communicate with the 222-S Labs about future work scope at REDOX. Engineering has also been involved in structural evaluations of the sand filters. These evaluations will be used for establishing an equipment stand-off distance. Additionally, discussions for the initial planning of the critical lift process is ongoing.						
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)						
No high risk threat value risks in May .						
FY2019 Risk Triggers (Risk could be realized in FY2019)						
PRXT-S2-009: Resources Unavailable Risk Handling Strategy: Accept Probability: Low (10% to 25%) Worst Case Impacts: \$102K, 64 day	Other higher CHPRC priority work results in reallocation of resources, improving job markets, funding uncertainties, or bump and roll result in competition for key resources. In addition, higher than anticipated attrition impacts project cost.			Risk Triggers: Due to the current job market, in addition to the need for specialized resources to complete the planned PUREX stabilization activities, qualified and trained resources are needed to support planned activities.		
				Mitigation action(s)	FC Date	%
				Conduct full time equivalent personnel analysis and identify corrective actions to ensure adequate resource profiles.	Ongoing	N/A
				Mitigation Assessment: No major changes in May . The project has hired D&D workers in anticipation of another 25 Nuclear Chemical Operators openings at WRPS in the second quarter of FY2019.		
Unassigned Risks (Pending ownership of identified risks/opportunities)						
No unassigned risks identified in May .						

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

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	7.1	4.5	7.1	(2.6)	-36.5%	(2.6)	-57.0%

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance: (-\$2.6M/-36.5%)

The current month negative schedule variance is primarily due to performing the stabilization of PUREX Tunnel 2 well ahead of the baseline schedule dates; therefore causing a negative variance due to lagging budgeted cost of work scheduled. In addition, the PUREX office trailer installation is behind schedule as the vendor backlog for receipt of the new trailers is approximately three months later than anticipated.

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

CM Cost Performance: (-\$2.6M/-57.0%)

The current month negative cost variance is partially attributed to incurring change orders for directing the grout contractor to perform additional demobilization activities for PUREX Tunnel 2, including removal of the power drop at IDF, repair the perimeter fence, and removal and disposal of the conveyances.

The variance is also attributed to performing 242-B/BL D&D work scope that is not currently in the proposed baseline. This project is well ahead of schedule and all scope in the baseline proposed at the start of FY2019 has been performed. This scope being performed outside of the baseline is expected to be definitized within the quarter. Once definitized, this scope will be added to the baseline and performance will be claimed.

Finally, the discovery of mercury on the seventh floor of the REDOX silo gallery continues to cause delays as air sampling continues and worker safety documentation is updated to account for the presence of mercury. The incorporation of industrial hygiene controls allowing the use of additional size reduction tools has slowed progress of combustible removals from the REDOX canyon, while additional support has been necessary to update and release the work package.

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

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	541.1	535.3	514.9	(5.9)	-1.1%	20.4	3.8%	554.9	539.4	24.5	15.4

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance: (-\$5.9M/-1.1%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$20.4M/+3.8%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$15.4M/+2.8%)

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	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0040 Spending Forecast	81.8	76.6	5.2
Incremental Scope Pending Change Management	0.0	2.5	(2.5)
RL-0040 – Total	81.8	79.1	2.7

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

FY2019 funding for project breakdown structure (PBS) RL-0040 is \$81.8 million. FY2019 funding aligns with the RL integrated priority list (IPL). The variance primarily reflects the work scope included in the IPL that is pending authorization.

Critical Path Schedule

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-250D	Submit to Ecology a 3-Year Rolling Prioritized Schedule to Implement Waste Site Removal Actions.	3/31/2019	3/27/2019 (A)		Complete.
M-016-256	Complete Removal of All Waste Sites for FY2019 as Updated/Modified in M-16-17-01.	9/30/2019		TBD	In negotiation with RL to adjust schedule to FY2020. Currently in dispute resolution.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review 224-B (B Plant) Removal Action Work Plan (RAWP) (2017-34)	8/16/2017 (A)	6/30/2019
202-A PUREX (2016-15) Draft B Engineering Evaluation/Cost Analysis (EE/CA) Ecology Review	12/11/2017 (A)	6/30/2019
REDOX RAWP (2017-06) Revision 0 Regulator Approval/Complete	3/15/2018 (A)	5/01/2019 (A)
REDOX Sampling Analysis Plan (SAP) (2017-05) Revision 0 Regulator Approval/Complete	4/11/2018 (A)	5/20/2019 (A)
Tier 2 Misc. (B Plant North) SAP (2017-47) Revision 0 Regulator Approval/Complete	4/17/2018 (A)	5/20/2019 (A)

Section F

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

CH2MHILL
Plateau Remediation Company



R. M. Geimer
Vice President for
K Basin Operations

May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

M. A. Wright
Vice President for
Project Technical Services

PROJECT SUMMARY

K Basin Operations (KBO):

The 100K Closure remediation team continued excavation and loadout of soil from the east trench and demolition and loadout of the concrete box culvert from the west trench of Waste Site 100-K-47:1. The 100K Closure K West Basin deactivation team completed shipping settled solid samples collected from the basin floor to the 222-S Laboratory. Preliminary and final results of tests expected August 30, and September 30, 2019 respectively. Contracts were awarded for the fabrication of the sand filter media removal system equipment and the removal of oily water from the 165-K East Fuel Storage Bunker. The request for proposal (RFP) for vertical pipe casing (VPC) fabrication received final proposals from bidders.

River Risk Management Project (RRMP):

Several facility structures, systems, and components (SSCs) that require preventative maintenance (PM) were prioritized for May. Many of these PMs required reduced ventilation that prevented concurrent project activities in Zone 2 ventilation areas. C Cell external cell sealing continued. The remote excavator arm (REA) was used to load 16 bins of B Cell debris. Of these, eight were weighed and assayed in the airlock and moved into D Cell for future loadout. Box shielding was installed on three 9-by-5-by-5 waste boxes and grouted into place for forthcoming B Cell debris loadout. Thirteen geoprobes were removed from under B Cell to allow micropile installation, grout injection, and soil excavation. The soil stabilization test at Pit 6 was concluded and disposal of grouted test soil was initiated. The micropile design was received from the contractor and is currently under review in CHPRC.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
19-EMS-RRMP-OBJ1-P1	Increase Environmental Management System (EMS) awareness	Present or facilitate a discussion of EMS topics to 324 Building Disposition Project personnel on a minimum of five different occasions in fiscal year (FY) 2019 and recruit personnel from the 324 Building Disposition Project organizations (other than environmental) to participate in at least five compliance review/programmatic walk downs.	9/30/2019	90%
19-EMS-KBOPR-OBJ1-P1	Improve compliance/pollution and spill prevention	Monitor and evaluate universal waste and recycling accumulation areas for compliance with CHPRC procedures. Survey spill prevention measures.	9/30/2019	64%

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	1	22	5/28/2019 – Employee experienced a bug bite on the right arm. Employee was taken to HPM Corporation and released back to work with no restrictions. (25180)
Near Misses	0	2	N/A

KEY ACCOMPLISHMENTS

K Basin Operations

- 100K Closure Project:
 - o Soil Remediation and Waste Site Closure
 - Successfully transferred excavation subcontractor oversight from the 100K Closure soil remediation team to Project Technical Services on May 14, 2019. Transition was completed and the excavation and loadout of Waste Site 100-K-47:1, and preparation for Waste Site 100-K-47:2 overburden removal were resumed.
 - o K West Basin Deactivation
 - K West Basin operations deactivation team packaged and shipped to the 222-S Laboratory for analysis.
 - Issued the VPC fabrication contract request for proposal. Contract award was postponed pending approval to proceed from the Federal Project Director.
 - Awarded the Sand Filter Media Removal System equipment fabrication contract.
 - Completed initial proof testing of the magnetic drill configuration for inspecting and characterizing Fuel Transfer Cask Assembly TCA-1.
Completed the AMP 100 survey air box modifications, prepared a long pole deployment tool, and delivered both components to K West Basin.
 - o Ancillary Facility Deactivation and Demolition (D&D)
 - Awarded the 116 KE Fuel Storage Bunker oily water removal contract.
 - RL and EPA approved the revision to DOE/RL-2005-26, *Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities* and supporting Air Monitoring Plan, DD-62526.
 - D&D completed biological contamination removal in 165 KW Power Control Building.
 - o K East Reactor Interim Safe Storage (ISS)
 - Architecture engineering contractor completed disposition of CHPRC comments on the 60 percent Safe Storage Enclosure design modification package. CHPRC reviewed proposed dispositions and returned them to the contractor for incorporation into the 90 percent design package

River Risk Management Project, 324 Building Disposition Project

- Continued Remote Soil Excavation Operations Readiness Assessment self-assessment in preparation for checklist readiness assessment in July 2019
- Equipment Procurement and Fabrication:
 - Continued the design and fabrication of the following 324 systems: waste box shielding/waste bins/waste containers, cell dams, transfer mechanism modifications, and miscellaneous items for the REAs.
- Facility Preparations:
 - Initiated D Cell external sealing and interference removal.
 - Completed 324 Building ventilation test.
 - Completed annual elevator inspection.
 - Completed annual exhaust fan inspection.
 - Successfully removed 13 of 20 Geoprobes.
 - Initiated truck scale installation.
 - Completed inspection of the C Cell crane.
 - Completed C Cell pass-through door sealing.
- Structural Modifications:
 - Completed excavation of Pit 6 and staged material for demobilization.
 - Completed excavation of soil stabilization test sites.
- Mockup:
 - Successfully completed Construction Acceptance Testing of the floor saw.
 - Relocated snorkel assemblies to interim storage.
 - Continued floor saw operational testing.
 - Completed the site acceptance test on the rad assay system.
 - Received next batch of waste bins (20).
 - Initiated water delivery system installation training.
- Cell Cleanout
 - Used REA to load 16 bins of B Cell debris in the B Cell.
 - Weighed and assayed eight bins in the airlock and moved into D Cell for future loadout.
 - Installed box shielding on three 9-by-5-by-5 waste boxes and grouted into place for forthcoming B Cell debris loadout.
- Tours:
 - Hosted a tour for the Energy Facility Contractor's Group.
 - Hosted Leadership Tri-Cities.
 - Hosted a tour for the Washington State Science, Technology, Engineering and Math (STEM) Education Foundation and Mid-Columbia STEM Network.

Project Technical Support

- Training and Procedures
 - Completed a 48-page revision to the 324 Operations Training Manual to support the new Radiological Waste Storage Yard. The storage yard is a crucial part of the way that 324 will manage waste and is a new process for the facility.
 - Published new procedure 324-PRO-OP-54382, *324 Event Notifications*. This new administrative procedure provides project and senior management expectations for notification of facility events once an initial event is stabilized.
 - Published a new procedure 324-PRO-RP-54355, *Installation and Control of Temporary and Short-Term Shielding*. This new procedure provides implementation guidance for installation and control of temporary and short term shielding at the 324 Building in line with CHPRC-00073.
- Operations Program
 - Met with RL to discuss 324 readiness schedule and upcoming contract transition.
 - Conducted Controlling Organization Administrator qualification interview.
- Readiness and Preparedness

- o Conducted 324 full up drill testing the facilities capability to respond to an adverse weather condition and resulting facility damage with personnel injuries. The overall response demonstrated that the 324 Building capabilities to address emergency conditions has significantly improved from last fall. Key positions of the Facility Emergency Response Organization (FERO) were granted proficiency with one exception.
- o Conducted full up drill at 324, testing the building's capability to respond to an internal explosion with personnel injuries. Again, the 324 Building demonstrated a capable FERO team response, and full qualification/proficiency was granted for all FERO members.
- Project Delivery
 - o Integrated Disposal Facility Infrastructure
 - Initiated preparation of procurement packages for the mobile office trailers.

MAJOR ISSUES

Issue

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

Corrective Action

The project continues to work with Labor Relations and Central Radiation Protection Management to fill needed positions.

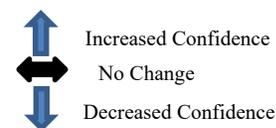
Status

The number of RCTs hired and assigned is sufficient to perform planned Soil Remediation and K East Reactor asbestos removal work for the remainder of FY2019. However, between the Sludge Retrieval Project, K West Basin Deactivation, and 100K Operations, the ability to effectively staff RCTs remains a challenge for the remainder of FY2019.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
RL-0041/WBS-041													
Explanation of major changes to the project monthly spotlight chart: Risk 100K-KWB-102: KW Basin – Resources Unavailable was moved from the Realized risk section to the FY2019 Risk Trigger section of the spotlight chart.													
Realized Risks (Risks that are currently impacting project cost/schedule)													
RCC-300-296-31: 300-296 Contamination Encountered During Assumption Verification.	To validate the assumptions supporting the 324 Building structural modification design, pilot holes will be drilled into the soil beneath B Cell to collect necessary data. If data results in contamination levels much higher than assumed, or contamination deeper than assumed, the project will have to develop an alternative approach, requiring development and/or fabrication of additional equipment, and limit progress on alternate fieldwork activities to recover. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$3,318K, 256 days	●	↑	<p>Risk Event: In March, unexpected contamination was found within Room 18 during pilot hole drilling activities.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>As low as reasonably achievable (ALARA) Review (IPAR) Evaluations</td> <td>5/13/2019</td> <td>100</td> </tr> </tbody> </table> <p>Recovery Assessment: ALARA Review evaluations for process improvements were completed. Fieldwork activities resumed on May 13, 2019. Monitoring of this risk will continue as additional controls are in place to reduce the likelihood of occurrence. Following the current period, this risk will be removed from being categorized as <i>Realized</i> and placed under the <i>High Risk Threat Value</i> section below.</p>	Recovery action(s)	FC Date	%	As low as reasonably achievable (ALARA) Review (IPAR) Evaluations	5/13/2019	100			
Recovery action(s)	FC Date	%											
As low as reasonably achievable (ALARA) Review (IPAR) Evaluations	5/13/2019	100											
RCC-300-296-01: Latent Conditions Impact Facility Modification.	Latent conditions, poor visibility in REC cells, or drawing omissions, inconsistencies, or errors impact facility modifications (e.g. mechanical, electrical Industrial Hygiene/radiological control hazards), resulting in unplanned work and subsequently, cost and schedule impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$294.5K, 256 Days	●	↑	<p>Risk Event: On March 28, unexpected beta-gamma contamination was detected while performing clearance surveys at the 324 step-off pad. Following sampling, it was determined to be beta contamination (suspected strontium-90), without a corresponding gamma component. To ensure worker safety, a stop work was initiated on all radiological work activities at the 324 project, pending follow-up radiological surveys.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform Follow-up Contamination Surveys</td> <td>4/1/2019</td> <td>100</td> </tr> <tr> <td>Implement Controls and Resume Field-work Activities</td> <td>5/13/2019</td> <td>100</td> </tr> </tbody> </table> <p>Recovery Assessment: Follow-up contamination surveys were performed throughout the front side areas of the 324 Building using strontium controls (developed for Room 18) with no contamination detected. Work scope within the 324 Building resumed on May 13, 2019. Based on the historical discovery of an elevated latent contamination level (NOC, CHPRC-1801178); this risk will continuously be monitored as routine preventative maintenance activities are in place to reduce the likelihood of occurrence. Following the current period, this risk will be removed from being categorized as <i>Realized</i> and placed under the <i>Risk Trigger</i> section below.</p>	Mitigation action(s)	FC Date	%	Perform Follow-up Contamination Surveys	4/1/2019	100	Implement Controls and Resume Field-work Activities	5/13/2019	100
Mitigation action(s)	FC Date	%											
Perform Follow-up Contamination Surveys	4/1/2019	100											
Implement Controls and Resume Field-work Activities	5/13/2019	100											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																					
		Month	Trend																						
RL-0041/WBS-041																									
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	●	↔	<p>Risk Event: Upon review of the 30 percent design submittal, it was determined that the cell wall loading/limitations were inadequate and required additional clarification. To reduce 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.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contractor prepare and submit structure modification design - 30%-60% (VE2810)</td> <td>8/15/2018</td> <td>100</td> </tr> <tr> <td>Perform Micropile Demonstration and Verification to Support Structural Mod Design (VS1220A)</td> <td>1/24/2019</td> <td>100</td> </tr> <tr> <td>Structural Mods Design Micro-Pile Comment Resolution (VS1220C)</td> <td>5/13/2019</td> <td>100</td> </tr> <tr> <td>Perform Pilot Holing for Structural Mods (VS5010)</td> <td>6/24/2019</td> <td>30</td> </tr> <tr> <td>Perform Pit 6 Soil Verification Testing / Geotech (VS1220B)</td> <td>7/16/2019</td> <td>99</td> </tr> <tr> <td>Contractor prepare and submit structure modification design (VN1220)</td> <td>8/19/2019</td> <td>87</td> </tr> </tbody> </table> <p>Recovery Assessment: Delays for completing the final structural design have been incurred due to the realization of risks RCC-300-296-31: <i>Contamination Encountered During Assumption Verification</i> and RCC-300-296-01: <i>Latent Conditions Impact Facility Modifications</i>. The realization of these risks halted fieldwork activities supporting the completion of the final design. However, fieldwork resumed on May 13, 2019.</p>	Recovery Action(s)	FC Date	%	Contractor prepare and submit structure modification design - 30%-60% (VE2810)	8/15/2018	100	Perform Micropile Demonstration and Verification to Support Structural Mod Design (VS1220A)	1/24/2019	100	Structural Mods Design Micro-Pile Comment Resolution (VS1220C)	5/13/2019	100	Perform Pilot Holing for Structural Mods (VS5010)	6/24/2019	30	Perform Pit 6 Soil Verification Testing / Geotech (VS1220B)	7/16/2019	99	Contractor prepare and submit structure modification design (VN1220)	8/19/2019	87
Recovery Action(s)	FC Date	%																							
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Perform Pit 6 Soil Verification Testing / Geotech (VS1220B)	7/16/2019	99																							
Contractor prepare and submit structure modification design (VN1220)	8/19/2019	87																							
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	●	↑	<p>Risk Event: During vendor factory acceptance test and/or mockup, testing, 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 supports and dummy post assemblies) and transfer mechanism (electrical components).</p> <table border="1"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Install Radiological Assay System and perform CAT at Mockup</td> <td>3/14/2019</td> <td>100</td> </tr> <tr> <td>Install Floor Saw and Support System at Mockup (VN1020)</td> <td>4/23/2019</td> <td>100</td> </tr> </tbody> </table> <p>Recovery Assessment: Integration with remotely operated equipment, through testing and training at the mockup, will continue with preparations for 324 Building equipment. Impacts continue to be incorporated into the project schedule, along with the estimate to complete, to reflect further impacts of risk being realized. Following the current period, this risk will be removed from being categorized as <i>Realized</i> and placed under the <i>Risk Trigger</i> section below.</p>	Recovery action(s)	FC Date	%	Install Radiological Assay System and perform CAT at Mockup	3/14/2019	100	Install Floor Saw and Support System at Mockup (VN1020)	4/23/2019	100												
Recovery action(s)	FC Date	%																							
Install Radiological Assay System and perform CAT at Mockup	3/14/2019	100																							
Install Floor Saw and Support System at Mockup (VN1020)	4/23/2019	100																							
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																									
No critical risks identified in May.																									
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																									
RCC-300-296-07: 300-296 Failure of a REC Cranes (B Cell, A Cell, A-D and Airlock, or CHA cranes)	Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$1,561K, 208 days	●	↔	<p>Risk Trigger Metric: Radiochemical Engineering Cells (REC) crane failure occurs during operations.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Determine B Cell Replacement Crane Options</td> <td>3/19/2019</td> <td>100%</td> </tr> <tr> <td>Award Contract – B-Cell 10T Crane – 324</td> <td>6/11/2019</td> <td>Ongoing</td> </tr> </tbody> </table> <p>Mitigation Assessment: Request for Proposals (RFP) were issued in April. The project is awaiting estimates and feedback from potential vendors. Once received, source selections will be evaluated for awarding contract for B Cell crane fabrication. These efforts are expected to reduce the potential for impacts.</p>	Mitigation action(s)	FC Date	%	Determine B Cell Replacement Crane Options	3/19/2019	100%	Award Contract – B-Cell 10T Crane – 324	6/11/2019	Ongoing												
Mitigation action(s)	FC Date	%																							
Determine B Cell Replacement Crane Options	3/19/2019	100%																							
Award Contract – B-Cell 10T Crane – 324	6/11/2019	Ongoing																							

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
RL-0041/WBS-041										
RCC-300-296-15: 300-296 Cell sealing, interference removal and/or core drilling takes longer than planned	Unexpected field conditions encountered during interference removal, sealing of cell penetrations, and/or core drilling work scope. The unexpected field conditions subsequently cause in-scope unplanned work and result in schedule impacts to the project. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$145.8K, 90 days	●	↑	<p>Risk Trigger Metric: The project experiences unexpected field conditions outside their control that make cell sealing, interference removal, and core drilling more difficult than planned.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform Core Drilling and Shield Plug Installation (VN1200)</td> <td>3/28/2019</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in May. A majority of core drilling interferences have been identified as the project progresses with drilling necessary at the 324 Building in advance of installation of soil remediation equipment. The remainder of known core drilling efforts were completed in the period. However, due to the uniqueness involved with work scope, there exists the potential for unexpected delays and additional core drilling efforts.</p>	Mitigation action(s)	FC Date	%	Perform Core Drilling and Shield Plug Installation (VN1200)	3/28/2019	100
Mitigation action(s)	FC Date	%								
Perform Core Drilling and Shield Plug Installation (VN1200)	3/28/2019	100								
RCC-300-296-08: 300-296 Failure of Cell Shield Door	Failure of shield door(s) or crane shield door(s) shuts down cleanout of REC cells/airlock, penetration sealing in airlock, equipment installation, and other activities for remote soil removal. It may not be possible to repair a shield door due to radiation dose rate and location, resulting in cost and schedule delays. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$460K, 96 days	●	↔	<p>Risk Trigger Metric: During operations of cleanout activities, a cell shield door inoperable.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Preventative maintenance activities are being conducted</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in May. To assure REC shield doors maintain operability an engineering evaluation was conducted, resulting in the implementation of monthly PMs and the procurement of spare parts.</p>	Mitigation Action(s)	FC Date	%	Preventative maintenance activities are being conducted	Ongoing	N/A
Mitigation Action(s)	FC Date	%								
Preventative maintenance activities are being conducted	Ongoing	N/A								
FY2019 Risk Triggers (Risk could be realized in FY2019)										
100K-KWB-102: KW Basin – Resources Unavailable	Other higher CHPRC priority work results in reallocation of key resources (Rad planners, RCTs, industrial hygienist, and nuclear chemical operators), which results in cost and schedule delays as projects compete for key CHPRC resources. Risk Handling Strategy: Accept Probability: Low (10% to 25%) Worst Case Impacts: \$15K, 16 days	●	↔	<p>Risk Event: 100K Closure Project soil remediation and basin characterization work is experiencing a shortage of RCTs, radiation control engineers, radiation control work planners, and radiation control first line managers.</p> <table border="1"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Work with RADCON to ensure KW Basin has sufficient RCTs to support remaining FY19 scope.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Assessment: The number of RCTs hired and assigned is sufficient to perform planned soil remediation and K East Reactor asbestos removal work for the remainder of FY2019. However, between the Sludge Retrieval Project, K West Basin Deactivation, and 100K Operations, the ability to effectively staff RCTs remains a challenge for the remainder of FY2019.</p>	Recovery action(s)	FC Date	%	Work with RADCON to ensure KW Basin has sufficient RCTs to support remaining FY19 scope.	Ongoing	N/A
Recovery action(s)	FC Date	%								
Work with RADCON to ensure KW Basin has sufficient RCTs to support remaining FY19 scope.	Ongoing	N/A								
Unassigned Risks (Pending ownership of identified risks/opportunities)										
RCC-300-296-04DOE: 300-296 Seismic Event (Force Majeure)	A “Force Majeure” incident, such as a seismic event, results in the loss of structural integrity; causing cost and schedule impacts to the project delivery. CHPRC Comment: CHPRC cannot manage the geological seismic movement that may impact the structural integrity of a building. Therefore, this risk is proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted, via acknowledgement from the RL contracting officer, it will be removed from the spotlight chart.									
RCC-300-296-23DOE: 300-296 Large Brush Fire (Force Majeure)	A brush fire ignited on the Hanford Site near the proximity of the 300-296 Waste Site, resulting in cost and schedule delays. CHPRC Comment: This risk was identified as “Force Majeure” and is beyond the capabilities of CHPRC to manage. Therefore, this risk was proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted, via acknowledgement from the RL contracting officer, it will be removed from the 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 (CM)

(\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	11.4	10.4	11.5	(1.0)	-9.2%	(1.1)	-11.1 %

Numbers are rounded to the nearest \$0.1 million

CM Schedule Performance (-\$1.0M/-9.2%)

Routine 100 K Closure Project equipment PM's including fans, compressors, stack monitor and oxygen analyzer system were much more complex than what was assumed during the development of the budget, which was based on May 2018 data. The proposed CHPRC FY2019 PMB reflects starting the disposition of the Transfer Cask Assembly (TCA-1), isolation of the North Loadout Pit (NLOP), and conditioning of fuel specimens to start at the beginning of the FY. However, that work was resequenced by the project to start in the spring to align with acquisition of added engineering resources, as well as 105-KW Basin operational priorities. With the exception of the NLOP isolation effort, currently delayed by efforts to design and install the Vertical Pipe Casings (see WBS 041.02.21.02), work is progressing on TCA-1 and the fuel specimen condition efforts, and schedule recovery is in progress.

CM Cost Performance (-\$1.1M/-11.1%)

The KBO CM negative cost variance is primarily due to initiatives to recover the delay in remediation of Waste Site Area AF. The recovery plan implemented a new loadout rate, higher than the baseline loadout rate, resulting in additional costs. The RRMP CM negative cost variance is related to a Stop Work initiated in early April, following discovery of an unexpected, latent condition (elevated beta-gamma contamination) as all radiological work scope was placed on hold. Additional, unplanned surveys were performed along with control measures implemented. As a result, increased costs were experienced. In addition, there were higher than anticipated costs related to closeout of the former cell dams subcontract, higher than planned costs for procurement and fabrication to the existing cell dam subcontract as a result of design changes and testing requirements (i.e., grout test) for the cell dams and seals; and increased costs for installation activities relating to the camera and lighting system. Offsetting the negative variance is a favorable cost variance due to progress being made ahead of the plan for the structural modification design.

Contract-to-Date (CTD)

(\$M)

WBS 041/ RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	653.2	640.2	605.9	(13.0)	-2.0%	34.3	5.4%	696.1	658.7	52.9	37.4

Numbers are rounded to the nearest \$0.1 million

CTD Schedule Performance (-\$13.0M/-2.0%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance (+\$34.3M/+5.4%)

The favorable cost variance is primarily due to completing Confirmatory Sampling - No Action (CSNA) waste sites early and under cost. In addition, less demolition was required for the K East Sedimentation Basin, and fewer resources are supporting the level of effort (LOE) program management and usage-based services scope. Some resources have been diverted to other priority work scope, and some resource sharing has occurred. Offsetting the positive cost variance, the 324 Building Disposition Project experienced increased costs for design phases for structural modifications. Additional design requirements were implemented that were not originally part of the design scope of work. These additional requirements included more extensive building modeling, soil stabilization and building foundation verifications and testing demonstrations, all of which have contributed to the cumulative cost variance. In addition, there were greater than planned labor support was required from RCTs because of the alpha contamination latent condition discovered at the 324 Building.

Variance at Completion (+\$37.4M/+5.4%)

The 100K Closure positive variance at completion (VAC) is primarily due to labor; fewer resources have been required than planned to support the LOE program management and usage-based services scope. Some resources have been diverted to other priority work scope, and some resource sharing has occurred. Additionally, the VAC is due to completing the CSNA waste sites early and under cost. Offsetting the positive variance, the 324 Building Disposition Project experienced greater than planned labor support by Health Physics Technicians (HPTs). Additional support and oversight beyond planned levels is required as a result of the Alpha contamination latent condition discovered at the 324 Building. The number of HPTs required to support REC cleanout and facility modifications has increased over the planned 10 FTEs. In addition, increased project management and support staff over the planned levels to accelerate work scope, as well as performing initial structural modifications contributed to the variance. Lastly, a number of unplanned spare parts, acquisitions, and various materials were purchased and/or planned to be acquired in the current fiscal year. As work, scope has progressed and evolved, acquisitions were accelerated in order to complete in scope, unplanned work.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0041 Spending Forecast	148.3	132.6	15.8
Incremental Scope Change Pending Change Management	0.0	0.3	(0.3)
RL-0041 – Total	148.3	132.9	15.4

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis:

The FY2019 projected funding for project breakdown (PBS) structure RL-0041 is \$148.3 million. The projected funding includes carryover from FY2018 and new budget authority. The spending forecast is based on the FY2019 performance measurement baseline annual update submitted to RL with updates

through December FY2018. FY2019 funding aligns with the RL Integrated Priority List (IPL). The variance primarily reflects the work scope included in the IPL.

Critical Path Schedule:

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

Number	Title	Due Date	Forecasted Date	Status/ Comment
M-016-85A	Complete Remote Excavation of 300-296 Waste Site	9/30/2019	3/30/2021	Milestone will be missed.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Concur on DSA/TSR Revision Comment Resolution	2/25/2019(A)	5/16/2019(A)
RL Prepare DSA/TSR Revision SER	5/17/2019(A)	6/14/2019
RL Review EPHA Draft	6/28/2019	7/12/2019
SRB Review SER for DSA/TSR Revision	6/15/2019	6/21/2019
RL Issue SER for 324 DSA/TSR	6/22/2019	6/28/2019
RL Approval EPHA Final	7/30/2019	8/13/2019
DOE Independent Design Review - IFC Structural Modification	7/18/2019	8/7/2019

Section G

Fast Flux Test Facility Closure (RL-0042)

CH2MHILL
Plateau Remediation Company



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

May 2019
CHPRC-2019-05, 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

- Prepared a draft statement of work (SOW) for securing a tank diving contractor to perform the five year T-58 and T-87 internal water storage tank inspections. Started functional review of the SOW and opened a discussion with labor relations to determine expected plant forces work review requirements.
- Performed a team work planning review of the work change notice for the P-16 pump variable frequency drive installation work package and started incorporating comments.
- Continued development of the acceptance test plan for the P-16 pump variable frequency drive replacement based on the approved engineering change request (ECR).
- Received final approval and release of an ECR to replace the C670 fire pump controller.
- Continued review of the acceptance test plan for replacement of the C670 fire pump controller.

MAJOR ISSUES

Issue

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

Corrective Action

An alternative option was identified that involves replacing diesel fire pump P-61 in 481A Building. However, this will require additional work to restore power to the building and install additional valves to connect the P-61 replacement to the area wide water.

Status

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

RISK MANAGEMENT STATUS

None currently identified.

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	0.2	0.2	0.2	0.0	0.0%	(0.0)	-8.4%

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/-8.4%)

The cost variance is within reporting thresholds.

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

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	27.5	27.5	23.1	0.0	0.0%	4.4	15.9%	28.1	24.1	1.0	4.0

Numbers are rounded to the nearest \$0.1 million

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

The schedule variance is within reporting thresholds.

CTD Cost Performance (+\$4.4M/+15.9%)

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

Variance at Completion (+\$4.0M/+14.3%)

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS VS. SPEND FORECAST (\$M)

RL-0042 FFTF Closure	FY2019		Variance
	Projected Funding	Spending Forecast	
RL-0042 Spending Forecast	4.3	2.5	1.8

Numbers are rounded to the nearest \$0.1 million

Funds Analysis

Fiscal year 2019 funding for project breakdown structure RL-0042 is \$4.3 million. The spending forecast is \$2.5 million, which represents increased support due to electrical component failures and configuration challenges, increased interest by regulators requiring additional inspections, and a recent failure of the water system/water piping.

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



May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

1. CONTRACTOR		2. CONTRACT				3. PROGRAM				4. REPORT PERIOD							
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract				a. NAME Plateau Remediation Contract				a. FROM (YYYYMMDD) 2019 / 04 / 22							
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18				b. TO (YYYYMMDD) 2019 / 05 / 26							
c. TYPE CPAF		d. SHARE RATIO															
5. CONTRACT DATA																	
a. QUANTITY 1	b. NEGOTIATED COST 5,778,403	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 571,154	d. TARGET PROFIT/FEE 254,770	e. TARGET PRICE 6,033,173	f. ESTIMATED PRICE 6,472,667	g. CONTRACT CEILING 6,033,173	h. ESTIMATED CONTRACT CEILING 6,472,667	i. DATE OF OTB/OTS (YYYYMMDD)									
6. ESTIMATED COST AT COMPLETION						7. AUTHORIZED CONTRACTOR REPRESENTATIVE											
MANAGEMENT ESTIMATE AT COMPLETION (1)			CONTRACT BUDGET BASE (2)		VARIANCE (3)		a. NAME (Last, First, Middle Initial) Underwood, Teresa			b. TITLE Prime Contract Compliance Manager							
a. BEST CASE 6,154,619							c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)							
b. WORST CASE 6,226,619																	
c. MOST LIKELY 6,217,897			6,349,557		131,660												
8. PERFORMANCE DATA																	
CAPN.PBS																	
ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION			
	WORK SCHEDULED (2)	WORK PERFORMED (3)	ACTUAL COST WORK PERFORMED (4)	SCHEDULE (5)	VARIANCE COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	ACTUAL COST WORK PERFORMED (9)	SCHEDULE (10)	VARIANCE COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
RL-0011 Nuclear Mat Stab & Disp PFP	7,782	4,991	6,247	-2,791	-1,256	1,094,996	1,085,730	1,181,249	-9,266	-95,519	0	0	0	1,122,883	1,225,608	-102,724	
RL-0012 SNF Stabilization & Disp	1,838	2,046	1,506	208	540	754,785	753,916	724,305	-869	29,611	0	0	0	761,100	729,988	31,112	
RL-0013 Solid Waste Stab & Disp	16,426	16,177	12,868	-249	3,308	1,430,186	1,427,769	1,338,286	-2,417	89,483	0	0	0	1,484,642	1,393,089	91,553	
RL-0030 Soil & Water Rem-Grndwtr/Vadose	13,802	12,804	10,871	-998	1,933	1,602,060	1,599,783	1,543,151	-2,278	56,632	0	0	0	1,644,997	1,583,653	61,343	
RL-0040 Nuc Fac D&D - Remainder Hanfrd	7,078	4,497	7,061	-2,581	-2,565	541,100	535,274	514,894	-5,826	20,380	0	0	0	554,854	539,430	15,424	
RL-0041 Nuc Fac D&D - RC Closure Proj	11,417	10,372	11,519	-1,046	-1,147	653,168	640,204	605,882	-12,964	34,323	0	0	0	696,118	658,740	37,378	
RL-0042 Nuc Fac D&D - FFTF Proj	171	171	185	0	-14	27,536	27,536	23,147	0	4,389	0	0	0	28,137	24,112	4,026	
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	58,514	51,057	50,257	-7,457	800	6,103,830	6,070,212	5,930,913	-33,618	139,298	0	0	0	6,292,731	6,154,619	138,112	
f. MANAGEMENT RESERVE														63,278			
g. TOTAL	58,514	51,057	50,257	-7,457	800	6,103,830	6,070,212	5,930,913	-33,618	139,298	0	0	0	6,356,009			
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																	
a. VARIANCE ADJUSTMENT																	
b. TOTAL CONTRACT VARIANCE													-33,618	139,298	6,356,009	6,154,619	201,390

*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) 2019 / 04 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 05 / 26	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)								
34 - Env Program & Strategic Plng	1,314	1,333	1,224	19	110	94,107	93,343	86,734	-764	6,609	0	0	0	98,812	91,772	7,040		
35 - Business Services	0	0	0	0	0	476,879	476,879	453,596	0	23,283	0	0	0	476,879	453,596	23,283		
36 - Prime Contract & Proj Integr	0	0	0	0	0	1,111	1,111	492	0	618	0	0	0	1,111	492	618		
37 - Resource Mgmt & Strategic Intg	162	162	99	0	63	8,745	8,745	5,274	0	3,472	0	0	0	9,314	5,705	3,609		
3B - PFP Closure Project	7,782	4,991	6,247	-2,791	-1,256	1,006,356	997,090	1,100,184	-9,266	-103,094	0	0	0	1,034,244	1,144,543	-110,299		
3C - Waste & Fuels Management Project	13,127	12,885	9,471	-242	3,414	1,271,273	1,269,014	1,182,412	-2,259	86,602	0	0	0	1,314,083	1,224,827	89,257		
3D - Soil & Groundwater Remediation	12,447	11,430	9,628	-1,017	1,803	1,406,192	1,404,678	1,348,809	-1,514	55,869	0	0	0	1,444,281	1,384,166	60,116		
3G - K Basin Oper & Plateau Remediation Project	7,251	6,493	6,702	-758	-209	1,085,934	1,080,789	1,019,417	-5,144	61,372	0	0	0	1,113,117	1,049,571	63,546		
3H - River Risk Management Project	9,222	9,135	9,670	-87	-535	273,303	264,457	275,506	-8,845	-11,048	0	0	0	306,745	316,063	-9,318		
3K - Central Plateau Risk Reduction	7,209	4,627	7,217	-2,581	-2,590	479,931	474,105	458,490	-5,826	15,615	0	0	0	494,144	483,883	10,261		
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)	58,514	51,057	50,257	-7,457	800	6,103,830	6,070,212	5,930,913	-33,618	139,298	0	0	0	6,292,731	6,154,619	138,112		
f. MANAGEMENT RESERVE														63,278				
g. TOTAL	58,514	51,057	50,257	-7,457	800	6,103,830	6,070,212	5,930,913	-33,618	139,298	0	0	0	6,356,009				

CONTRACT PERFORMANCE REPORT																	Form Approved				
FORMAT 3 - BASELINE										DOLLARS IN THOUSANDS							OMB No. 0704-0188				
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA			2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009						4. REPORT PERIOD a. FROM: 2019/04/22 b. TO: 2019/05/26								
5. CONTRACT DATA			a. ORIGINAL NEGOTIATED COST 4,312,366		b. NEGOTIATED CONTRACT CHANGE \$1,466,037		c. CURRENT NEGOTIATED COST (A + B) \$5,778,403		d. ESTIMATED COST AUTH UNPRICED WORK \$571,154		e. CONTRACT BUDGET BASE (C + D) \$6,349,557		f. TOTAL ALLOCATED BUDGET \$6,356,009		g. DIFFERENCE (E - F) (\$6,452)						
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2019		k. CONT COMPLETION DATE 9/30/2019				l. EST COMPLETION DATE 9/30/2019										
6. PERFORMANCE DATA																					
ITEM (1)			BCWS CUM TO DATE (2)		BCWS FOR REPORT PERIOD (3)		SIX MONTH FORECAST						BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)							UNDISTRIB BUDGET (18)	TOTAL BUDGET (19)
							+1 Jun-19 (4)	+2 Jul-19 (5)	+3 Aug-19 (6)	+4 Sep-19 (7)	+5 Oct-19 (8)	+6 Nov-19 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	FY19 (16)		
a. PM BASELINE (BEGIN OF PERIOD)			6,045,317	58,514	42,583	38,335	52,390	48,274	4,260	3,005	3,391,477	391,653	471,323	504,826	485,028	470,649	570,457	7,319	0	6,292,731	
b. BASELINE CHANGES AUTH DURING REPORT PERIOD BCRA-PRC-19-015R0 - HPIC Updates May FY2019																	0	0		0	
c. PM BASELINE (END OF PERIOD)			6,103,830	58,514	42,583	38,335	52,390	48,274	4,260	3,005	3,391,477	391,653	471,323	504,826	485,028	470,649	570,457	7,319	0	6,292,731	
7. MANAGEMENT RESERVE																				63,278	
8. TOTAL																				6,356,009	

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2019 / 04 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 05 / 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 JUN 2019 (4)	+2 JUL 2019 (5)	+3 AUG 2019 (6)	+4 SEPT 2019 (7)	+5 OCT 2019 (8)	+6 NOV 2019 (9)	DEC 2019 (10)	JAN 2020 (11)	FEB 2020 (12)	MAR 2020 (13)	ATCOMPLETE (14)				
300 - Office of the President	11	864	7	7	7	7	7	0	0	0	0	0	0	0	0	0	890
303 - Internal Audit	6	573	6	6	6	6	6	0	0	0	0	0	0	0	0	0	596
304 - General Counsel	6	530	4	4	4	4	4	0	0	0	0	0	0	0	0	0	547
31 - Communications	8	1178	9	9	9	9	8	0	0	0	0	0	0	0	0	0	1215
32 - Safety Health Security & Quality	57	8229	64	62	62	62	62	0	0	0	0	0	0	0	0	0	8480
34 - Env Program & Strategic Plng	44	5630	46	46	46	46	46	0	0	0	0	0	0	0	0	0	5814
35 - Business Services	58	7840	56	57	61	61	61	0	0	0	0	0	0	0	0	0	8075
36 - Prime Contract & Proj Integr	39	4221	40	41	41	41	41	0	0	0	0	0	0	0	0	0	4386
37 - Resource Mgmt & Strategic Intg	39	3155	41	44	44	44	44	0	0	0	0	0	0	0	0	0	3327
38 - Project Technical Services	36	6273	37	40	40	40	40	0	0	0	0	0	0	0	0	0	6431
3B - PFP Closure Project	211	52889	203	209	207	208	189	194	214	195	15	2	0	0	0	0	54525
3C - Waste & Fuels Management Project	381	56691	402	384	392	388	2	2	3	7	388	2	2	1	1	1	58276
3D - Soil & Groundwater Remediation	270	41647	276	283	296	245	7	4	5	7	7	6	2	2	2	2	42786
3G - K Basin Oper & Plateau Remediation Project	227	35803	242	250	251	231	18	15	20	12	0	0	0	0	0	0	36841
3H - River Risk Management Project	224	7974	227	231	228	230	17	5	0	0	0	0	0	0	0	1	8914
3K - Central Plateau Risk Reduction	231	19093	197	174	193	195	16	11	4	0	0	0	0	0	0	0	19882
g. TOTAL DIRECT	1848	252590	1857	1848	1888	1815	249	231	246	221	24	10	5	5	5	5	260985

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

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 of \$138.1 million, with \$63.3 million of management reserve (MR), for a total positive variance of \$201.4 million. For May, the project was 12.7 percent behind schedule and 1.6 percent under planned cost. Contract to date; the project was 0.6 percent behind schedule and 2.3 percent under planned cost.

There was no change in the difference between the Contract Budget Base (CBB) and the Total Allocated Budget, on Format 3, for the month of May. The current negative delta of \$6,452 million is due to direction from PRC RL Contracting Officer (CO), documented in Correspondence No.1704418A, to implement a \$7 million drawdown for contingency in BCR-011C-17-013R0 as well as an approximate \$0.6 million downward adjustment made in April 2019, to align Authorized Unpriced Work to the Global Settlement Contract MOD 684. The RL CO has not incorporated the directed \$7 million contingency drawdown into the PRC CBB, resulting in the negative delta.

There was one BCR for the month of May and it did not impact the PMB.

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

Variance in Performance BAC and EAC: The variance at complete (VAC) between the BAC and EAC this month is a +\$138.1 million, +2.2% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

CPS - In Process		
	Total Authorized Unpriced Work	\$571,154
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	Grand Total Adjustments	\$571,154

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

Undistributed Budget Activity

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

There was no change to UB in May.

Management Reserve Activity

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

There was no change to MR in May.

Fee Activity

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

There was no change to fee in May.

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

Prepared by: Project Control Staff	Date: 06/19/2019	Approved by:	Date:
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Appendix B

Project Services and Support (WBS 000)



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

M. A. Wright
Vice President for
Project Technical
Services

May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

D. J. Henderson
Director of
Communications

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

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

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

This section is reported quarterly.

Appendix C

Capital Asset Projects

CH2MHILL
Plateau Remediation Company



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

May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

CH2MHILL
Plateau Remediation Company



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

May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Progress has been temporarily put on hold for 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:

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

MAJOR ISSUES

None currently identified.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- Increased Confidence
- No Change
- Decreased Confidence

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

CRITICAL PATH SCHEDULE

The Plutonium Finishing Plant (PFP) Critical Path Schedule begins with completion of demolition of CSZ 2.3 (including the stairwells), followed by the remaining sections of Zones 2, 3, 4, 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 RL concurrence of the management assessment (MA) to resume high-risk demo is obtained. This leads to CD-4 declaration and confirmation of the completion worksheet. The completion of the DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, CD-4, Project Completion, milestone is forecast for December 17, 2019.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	* Due Date	**Forecast Date	Status/ Comment
CAP.1	Removal of 174 gloveboxes from 234-5Z	11/30/2017	12/17/2019	The CAP 1 project forecasted project completion date is December 17, 2019. A five week slip from last month is due to focused attention on the completion of the MA and a deliberate approach used on demolition and load-out activities.

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Nothing to report at this time.

DOE ACTIONS / DECISIONS

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

Appendix C.1

RL-0011.C1 – PFP D&D

(Removal of 174 Gloveboxes from 234-5Z)

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



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

May 2019
CHPRC-2019-05, 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) 2019 / 04 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 05 / 26	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18	

5. CONTRACT DATA								
a. QUANTITY 1	b. NEGOTIATED COST 330,987	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 9,878	e. TARGET PRICE 340,865	f. ESTIMATED PRICE 344,856	g. CONTRACT CEILING 340,865	h. ESTIMATED CONTRACT CEILING 344,856	i. DATE OF OTB/OTS (YYYYMMDD)

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

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-0011 Nuclear Mat Stab & Disp PFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RL_0011_C1.02 Maintain Safe & Compliant PFP	0	0	0	0	0	235,514	235,495	259,792	-19	-24,296	0	0	0	235,514	259,798	-24,283
RL_0011_C1.05 Disposition PFP Facility	0	0	0	0	0	11,990	11,990	12,477	0	-487	0	0	0	11,990	12,477	-487
RL_0011_C1.06 Project Management & Support	0	0	0	0	0	7,221	7,221	7,731	0	-510	0	0	0	7,221	7,731	-510
RL_0011_C1.90 Usage Based Services Distributions -PBS RL-11	0	0	0	0	0	19,399	19,399	19,253	0	147	0	0	0	19,399	19,253	147
RL_0011_C1.98 Ramp-up and transition	0	0	0	0	0	41,028	41,028	33,328	0	7,700	0	0	0	41,028	33,328	7,700
RL_0011_C1.99 PBS RL-11 UBS, G-n-A, Direct Distrib	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,585	-17,433
f. MANAGEMENT RESERVE														2,393		
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545		
9. RECONCILIATION TO CONTRACT BUDGET BASELINE																
a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE																
										-19	-17,446			317,545	332,585	-15,040

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

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2019 / 04 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 05 / 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 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)								
35 - Business Services	0	0	0	0	0	60,427	60,427	52,580	0	7,847	0	0	0	60,427	52,580	7,847		
3B - PFP Closure Project	0	0	0	0	0	254,725	254,706	279,999	-19	-25,293	0	0	0	254,725	280,005	-25,280		
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
d. UNDISTRIBUTED BUDGET																		
e. SUBTOTAL (Performance Measurement Baseline)	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	315,152	332,585	-17,433		
f. MANAGEMENT RESERVE														2,393				
g. TOTAL	0	0	0	0	0	315,152	315,133	332,579	-19	-17,446	0	0	0	317,545				

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2019 / 04 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 05 / 26	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18	

5. PERFORMANCE DATA															
WBS.Resp Org Group ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 JUN 2019 (4)	+2 JUL 2019 (5)	+3 AUG 2019 (6)	+4 SEPT 2019 (7)	+5 OCT 2019 (8)	+6 NOV 2019 (9)	DEC 2019 (10)	JAN 2020 (11)	FEB 2020 (12)	MAR 2020 (13)	ATCOMPLETE (14)		
35 - Business Services	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
3B - PFP Closure Project	0	15441	0	0	0	0	0	0	0	0	0	0	0	0	15442
g. TOTAL DIRECT	0	15458	0	0	0	0	0	0	0	0	0	0	0	0	15459

Appendix C.2

Capital Asset Project

RL-0011.C2 - Demolition of PFP Facilities



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

May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The Plutonium Finishing Plant (PFP) team successfully completed the independent management assessment (MA) required prior to restart of higher-risk work. The assessment team was complimentary of the actions taken as the PFP team prepares to resume higher-risk demolition, and noted in its final report that “the actions taken to prepare to commence [the higher-risk] phase of the demolition work are completed and effective.” The PFP team also completed demolition of the PFP vault, and loaded out all associated debris. Thirteen containers of existing demolition debris and 117 containers of low risk demolition debris were shipped to the Environmental Restoration Disposal Facility (ERDF) for permanent disposal. Set-up for demolition on remaining lower-risk portion of the Main Processing Facility is underway, beginning with Stairwell 2.

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

- Successfully completed the MA designed to verify the PFP Closure Project team’s readiness to begin higher-risk demolition activities. Over two weeks, an independent assessment team interviewed dozens of PFP employees, observed an emergency drill and a waste-loading exercise, reviewed hundreds of documents, and evaluated implemented controls, among other activities. The U.S. Department of Energy Richland Office (RL) provided oversight on the MA, and some of the activities were also observed by representatives from the Defense Nuclear Facilities Safety Board and regulatory agencies. The assessment team was complimentary of the actions taken in preparation to resume higher-risk demolition. The team was also encouraged by actions taken to enhance training, worker involvement, and monitoring, among other improvements. PFP will be working closely with DOE and the regulators over the next several weeks to address a few identified corrective actions with a goal of gaining approval to begin the higher-risk work this summer.
- Successfully completed the demolition and debris disposition of CSZ 4.1 (vault).
- Shipped 130 containers of demolition debris to ERDF, completing loadout of vault debris.

- Prepared to begin demolition on Stairwell 2, including setting-up elevated water cannon placements.
- Continued removing high-efficiency particulate air filters from the ion exchange exhauster units and installing/calibrating gauges. The ion exchange exhauster units will be used in high-risk demolition activities.

MAJOR ISSUES

None currently identified.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

-  Increased Confidence
-  No Change
-  Decreased Confidence

Unmitigated Risk Impacts	Assessment		Comments															
	Month	Trend																
RL-0011/WBS-011.OA																		
Explanation of major changes to the project monthly stoplight chart: Risks PFP-P2-002, <i>Weather Impacts During 235-Z Debris Disposition</i> , and PFP-P-014, <i>Bump and Roll, Labor Assets Management Program (LAMP), or Other Contractor Hiring of Bargaining Unit Employees Affecting Productivity</i> , were removed from the stoplight chart, but will continue to be monitored throughout the remainder of the risk life cycle.																		
Realized Risks (Risks that are currently impacting project cost/schedule)																		
No realized risks identified in <i>May</i> .																		
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																		
No critical risks identified in <i>May</i> .																		
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)																		
No high threat value risks identified in <i>May</i> .																		
FY2019 Risk Triggers (Risk could be realized in FY2019)																		
PFP-P-004: Stop Work From Concerned Workers	Concerned workers result in a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project. Risk Handling Strategy: Accept Probability: Very likely (>90%) Worst Case Impacts: \$0, 52 days	 	Risk Trigger: During resumption of PFP demolition activities, an increase in stop works could result in delays. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps, with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in <i>May</i> . Though increased communication and worker involvement to avoid confusion and concern in an effort to minimize stop works has continued; stop works may impact the project schedule going forward.	Mitigation action(s)	FC Date	%	Update communications as positions change.	Ongoing	N/A	Provide new maps, with entry/exit instructions when boundaries are revised.	Ongoing	N/A	Encourage additional worker involvement	Ongoing	N/A	Increase frequency of post-job reviews.	Ongoing	N/A
Mitigation action(s)	FC Date	%																
Update communications as positions change.	Ongoing	N/A																
Provide new maps, with entry/exit instructions when boundaries are revised.	Ongoing	N/A																
Encourage additional worker involvement	Ongoing	N/A																
Increase frequency of post-job reviews.	Ongoing	N/A																

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

CRITICAL PATH SCHEDULE

The PFP critical path schedule begins with completion of demolition of core stabilization zone (CSZ) 2.3 (including the stairwells), followed by the remaining sections of Zones 2, 3, 4 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 RL concurrence of the MA to resume high-risk demo is obtained. The 234-5Z demolition is projected to complete September 30, 2019. The 236-Z canyon demolition will then resume with completion scheduled for December 2, 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, cover cap activities, and completion of the DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, CD-4, Project Completion, milestone forecast for February 2020.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	* Due Date	**Forecast Date	Status/ Comment
RL-011.C2	Completion of Demolition of all PFP Facilities.	7/31/2020	2/18/2020	The CAP 2 project forecast project completion date is February 18, 2020. A five week slip in the forecast completion date is due to focused attention on the completion of the MA and a deliberate approach used on demolition and waste loadout activities.

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

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

DOE ACTIONS / DECISIONS

Working with RL on CD-4 closure actions.

Appendix C.2

RL-0011.C2 - Demolition of PFP Facilities

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company



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

May 2019
CHPRC-2019-05, Rev. 0
Contract DE-AC07-08RL14788
Deliverable C.3.1.3.1 - 1

**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) 2019 / 04 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 05 / 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	6,402	3,742	4,934	-2,660	-1,193	99,604	90,552	126,682	-9,052	-36,130	0	0	0	125,742	162,170	-36,428	
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)	6,402	3,742	4,934	-2,660	-1,193	99,604	90,552	126,682	-9,052	-36,130	0	0	0	125,742	162,170	-36,428	
f. MANAGEMENT RESERVE														13,535			
g. TOTAL	6,402	3,742	4,934	-2,660	-1,193	99,604	90,552	126,682	-9,052	-36,130	0	0	0	139,278			

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) 2019 / 04 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019 / 05 / 26	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA		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 JUN 2019 (4)	+2 JUL 2019 (5)	+3 AUG 2019 (6)	+4 SEPT 2019 (7)	+5 OCT 2019 (8)	+6 NOV 2019 (9)	DEC 2019 (10)	JAN 2020 (11)	FEB 2020 (12)	MAR 2020 (13)	ATCOMPLETE (14)	
3B - PFP Closure Project	168	3440	159	163	161	160	147	153	158	154	2	0	0	4697
g. TOTAL DIRECT	168	3440	159	163	161	160	147	153	158	154	2	0	0	4697

CLASSIFICATION (When Filled In)										
CONTRACT PERFORMANCE REPORT										
FORMAT 5 - Explanations and Problem Analysis										
FORM APPROVED OMB No. 0704-0188										
1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD				
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2019/04/22				
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2019/05/26				
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:		6,401.9	3,741.6	4,934.5	-2,660.3	-41.6%	-1,192.9	-31.9%	0.58	0.76
Cumulative:		99,603.9	90,551.8	126,682.3	-9,052.1	-9.1%	-36,130.5	-39.9%	0.91	0.71
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		125,742.1	162,170.4	-36,428.4	-29.0%	0	0.99			
Explanation of Variance/Description of Problem:										
Current Month:										
Schedule Variance: The Current Month (CM) unfavorable schedule variance is primarily attributed to the project's deliberate approach to complete 235-Z low-risk demolition and load-out activities.										
Cost Variance: The CM unfavorable cost variance is primarily attributed to the accrual of labor costs and lagging demolition and debris load-out activities. The Management Assessment to resume high-risk demolition required the diversion of labor resources that would otherwise been allocated to demolition and debris load-out.										
Cumulative to Date:										
Schedule Variance: The cumulative schedule variance is due to delayed completion of low risk work scope due to implementation of revised approach and a deliberate approach to demolition activities.										
Cost Variance: The cumulative negative cost variance is associated with MSA resources arriving to support PFP demolition that were planned as P/Q shift support. Additionally, Readiness Assessment activities lagged due to a delay in the start of 236-Z Demolition and increased requirements to show readiness resulting in increased costs due to additional time and effort required from subcontracted and direct labor resources. The apportioned project management activities (i.e. project oversight and planning) and support activities are ongoing, while a delay in the discrete field work is resulting in minimal apportioned BCWP. Demolition mobilization activities took longer than originally assumed because of recommendations made during the readiness assessment and purchasing unplanned PBS fixative to support 236-Z demolition. In addition, significant winter weather impacts (i.e., snow, wind, freezing rain, etc.) have been recognized on the Hanford Site. Site closures, freezing temperatures and significant snowfall that required clearing of the demolition zone rather than performing physical demolition on the facilities while a constant staff provides demolition support services is a contributing factor. Unplanned Management Assessment efforts for the 234-5Z and 291-Z facilities took longer than originally assumed. Impacts associated with the Stop Work that was initiated by the HAMTC union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As the project gets further into the demolition phase of the PRF Canyon, increased utilization of Personnel Protective Equipment to align with the original plan as well as increased material procurements to align with the scope being performed (i.e., P-100 filters, Labounty Shear, additional fixative, etc.) are also contributing to this variance. An adjustment to the General & Administrative (G&A) Rate for FY2017 resulted in a reduction to the Performance Measurement Baseline (PMB) of \$463K. Finally, impacts from a contamination event that occurred on Friday, December 15, 2017, swing shift where RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis was conducted and resumption actions identified.										
This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
Impact:										
Schedule Impact: Completion of all demolition activities are forecast to occur in December 2019. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of November 30, 2017, was not met.										
Cost Impact: A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017.										
Corrective Action:										
NOTE: All corrective actions and resumption pre-start items identified in the management assessment are have been completed, and the DOE has provided concurrence for the resumption of lower-risk work. The Stop Work issued by CHPRC management on demo activities has been lifted and resumption of low risk debris disposition is underway.										
Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):										
The change in the difference between the Contract Budget Base (CBB) and the Total Allocated Budget, on Format 3, for the month of May was caused by moving the \$21 million implemented by BCR-011C-19-002R0, in April, to Authorized Unpriced Work. The current negative delta is due to the request from PRC RL Contracting Officer (CO), documented in Correspondence No.1704418A, to implement a \$7 million drawdown for contingency in BCR-011C-17-013R0. The RL CO has not incorporated the directed \$7 million contingency drawdown into the PMB CBB, resulting in the negative delta.										
The following items are addressed, as applicable:										
1. Schedule Margin Analysis: No change in the month of May										
2. IMS Data dictionary Changes: No change in the month of May										
3. Forecast Schedule with No Baseline: No change in the month of May										
4. UB Balance: No change in the month of May										
5. Negative Actual Cost of Work Performed (ACWP): No change in the month of May										
6. Earned Actual Cost (EAC) Analysis: Best Case = \$162,170; Most Likely = \$175,706; Worst Case = \$176,075. The Best Case EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no use of management reserve. The Most Likely EAC is the EAC reported this month plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will remain at completion but all available management reserve is used (e.g., all identified risks realized). The Worst Case EAC is the ACWP plus the ETC or BCWR if greater plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will be eroded at completion and all available management reserve is used (e.g., all identified risks realized), plus the scope identified in the Trend Log that is not in the EAC. The Best/Worst and Most Likely EAC values are documented in the Format 1 Report.										
7. Negative CV > VAC: No change in the month of May										
8. Management Reserve Transactions: No change in the month of May										
9. Freeze Period Changes: No change in the month of May										
10. Retroactive Changes: No change in the month of May										
11. Earned Value Type Changes: No change in the month of May										
Prepared by: Jessica Mares		Date: 06/13/19			Approved by:			Date:		