

Monthly Performance Report

May 2020

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

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

CH2MHILL
Plateau Remediation Company

P.O. Box 1600
Richland, Washington 99352

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APPROVED
By Janis D. Aardal at 3:41 pm, Jun 25, 2020

Release Approval

Date

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CH2MHILL
Plateau Remediation Company
a Jacobs company



L. Ty Blackford
President and
Chief Executive Officer

Monthly Performance Report

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May 2020
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EXECUTIVE SUMMARY

CH2M HILL Plateau Remediation Company (CHPRC) has advanced cleanup throughout the Hanford Site during May. On March 24, 2020, the U.S. Department of Energy (DOE), Richland Operations Office (RL) issued CHPRC a partial stop work order (PSWO) due to the coronavirus (COVID-19). A safe and orderly ramp down of all operations activities was implemented that ensured the continuation of non-portable essential mission-critical activities and maximized the use of teleworking for portable work. Following completion of the ramp down, operations, surveillance and maintenance activities necessary to maintain safety and environmental compliance continued. CHPRC implemented plans to mitigate work delays and disruption and address impacts to programmatic work. In compliance with state and federal government COVID-19 guidance, and as required by the PSWO, CHPRC has taken and continues to take reasonable actions to protect and provide support to our workforce.

Major accomplishments included the following:

- Plutonium Finishing Plant (PFP) Closure Project:** Crews continued to maintain the demolition site in essential mission-critical operations condition in compliance with the RL PSWO by performing a survey of PFP radiological boundaries and re-applying soil fixative to the PFP demolition site.
- Soil and Groundwater Remediation Project:** The project continued essential mission-critical operations in compliance with the RL PSWO. The 100-KR-1, 100-KR-2 and 100-KR-4 Operable Units Feasibility Study was completed and transmitted to RL. The project supported the public review process of the 200-BP-5/200-PO-1 Operable Unit Proposed Plan, which began on May 4, 2020. All six groundwater pump and treat facilities continued operations with a skeleton crew, continuing progress toward the goal of 2.2 billion gallons of groundwater treated for fiscal year (FY) 2020.
- K Basins Operations (KBO):** At KBO, minimum essential mission-critical operations continued in compliance with the RL PSWO. Daily operations of the 400 Area and 100K Area water plants were maintained. The irradiated fuel storage basin water treatment ion exchange filter IXM-4 was replaced at 105KW, and further implementation of social distancing features in mobile offices, 105K West and the 400 Area Maintenance and Storage Facility were completed. The contract for fabrication of the trailer-mounted electrical substation to support deactivation at the 105K West Facility was awarded. The request for proposal for installation of a mobile office trailer to support construction of the interim secure storage structure around the 105K East Reactor was issued. Fabrication of vertical pipe casing (VPC) and hydraulic power units was completed, as well as installation of a VPC for mockup testing. Planning efforts to support resumption of work at 105K West and soil remediation at 100K continued.
- Waste and Fuels Management (W&FM) Project:** The W&FM Project continued to perform essential mission-critical operations in compliance with the RL PSWO. The Management of Cesium and Strontium Capsule project, Project W-135, *Waste and Encapsulation and Storage Facility (WESF) Modifications*, continued to work on DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, Critical Decision (CD)-2 and CD-3 deliverables. The project is preparing procurement documentation to support award of a construction subcontract to modify the WESF to support transfer of the capsules to dry storage.



CHPRC recently performed the routine application of fixative to the former Plutonium Finishing Plant footprint to ensure continued site safety.

- **River Risk Management Project:** The project continued essential mission-critical operations in compliance with the RL PSWO, with portable work continuing using temporary alternate work locations as appropriate. Implementation of social distancing modifications was completed for one of the construction subcontractors on the project, and preparations are underway to implement social distancing for the Radiological Control organization. Engineering continued to support engineered equipment procurements, revising the current Operations Plan and revising the Project Execution Plan. The project released the 324 Building Structural Formal Design Review Report on May 21, 2020. Equipment procurement continued for the cell dams, universal cutting tool, waste boxes, modified airlock rail system and the B Cell 10-ton crane. The Environmental Restoration Disposal Facility received two long-length waste items from tank farms.
- **Central Plateau Risk Management (CPRM) Project:** The project continued essential mission-critical operations in compliance with the RL PSWO. On the Central Plateau, crews completed the monthly As Low As Reasonably Achievable Current Technology surveys at the canyon facilities and operated the Central Radiological Count Facility. In the 400 Area, crews completed the monthly water plant and septic system inspections. In the 500 Area, crews completed the weekly aqueous makeup inspections. CPRM continued social distancing packing and moves in MO-294 and MO-6114.
- **West Area Remediation Project:** Crews set up work areas to implement social distancing measures. Planning progressed for sampling and characterization, hazard material removal and demolition work packages related to the planned demolition of the 234-5Z-BA, 234-5Z-BE and 216-ZP-1 structures.

The President's Zero Accident Council (PZAC) meeting for May was hosted by CPRM via Virtual Meeting. The three main ideas were:

- Helping people change.
- What the new "norm" looks like.
- Welcome to the jungle.

Four *Thinking Target Zero* (TTZ) bulletins were published to convey important occupational, safety, health and environmental messages:

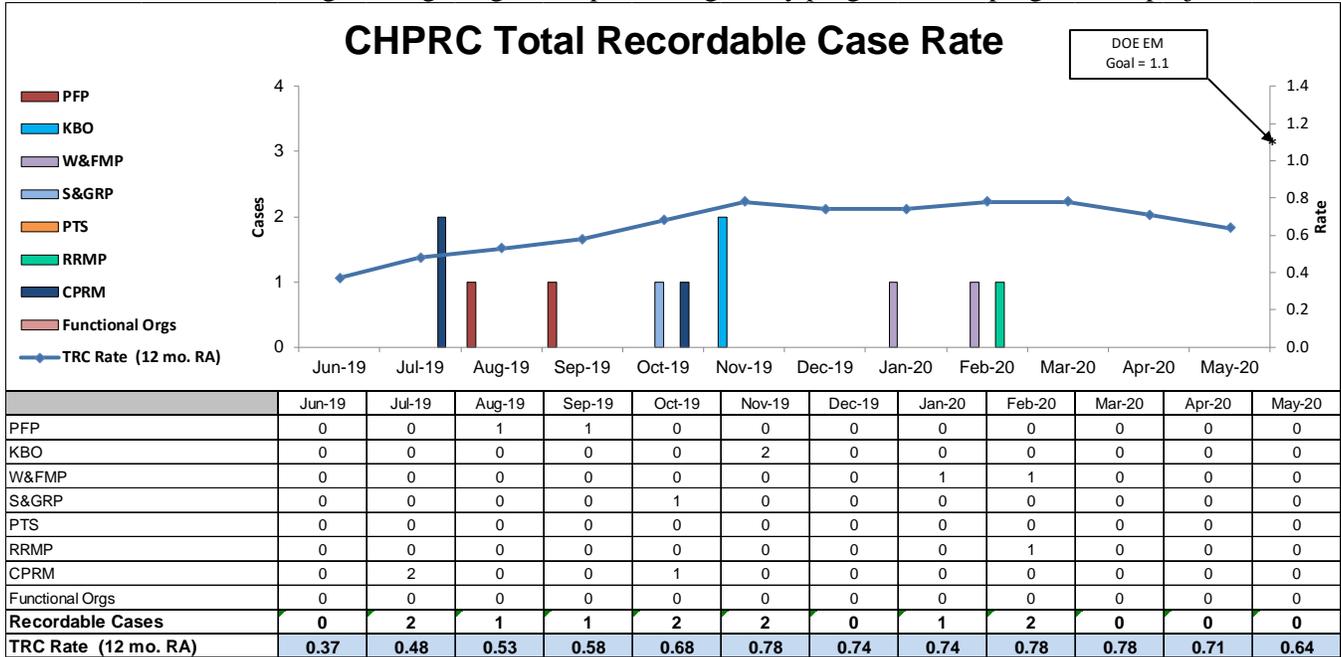
- Plastic bag ban.
- VPPPA scholarships.
- Allergies and pests.
- Cooking outdoors.

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

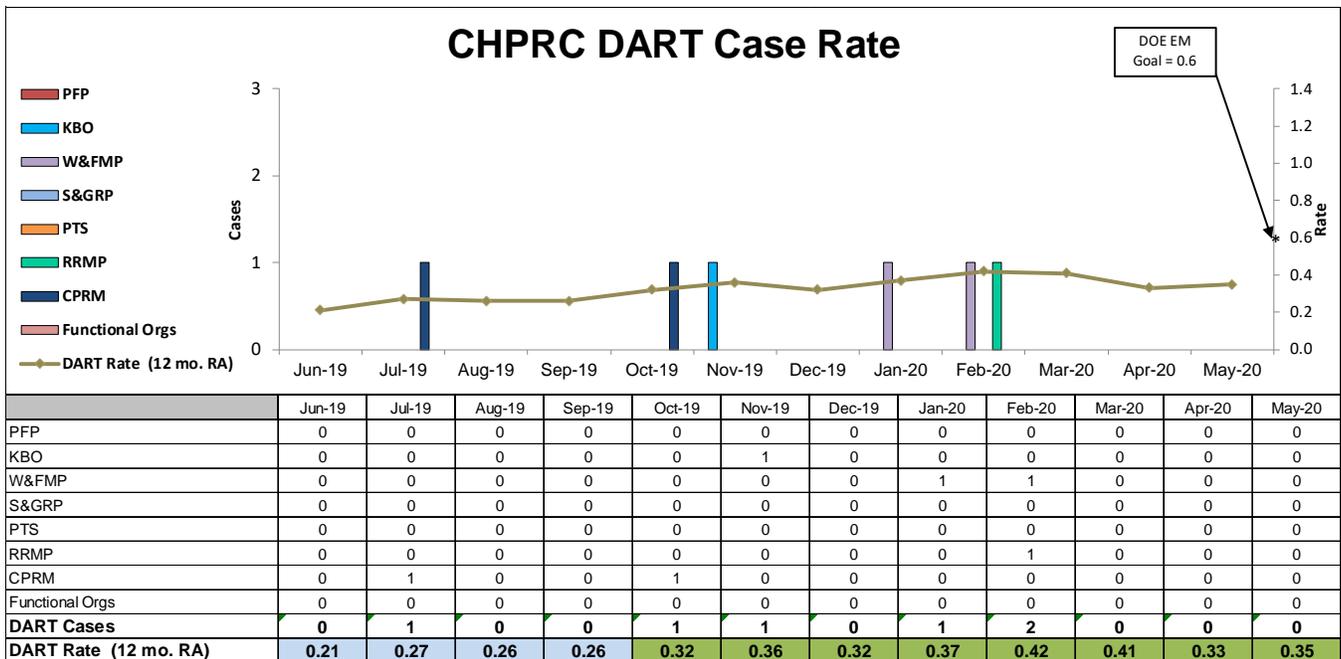
- Four Lessons Learned:
 - OPEXShare: 2020-RL-HNF-64903 Purchasing Safety Apparel Online.
 - OPEXShare: 2020-KBO-0001 Inadequate Review of Work Control Leads to Improper Use of PPE.
 - OPEXShare: NNSS-2019-2-6-25812 What safe practices will you do today to get to tomorrow?
 - OPEXShare: 2020-RL-HNF-65015 Follow the Manufacturer's Instructions – Use Caution when using Homemade Hand Sanitizers.
- Injuries.
- Weekly ethics moments.
- Vehicle events.
- MSA custodial services.
- VPPPA Scholarships.
- Listen to your body.
- Electrical safety at home.
- Increased bird nesting.
- Protect your hearing.
- HPMC – telehealth services.
- Changes at HPMC clinics.
- Summer safety 2020.
- Updates for Central Badging.
- Information management.
- Electronic approvals.
- Welcome Back! Worker safety re-focus.

TARGET ZERO PERFORMANCE

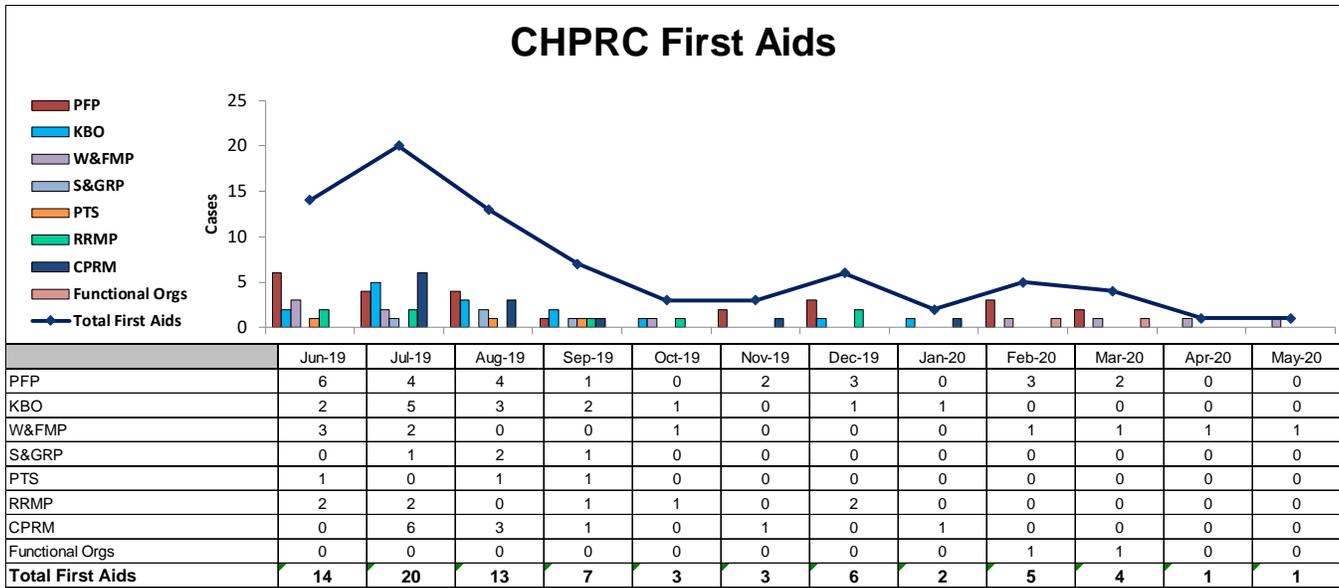
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.64 is based on a total of 11 Recordable injuries. May had no Occupational Safety and Health Administration Recordable cases.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.35 is based upon a total of six Days Away cases. May had no reported DART cases.



First Aid Case Summary: CHPRC reported one first aid case in May. The contributor was a miscellaneous. (burn, rash, repetitive motion, etc.) injury.

KEY ACCOMPLISHMENTS

Projects

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

Project Services and Support

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

MAJOR ISSUES

Projects

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

Project Services and Support

Issue

Due to COVID-19, a national emergency was declared on March 13, 2020. On March 17, 2020, CHPRC senior management issued a companywide stop work on all fieldwork not associated with technical safety requirements, environmental compliance or emergency response. On March 18, 2020, CHPRC submitted letter CHPRC-2001123 to RL identifying that COVID-19 may impact CHPRC’s ability to meet contractual requirements. On March 24, 2020, RL issued letter 20-PRO-0139, a PSWO for non-portable work. On May 20, 2020, CHPRC received letter 20-PRO-0168, which extended the PSWO through June 22, 2020, unless the contracting officer directs an earlier date. The PSWO noted that CHPRC would have 30 days following termination of the PSWO to assert its rights for an equitable adjustment. On May 22, 2020, the RL contracting officer approved CHPRC’s request for submission of the Request for Equitable Adjustment (REA) 90 days after the end of the PSWO. CHPRC anticipates that in addition to schedule impacts, the PSWO will result in FY2020 and FY2021 cost impacts under the following clauses:

- Plateau Remediation Contract (PRC) Section Contract Clause I.115 Federal Acquisition Regulation (FAR) 52.249-14 “Excusable Delays” (April 1984)
- PRC Contract Clause I.102 FAR 52.243-2, “Changes – Cost Reimbursement” (August 1987) – Alternate II (April 1984), Alternate III (April 1984), and Alternate IV (April 1984)
- PRC Contract Clause I.89 FAR 52.236-2, “Differing Site Conditions” (April 1984)

Corrective Action

CHPRC will timely notify the RL contracting officer of events, incidents or circumstances causing grounds to submit an REA. Following receipt of RL’s PSWO direction, a PSWO implementation plan and restart plan were developed. To support workforce stability as directed by RL, CHPRC employees were provided attendance code “COV” to be used for charging hours not worked but in a paid status for time not spent on portable work or for those where performance of meaningful productive work is not practical. In addition, CHPRC provided similar guidance to our subcontractors that we believe will be critical to ramp up and execute to full performance capacity at the conclusion of the partial stop work period. This guidance also notified our subcontractors that justifiable absence time could be reimbursable by CHPRC.

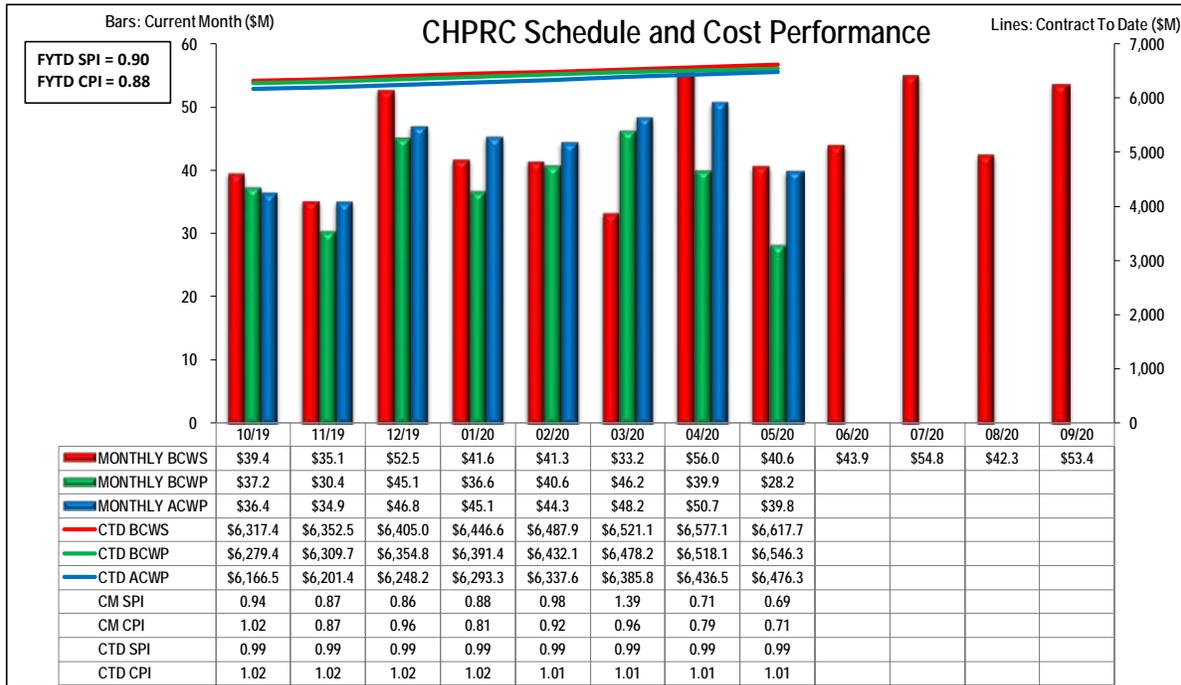
Status

The situation at the Hanford Site continues to evolve. CHPRC has implemented plans to mitigate work delays and disruption and cost-effectively address unanticipated impacts to programmatic work. CHPRC has established separate financial account(s) to collect costs associated with COVID-19. CHPRC remains in constant contact with RL to ensure related information requests and deliverables meet RL needs, and CHPRC stays abreast of potential changes in the essential mission-critical operations posture so they can be anticipated and addressed in a timely manner should they occur. Development of social distancing and staffing re-mobilization plans, new and revised CHPRC policies and procedures to address COVID-19 and new training for returning workers were developed. Development of deliverables in response to COVID-19 and the PSWO were and continue to be coordinated with other Hanford contractors to ensure a collaborative, consistent approach for both work ramp down and resumption activities planned and proposed to RL. Additionally, CHPRC continues to communicate to RL that the ramp down and resumption activities will have both cost and schedule impacts on the work planned for FY2020 and FY2021. Major updates and communications in May include the following:

- On May 14, 2020, CHPRC received modification 740 of the Plateau Remediation Contract adding the Coronavirus Aid, Relief, and Economic Security (CARES) Act via CHPRC-2001779 with the effective date of March 25, 2020.
- On May 20, 2020, CHPRC received letter 20-PRO-0168, extending the PSWO through June 22, 2020, unless the contracting officer directs an earlier date.
- On May 20, 2020, CHPRC received concurrence from RL via letter 20-AMRP-0027 on the technical scope and approach to remobilization described by HNF-64785, Revision 3.
- On May 22, 2020, RL’s contracting officer responded to CHPRC’s request via CHPRC-2001869, approving REA submission 90 days after the end of the PSWO.

In compliance with state and federal government COVID-19 guidance, and as required by or in consequence of the PSWO, CHPRC has taken and continues to take reasonable actions to protect and provide support to the workforce.

EARNED VALUE MANAGEMENT



| | SM | | | | | SM | | | | | SM | | | |
|---|----------------|-------------|-------------|-------------|---------------|------------------|----------------|----------------|----------------|---------------|-----------------|----------------|----------------|-------------|
| | 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 | - | - | 2.9 | - | (2.9) | 1,143.6 | 1,129.9 | 1,239.0 | (13.7) | (109.1) | 1,143.6 | 1,253.7 | (110.2) | |
| RL-0012 - SNF Stabilization & Disposition | - | - | - | - | - | 759.6 | 759.6 | 729.8 | (0.0) | 29.8 | 759.6 | 729.8 | 29.8 | |
| RL-0013 - Solid Waste Stab & Disposition | 13.7 | 11.8 | 14.1 | (1.9) | (2.3) | 1,601.5 | 1,591.8 | 1,509.5 | (9.7) | 82.3 | 1,675.3 | 1,598.8 | 76.5 | |
| RL-0030 - Soil & Water Rem-Grndwtr/Vadose | 12.1 | 6.3 | 7.5 | (5.8) | (1.2) | 1,712.7 | 1,696.3 | 1,647.8 | (16.4) | 48.5 | 1,755.1 | 1,706.9 | 48.2 | |
| RL-0040 - Nuc Fac D&D - Remainder | 5.0 | 2.8 | 5.6 | (2.2) | (2.9) | 604.3 | 591.0 | 582.5 | (13.3) | 8.5 | 638.1 | 635.4 | 2.7 | |
| RL-0041 - Nuc Fac D&D - RC Closure Project | 9.6 | 7.1 | 9.6 | (2.5) | (2.4) | 765.3 | 747.0 | 741.7 | (18.3) | 5.3 | 808.2 | 807.5 | 0.7 | |
| RL-0042 - Nuc Fac D&D - FFTF Project | 0.2 | 0.2 | 0.1 | (0.0) | 0.1 | 30.8 | 30.7 | 25.9 | (0.0) | 4.9 | 32.3 | 27.6 | 4.7 | |
| (Values are rounded to the nearest \$0.1M) | Total | 40.6 | 28.2 | 39.8 | (12.4) | (11.6) | 6,617.7 | 6,546.3 | 6,476.3 | (71.4) | 70.0 | 6,812.2 | 6,759.8 | 52.4 |

Performance Summary

CHPRC continues to track completion of the contract within budget. Currently, a variance at completion of the contract of \$52.4 million is projected, with an additional \$48.2 million of management reserve (MR) for a total positive variance of \$100.6 million. For May, the project was 30.6 percent behind schedule and 41.2 percent over planned cost. Contract to date, the project was 1.1 percent behind schedule and 1.1 percent under planned cost.

The current month (CM) negative schedule and cost variances were the result of the PSWO issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with continuation of essential mission-critical operations that could not be performed in a safe and compliant manner consistent with the Centers for Disease Control and Prevention COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. Non-portable work activities are work that cannot be performed in a remote manner (e.g., telework from home). A large amount of discrete scope across the projects was demobilized and placed in safe configuration in late March. CHPRC and subcontractor labor assigned to work that could not

be performed in a remote manner charged to segregated accounts for unproductive time caused by the PSWO. The cost for the standby of subcontractor equipment remaining onsite during this period was also charged to these segregated accounts. As the method of earning performance for discrete scope is based on physical progress in the field, no performance was taken on many accounts, causing the negative schedule and cost variances.

FUNDING ANALYSIS

FY2020 Funds vs. Fiscal Year Spend Forecast (\$M)

| PBS | Project | FY2020 | | Variance |
|--|--|-------------------|-------------------|-------------|
| | | Projected Funding | Spending Forecast | |
| RL-0011 | Nuclear Materials Stabilization and Disposition | 34.4 | 38.9 | (4.5) |
| RL-0012 | Spent Nuclear Fuel Stabilization and Disposition | 0.6 | (0.1) | 0.6 |
| RL-0013 | Waste and Fuels Management Project | 202.7 | 199.6 | 3.1 |
| RL-0013 | Management of Cesium and Strontium Capsules | 14.3 | 1.1 | 13.2 |
| RL-0030 | Soil, Groundwater and Vadose Zone Remediation | 126.0 | 116.8 | 9.2 |
| RL-0040 | Nuclear Facility D&D, Remainder of Hanford | 93.3 | 90.0 | 3.2 |
| RL-0041 | Nuclear Facility D&D, River Corridor | 150.9 | 146.9 | 4.0 |
| RL-0042 | Fast Flux Test Facility Closure | 4.8 | 3.8 | 1.0 |
| Total Fiscal Year Spending Forecast | | 626.8 | 596.9 | 29.9 |

Funds/Variance Analysis

FY2020 overall projected funding of \$626.8 million remains unchanged from last month. The spending forecast of \$596.9 million reflects an overall reduction of \$3.4 million from last month, primarily for work scope pushing into FY2021.

BASELINE CHANGE REQUESTS

In May, CHPRC approved and implemented 14 baseline change requests (BCRs) into the performance measurement baseline (PMB). Nine of the 14 BCRs impacted the PMB budget. Each change request is identified in the following table:

| Change Request# | Title | PBS | Summary of Change |
|------------------|--|---------|--|
| BCR-013-20-018R0 | <i>Remove IDF Pad Construction Scope from PMB</i> | RL-0013 | This BCR removed the scope of WBS 013.12.07.03.01 – (GPP) Build Cooling Pad and 013.12.07.03.02 (GPP) Build Waste Treatment Pad from the FY2020 PMB, as construction of these pads is no longer necessary this FY. This BCR decreases the PMB by \$1,086.4K. |
| BCR-013-20-020R0 | <i>RL-0013 Waste and Fuels Scope Reductions</i> | RL-0013 | This BCR modified the FY2020 PMB to remove planned scope that will not be performed in FY2020. On May 12, 2020, CHPRC with the concurrence of RL project management staff via telephone conversation reviewed this list of scope to be removed and received concurrence to proceed. This BCR decreased the PMB by \$2,748.2K. |
| BCR-013-20-021R0 | <i>RL-0013 W-135 Scope Revisions</i> | RL-0013 | This BCR modified the FY2020 PMB to remove planned scope that will not be performed in FY2020. On May 12, 2020, CHPRC met with RL project management staff via telephone conversation, reviewed this list of scope to be removed, and received concurrence. This BCR decreased the PMB by \$205.4K. |
| BCR-013-20-022R0 | <i>Revised Shipping Schedule</i> | RL-0013 | This BCR incorporated revisions to the shipping schedule of in-scope, unplanned work, of waste shipments to Perma-Fix Northwest for processing and compliant packaging. This BCR removed five full shipments and one return from WBS 013.06.05.03.01 Large Box Commercial TRUM Repack Group 3 schedule, and will add in six new shipments to the schedule in WBS 013.06.02.01.01 PFP TRU Commercial Repacking. This BCR decreases the PMB by \$1,894.5K. |
| BCR-030-20-015R0 | <i>RL-0030 Scope Revisions</i> | RL-0030 | This BCR modified the FY2020 PMB to remove planned scope that will not be performed in FY2020. On May 12, 2020, CHPRC met with RL project management staff via telephone conversation, reviewed this list of scope to be removed and received concurrence. This BCR decreased the PMB by \$813.5K. |
| BCR-040-20-010R0 | <i>Remove FY2020 RL-0040 CPRM Scope from PMB</i> | RL-0040 | This BCR modified the FY2020 PMB to remove planned scope that will not be performed in FY2020. On May 6, 2020, CHPRC and the RL-0040 Federal Project Director reviewed the scope to be removed and concurred to proceed. This BCR decreased the PMB by \$3,972.5K. |
| BCR-040-20-011R0 | <i>200W Tier 2 CERCLA Removal Action Documentation</i> | RL-0040 | This BCR incorporated development of required <i>Comprehensive Environmental Response, Compensation, and Liability Act of 1986</i> (CERCLA) removal action documentation into WBS 040.01.21.09.02, for the 200 West Tier 2 facilities as authorized by the RL contracting officer. This BCR increased the PMB by \$59.7K. |

| Change Request# | Title | PBS | Summary of Change |
|-------------------|---|---|---|
| BCR-041-20-008R0 | <i>FY2020 RL-0041 KBO Scope from PMB</i> | RL-0041 | This BCR modified the FY2020 PMB to remove planned scope that will not be performed in FY2020. On May 13, 2020, CHPRC met with RL project management staff via telephone conversation and reviewed this list of scope to be removed and agreed to proceed. This BCR decreased the PMB by \$1,677.5K. |
| BCR-042-20-005R0 | <i>RL-0042 Install Argon System Transmitter</i> | RL-0042 | This BCR added new scope for WBS 042.01.01.13 400 Area Argon System and includes the procurement and installation of the argon system transmitter and the initiation of the <i>Resource Conservation and Recovery Act of 1976</i> permit addendum to remove the Fast Flux Test Facility fire system reference. This BCR increased the PMB by \$86.4K. |
| BCR-PRC-20-015R0 | <i>Implement Approved TPA Milestone Changes</i> | RL-0013 RL-0030 RL-0040 | This BCR modified M-016-250E and M-091-03N due dates from March 31, 2020, and June 30, 2020, respectively to September 30, 2020, per recently approved <i>Hanford Federal Facility Agreement and Consent Order</i> (Tri-Party Agreement) change notices M-16-20-02 and M-91-20-01. Additionally, milestone M-037-10 was deleted from the PMB consistent with approved Tri-Party Agreement change notice M-37-19-01. PBSs RL-0013, RL-0030 and RL-0040 are impacted by these changes. This BCR did not change the PMB value. |
| BCR-PRC-20-016R0 | <i>Mod 735 Implementation – Fee Adjustment</i> | RL-0013 RL-0030 RL-0040 RL-0041 | This BCR implemented \$27.0 million of fee definitized by Contract Modification 735 into the baseline. This BCR did not change the PMB value. |
| BCR-PRC-20-017R0 | <i>Schedule Logic Corrections</i> | RL-0013 RL-0040 | This BCR corrected logic ties that were deleted in error during the implementation of BCR-013-19-010R0 and BCR-040-19-005R0. This BCR did not change the PMB value. |
| BCRA-PRC-20-018R0 | <i>HPIC Updates May FY2020</i> | RL-0011 RL-0013 RL-0030 RL-0040 RL-0041 | This administrative BCR documented Hanford Programs Integrated Control module changes made in the March 2020 performance period prior to archive. These changes include new work packages, cost account charge number requests and control account manager changes as documented in the HPIC forms. This BCR did not change the PMB value. |

The allocated (distributed) budget decreased \$12,251.9K in May.

Undistributed Budget (UB) Activity

| BCR Number | Title | PBS | Fiscal Year | UB |
|------------|-------|-----|-------------|-----|
| N/A | N/A | N/A | 2020 | N/A |

There was no change to UB in May.

Management Reserve (MR) Activity

| BCR Number | Title | PBS | Fiscal Year | MR |
|------------------|--------------------------------------|---------|-------------|------------|
| BCR-PRC-20-014R0 | <i>Alignment of CBB with Mod 735</i> | RL-0040 | 2020 | \$(167.4K) |

The MR decreased by \$167.4K in May.

Fee Activity

| BCR Number | Title | PBS | Fiscal Year | Fee |
|------------------|-------------------------------|--|-------------|------------|
| BCR-PRC-20-016R0 | <i>Mod 735 Implementation</i> | RL-0013 RL-0030 RL-0040 RL-0041 | 2020 | \$27,00.0K |

The fee increased \$27K in May.

The PMB values of change requests are summarized by FY in the following tables. For a list of change requests that have impacted the PMB budget by FY, see the Format 3 Report in Appendix A.

May 2020 Summary of Changes (\$M)

| | FY2009-2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FY2014-2018 | FY2019 | FY2020 | Total |
|--|-------------|------------|------------|------------|------------|------------|-------------|------------|-------------|-------------|
| April 2020 MR Totals | | | | | | | | | | |
| RL-0011 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.5 | 5.5 |
| RL-0012 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.4 | 5.4 |
| RL-0013 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.4 | 8.4 |
| RL-0030 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.6 | 3.6 |
| RL-0040 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.5 | 11.5 |
| RL-0041 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.6 | 13.6 |
| RL-0042 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 |
| Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 48.4 | 48.4 |
| May 2020 MR Changes/Utilization | | | | | | | | | | |
| RL-0011 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RL-0012 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RL-0013 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RL-0030 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RL-0040 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.2 |
| RL-0041 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| RL-0042 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.2 |
| May 2020 MR Totals | | | | | | | | | | |
| RL-0011 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.5 | 5.5 |
| RL-0012 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.4 | 5.4 |
| RL-0013 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.4 | 8.4 |
| RL-0030 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.6 | 3.6 |
| RL-0040 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.3 | 11.3 |
| RL-0041 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.6 | 13.6 |
| RL-0042 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 |
| Total | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 48.2 | 48.2 |

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

| | FY 2009-2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FYs 2014-2018 | FY2019 | FY2020 | Contract Period Total | Total PMB |
|----------------------------|----------------|--------------|--------------|--------------|--------------|--------------|----------------|--------------|--------------|-----------------------|----------------|
| April 2020 Estimate | | | | | | | | | | | |
| PMB | 3,391.5 | 391.7 | 471.3 | 504.8 | 485.0 | 470.6 | 2,323.5 | 563.1 | 546.4 | 6,824.4 | 6,824.4 |
| MR | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 48.4 | 48.4 | 48.4 |
| Fee | 155.5 | 14.3 | 14.5 | 27.8 | 10.6 | 18.9 | 86.1 | 36.5 | 0.0 | 278.1 | 278.1 |
| Total | 3,547.0 | 406.0 | 485.8 | 532.6 | 495.6 | 489.5 | 2,409.6 | 599.5 | 594.8 | 7,150.9 | 7,150.9 |
| May 2020 Change | | | | | | | | | | | |
| PMB | | | | | | | | | | | |
| Change to PMB | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -12.3 | -12.3 | -12.3 |
| MR | | | | | | | | | | | |
| Change to MR | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.2 | -0.2 | -0.2 |
| Fee | | | | | | | | | | | |
| Change to Fee | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 27.0 | 27.0 | 27.0 |
| Total Change | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.6 | 14.6 | 14.6 |
| May 2020 Estimate | | | | | | | | | | | |
| PMB | 3,391.5 | 391.7 | 471.3 | 504.8 | 485.0 | 470.6 | 2,323.5 | 563.1 | 534.2 | 6,812.2 | 6,812.2 |
| MR | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 48.2 | 48.2 | 48.2 |
| Fee | 155.5 | 14.3 | 14.5 | 27.8 | 10.6 | 18.9 | 86.1 | 36.5 | 27.0 | 305.1 | 305.1 |
| Total | 3,547.0 | 406.0 | 485.8 | 532.6 | 495.6 | 489.5 | 2,409.6 | 599.5 | 609.4 | 7,165.5 | 7,165.5 |

SELF-PERFORMED WORK

| Contract-to-Date Actual Awards & Mods (\$M) 10/1/2008 - 5/31/2020 | | | | | |
|--|-------------------|----------------|------------|---|------------|
| Reporting Category | | | | | |
| | \$ Value | % | Goal % | | |
| SB | \$1,748.15 | 56.89% | 49.3% | PRC clause H.20b small business requirement ≥ 17% of CHPRC Contract Price performed by SB. | |
| SDB | \$331.01 | 10.77% | 8.2% | | |
| SWOB | \$309.71 | 10.08% | 7.5% | CHPRC Contract Value: | \$7,157.68 |
| HUB | \$104.41 | 3.40% | 2.2% | SB actual: | \$1,748.15 |
| VOSB | \$269.12 | 8.76% | 3.5% | SB Performed %: | 24.42% |
| SDVO | \$175.57 | 5.71% | 1.3% | PRC clause H.20a max self performed requirement ≤ 65% of Contract Price Self Performed | |
| NAB | \$110.24 | 3.58% | N/A | | |
| Large | \$821.60 | 26.74% | N/A | CHPRC Contract Value: | \$7,157.68 |
| GOVT | \$5.87 | 19.00% | N/A | CHPRC Self Performed: | \$4,377.53 |
| GOVT CONT | \$483.23 | 15.73% | N/A | CHPRC Self Performed %: | 61.16% |
| EDUCATION | \$0.17 | 0.01% | N/A | | |
| NONPROFIT_ | \$4.46 | 0.15% | N/A | | |
| FOREIGN | \$9.23 | 0.30% | N/A | | |
| Total | \$3,072.71 | 100.00% | N/A | | |

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

Notes:

1. Since the contract award in October 2008, CHPRC has subcontracted more than \$3.0 billion in goods and services, with more than 56 percent going to small businesses. All subcontracting goals have been exceeded.
2. Approximately 90 percent of the total dollars arise from service and staffing contracts and contract amendments, with 6.9 percent of the remaining expenditures arising from PCard purchases and 3.9 percent from the balance in purchase orders for materials and equipment.
3. Data are summarized by business category (e.g., women-owned minority business enterprise codes) in accordance with socioeconomic reporting requirements. Small business categories overlap and should not be added together.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

| Contract Section | Project | GFS/I | Status |
|-------------------|---|---|--|
| J.12/C.2.2, C.2.3 | <p>PBS-11, <i>Plutonium Finishing Plant Closure Project</i></p> <p>PBS-13, <i>Solid and Liquid Waste Treatment and Disposal</i></p> | <p>Offsite Transportation of Radioactive Material: 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 and acts as signatory on the shipping papers and ensures compliance with DOE Manual 460.2-1, <i>Radioactive Material Transportation Practices Manual for Use with DOE O 460.2A</i>. RL arranges for Commercial Motor Vehicle Safety Alliance Level VI Vehicle Inspections and verifies that the government drivers meet the applicable U.S. Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or Transportation Safety Document requirements.</p> | Ongoing. |
| J.12/C.2.3.6 | PBS-13, <i>Transuranic Waste Certification</i> | <p>Waste Isolation Pilot Plan (WIPP) in Carlsbad, New Mexico: Provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable, and the number of shipments is controlled by DOE-Headquarters on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office.</p> | No WIPP shipments are planned within the remaining contract period of performance. |

DOE ACTIONS/DECISIONS

Refer to Sections A through G and Appendix C of this report for the project-specific DOE actions/decisions.

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

CH2MHILL
Plateau Remediation Company
a Jacobs company



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

May 2020
CHPRC-2020-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In May, the Plutonium Finishing Plant (PFP) Closure Project team continued essential mission-critical operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) partial stop work order (PSWO) issued as a part of the Hanford Site response to the novel coronavirus (COVID-19). Essential mission-critical operations consisted of a survey of PFP radiological boundaries and applying fixative to the PFP demolition area. Additionally, a small complement of resources continued to perform limited planning activities in support of implementation of social distancing in anticipation of the future return to normal operations.

Key Metrics

| <i>Key Performance Indicators</i> | <i>Current Month</i> | <i>Contract to Date</i> |
|---|----------------------|-------------------------|
| COMPLETE Glovebox/Hood Removed or Dispositioned in Place | 0 | 232 gloveboxes/hoods |
| COMPLETE KPP Rooms/Areas Ready for Demo | 0 | 72 rooms/areas |
| COMPLETE Asbestos/Asbestos Containing Material Removed | 0 | 35,827 |
| COMPLETE Process Vacuum Piping Dispositioned | 0 | 7,231 feet |
| COMPLETE Process Transfer Line Dispositioned | 0 | 1,525 feet |
| COMPLETE Pencil Tank Units Removed (Shipped) | 0 | 196 pencil tank units |
| COMPLETE Buildings Ready for Demo | 0 | 68 structures |
| Buildings Demolished or Removed | 0 | 67 structures |
| Non-Radioactive Waste Shipped | 0 | 89.8 m ³ |
| Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped | 0 m ³ | 5,016 m ³ |
| Low-level Waste (LLW)/Mixed (M)LLW Shipped | 0 m ³ | 23,276 m ³ |

EMS Objectives and Target Status

| Objective # | Objective | Target | Due Date | Status |
|--------------------|--|--|-----------------|---------------|
| 20-EMS-PFP-OBJI-P1 | Complete <i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i> removal action at the PFP Complex. | Performs actions for final PFP turnover to surveillance and maintenance (S&M). | 7/30/2020 | 25% |

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

| | Current Month | Rolling 12 Month | Comment |
|--------------------------------------|---------------|------------------|---------|
| Days Away, Restricted or Transferred | 0 | 0 | N/A |
| Total Recordable Injuries | 0 | 2 | N/A |
| First Aid Cases | 0 | 25 | N/A |
| Near Misses | 0 | 0 | N/A |

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments:

- Due to COVID-19, a national emergency was declared on March 13, 2020. On March 24, 2020, RL issued CH2M HILL Plateau Remediation Company (CHPRC) a PSWO as a part of the Hanford Site response to COVID-19. The PFP Complex was transitioned to essential mission-critical operations and maintained in that configuration. Essential mission-critical operations consisted of the completion of required S&Ms to protect government property and maintain safety and environmental compliance. These efforts included surveying PFP radiological boundaries and applying fixative to the PFP demolition area.

MAJOR ISSUES

Issue

The project's fiscal year (FY) 2020 forecast reflects spending approximately \$4.5 million more than the entire allotted carryover balance. Although RL-0011 was allocated a supplemental \$4.9 million, additional funding is required in FY2020 to complete PFP demolition.

Corrective Action

Resolve funding shortfall. Shift personnel assigned to the PFP Project to support the West Area Remediation Project (WARP) in RL-0040 when work resumption is expected in mid-June to conserve the limited personal protective equipment (PPE) inventory following the return to normal operations until site PPE inventory and resupply can support completing the RL-0011C.2 project. A secondary benefit of shifting labor resources to WARP activities will be to reduce the near-term PFP Project spending rate until this issue is resolved.

Status

CHPRC is working with RL to address this issue, with resolution expected in June. A \$3 million funds reallocation between projects has been identified and should resolve the expected funds overrun.

Implementation of the planned temporary shift of PFP labor resources to WARP scope to conserve limited PPE inventory and reduce the RL-0011 spend rate is underway.

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 | | | | | | | | | | | | | | | | | | | | |
| 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) | | | | | | | | | | | | | | | | | | | | |
| PFP-P5-007: Delay of PRF Debris Load Out | The loadout of Plutonium Reclamation Facility (PRF) debris is delayed. Risk Handling Strategy: Accept Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 32 days | ● | | Risk Event: The project has not executed debris loadout at the productivity rate that was planned. The project has experienced accumulation of water during PRF rubble loadout and more soil per loadout entry than expected. | <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr style="background-color: #e0e0e0;"> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Communicate PRF loadout options with RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> | Risk Recovery Action(s) | FC Date | % | Communicate PRF loadout options with RL. | Ongoing | N/A | Encourage additional worker involvement. | Ongoing | N/A | | | | | | |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | | | | | | | | |
| Communicate PRF loadout options with RL. | Ongoing | N/A | | | | | | | | | | | | | | | | | | |
| Encourage additional worker involvement. | Ongoing | N/A | | | | | | | | | | | | | | | | | | |
| Recovery Action Assessment: No major changes in May. Crews are loading out more soil associated with debris collection than expected. Additional loadout may be needed that will push project completion. A change recommended by craft personnel in the demolition approach has shown early signs of improved performance. | | | | | | | | | | | | | | | | | | | | |
| 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 risks identified in May. | | | | | | | | | | | | | | | | | | | | |
| FY2020 Key Risks | | | | | | | | | | | | | | | | | | | | |
| PFP-P4-002: Weather Impacts During 236-Z Demolition | Inclement weather, including moderate winds, low or high temperatures, and above average snowfall or thunderstorms will result in in-scope unplanned work and schedule impacts to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 30 days | ● | | Risk Trigger: High winds and cold weather may impact the project in the winter and spring seasons. Average winds above 15 mph shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and, therefore, shuts down fieldwork activities. | <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr style="background-color: #e0e0e0;"> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> | Mitigation 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 | | | | | | | | | | | | | | | | | | |
| Mitigation Assessment: No major changes in May. There were no weather events that impacted the project in May. | | | | | | | | | | | | | | | | | | | | |
| PFP-P-004: Stop Work From Concerned Workers | Concerned workers can implement a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 16 days | ● | | Risk Trigger: During PFP demolition activities, an increase in stop works could result in delays. | <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr style="background-color: #e0e0e0;"> <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 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 | | | | | | | | | | | | | | | | | | |
| Mitigation Assessment: No major changes in May. Increased communication and worker involvement to avoid confusion and concern to minimize stop works have continued; stop works may impact the project schedule going forward. | | | | | | | | | | | | | | | | | | | | |
| 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 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0% | (2.9) | 0.0% |

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Variance: (+0.0M/+0.0%)

The CM schedule variance is within threshold.

CM Cost Variance: (-\$2.9M/+0.0%)

The current month negative cost variance is the result of the PSWO issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with the continuation of essential mission-critical operations that could not be performed in a safe and compliant manner consistent with the Centers for Disease Control and Prevention (CDC) COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. Non-portable work activities are work that cannot be performed in a remote manner (e.g., telework from home). The project was demobilized and placed in a safe configuration in late March. CHPRC and subcontractor labor assigned to work that could not be performed in a remote manner were charged to control account 011.97.01.04 to collect and segregate unproductive time caused by the PSWO. As the method of earning performance is based on physical progress in the field, no performance was taken, causing the negative cost variance.

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 | 1,143.6 | 1,129.9 | 1,239.0 | (13.7) | -1.2% | (109.1) | -9.7% | 1,143.6 | 1,253.7 | 14.7 | (110.2) |

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Variance: (-\$13.7M/-1.2%)

The CTD schedule variance is within threshold.

CTD Cost Variance: (-\$109.1M/-9.7%)

The negative CTD cost variance is primarily a result of unplanned costs to support implementation of PFP schedule efficiency initiatives (i.e., foaming, Perma-Fix Northwest [PFNW] size reduction support, PremAire Breathing System); increased training costs of additional PFP radiation control technicians (RCTs) and deactivation and decommissioning (D&D) workers; additional resources to recover schedule

from asbestos-removal activities and support the unplanned asbestos removal (about 10,000 feet); unplanned shipping materials (e.g., waste shipping containers TL-1800s, SLB2s, IP-1 bags, etc.) required for TRU waste disposition loadout activities; and unplanned work to reconfigure the high-density polyethylene (HDPE) water loop to support the new radiological boundaries.

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

After resumption activities were completed, a deliberate and in-series approach has resulted in slower progress on demolition, size reduction and waste loadout. Process improvements for planning and training activities to replenish D&D and RCT staffing support have additionally increased costs.

The PSWO issued to CHPRC by RL on March 24, 2020, covered non-portable work activities not associated with continuation of essential mission-critical operations that could not be performed in a safe and compliant manner consistent with CDC COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. The project was demobilized and placed in a safe configuration in late March 2020. CHPRC and subcontractor labor assigned to work that could not be performed in a remote manner were charged to control account 011.97.01.04 to collect and segregate unproductive time caused by the PSWO.

The negative cost variance was partially offset by the use of fewer breathing air suits (three per day versus five) and fewer hoses than originally planned for 242-Z entries. These reductions were the result of fewer fieldwork team members required to perform hands-on work in 242-Z due to the confined space.

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

Variance at Completion (VAC): (-\$110.2M/-9.6%)

The unfavorable VAC reflects extended hotel load and field resource costs due to delays in demolition-ready and demolition activities, as well as resumption actions associated with the December 2017 contamination event encompassing fixative applications, performing radiological surveys and revising radiological postings, infrastructure modifications and stabilization activities. Reassignment of CHPRC personnel to support the RCA and programmatic assessments also contributed to the variance. Impacts attributable to COVID-19 concerns have pushed project completion, increasing the expected total project cost.

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

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

| RL-0011 Nuclear Matl Stab & Disp PFP | FY2020 | | Variance |
|---|----------------------|----------------------|----------|
| | Projected Funding | Spending Forecast | |
| Spending Forecast | 34.4 | 38.9 | (4.5) |
| Numbers are rounded to the nearest \$0.1 million. | | | |

Funds/Variance Analysis

CHPRC continues to work with RL to address the projected funding shortfall. A path forward to free up central plateau funding has been identified and will be implemented in June.

Critical Path Analysis

The PFP critical path schedule begins with the completion of PRF loadout, which is anticipated by November 19, 2020, meeting the requirements for the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) Milestone M-083-00A, "Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities." Demolition completion will be followed by site stabilization and demobilization, turnover to S&M and project closeout activities, completing by February 24, 2021.

MILESTONE STATUS

The following table is a one-year look ahead to project breakdown structure (PBS) RL-0011 Tri-Party Agreement enforceable milestones, nonenforceable target due dates and commitments.

| Number | Title | Due Date | Actual Date | Forecast Date | Status/Comment |
|-----------|---|-----------|-------------|---------------|---|
| M-083-00A | "Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities" | 9/30/2017 | | 11/19/2020 | Work resumption is currently anticipated for late September due to a phased resumption approach and to conserve personal protective equipment following COVID-19 impacts. |

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS/DECISIONS

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

Section C

Solid Waste Stabilization and Disposition (RL-0013)

CH2MHILL
Plateau Remediation Company
a Jacobs company



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

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Vice President for
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Vice President for
Project Technical Services

May 2020
CHPRC-2020-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In the May reporting period (April 27 – May 24, 2020), the Waste and Fuels Management Project (W&FMP) and the River Risk Management Project continued essential mission-critical operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) partial stop work order (PSWO) issued as a part of the Hanford Site response to the novel coronavirus (COVID-19).

The following items were accomplished in May:

- The Management of Cesium and Strontium Capsules (MCSC) Project W-135, *Waste Encapsulation and Storage Facility (WESF) Modifications*, continued to work on DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, Critical Decisions (CD)-2/3 submittal based on recommendations of the CH2M HILL Plateau Remediation Company (CHPRC) Project Review Board (PRB). The fabrication of the cask storage system (CSS) ancillary and transfer equipment was initiated.
- The Environmental Restoration Disposal Facility (ERDF) received two long length waste items for permanent disposal from tank farms.

EMS Objectives and Target Status

| Objective # | Objective | Target | Due Date | Status |
|---------------------|---|---|-----------|--------|
| 20-EMS-WFMP-OBJ1-P1 | Complete installation of the maintenance and storage facility (MASF) integrated testing mockup and demobilization. | Erect mockup structure and demobilization. | 9/30/2020 | 0% |
| 20-EMS-WFMP-OBJ2-P1 | Receive three garnet filter shipments at T Plant. | T Plant Complex to receive three garnet filter shipments. | 9/30/2020 | 0% |
| 20-EMS-WFMP-OBJ3-P1 | Repackage 400 m ³ of transuranic (TRU)/TRU mixed (TRUM) waste in preparation for certification/shipment to the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico. | Complete repackaging 400 m ³ of TRU/TRUM waste. | 9/30/2020 | 76% |
| 20-EMS-RRMP-OBJ1-P1 | Track maintenance/recycling activities at ERDF (e.g., used oil recycling, tires, batteries and product drums, etc.) | On a quarterly basis, track the maintenance recycling activities of the ERDF subcontractor and CHPRC transportation organization. | 9/30/2020 | 25% |

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

| | CM Quantity | Rolling 12 Month | Comment |
|---|-------------|------------------|---|
| Days Away, Restricted or Transferred (DART) | 0 | 2* | * 1 DART, Project Technical Services in support of RL-0013. * 1 DART, Mission Support Alliance, LLC in support of RL-0013. |
| Total Recordable Injuries | 0 | 0 | N/A |
| First Aid Cases | 1 | 14 | 5/20/2020 – Employee was sent to open the main gate at the Central Waste Center (CWC) to allow access to work crews. The employee was using a shovel to move tumbleweeds that were blocking the gate and preventing it from opening. The employee felt a strain in their back. After reporting to the shift office, the employee was taken to the HPM Corporation 200 West First Aid Station for evaluation and released back to work with no restrictions (25521). |
| Near Misses | 0 | 0 | N/A |

KEY ACCOMPLISHMENTS

Waste and Fuels Management Project

13.01 Project Management

- On May 15, 2020, CHPRC personnel distributed the Solid Waste Operations Complex (SWOC) Part B Permit building emergency plans (BEPs) for Low-Level Burial Grounds 31-34-94, CWC-Waste Receiving and Processing (WRAP), and T Plant for joint review by RL and CHPRC. These versions of the BEPs include changes resulting from negotiations with the Washington State Department of Ecology (Ecology) on the Hanford Emergency Management Plan permit modification request.

13.02 Capsule Storage and Disposition

- Completed 29 preventative maintenance (PM) packages.

13.03 Canister Storage Building (CSB)

- Completed nine PM packages.

13.06 TRU Repackaging

- Completed repackaging of 15.4 m³ of TRU/TRUM waste for a total of 421.4m³ fiscal year to date (FYTD).

13.07 Waste Receiving and Processing

- Completed 190 surveillances and 19 PM packages.

13.08 T Plant

- Completed 342 surveillances and 13 PM packages.

13.09 Central Waste Center and Low-Level Burial Grounds

- Completed 230 surveillances and 28 PM packages.

13.16 Offsite Spent Nuclear Fuel Disposition

- Maintained coordination of offsite spent nuclear fuel disposition.

13.21 Mixed-Waste Disposal Trenches

- Completed 150 surveillances.

13.24 Management of Cesium (Cs) and Strontium (Sr) Capsules Project (MCSC)

- The MCSC Project continued revising the draft Project W-135, *WESF Modifications*, CD-2, *Establish Project Baseline*, and CD-3, *Readiness to Start Construction* submittal based on recommendations of the CHPRC PRB.
- Initiated fabrication of the CSS ancillary and transfer equipment.

River Risk Management Project

13.10 Environmental Restoration Disposal Facility

- Due to the Hanford Site closure and RL placing the site in an essential mission-critical operations posture in response to COVID-19, there were no disposal activities.
- Received 71 tons of waste for disposal.
- Received 29,905 tons of waste for disposal FYTD. Any corrections in previous months are reflected in this total.
- Received two long length waste items from Washington River Protection Solutions, LLC for disposal.
- Four weekly essential mission-critical operation inspections were performed. The essential mission-critical operation inspections were performed on the leachate system, septic system, inventory control areas and radiological boundary surveys.

13.12 Integrated Disposal Facility

- Due to RL placing the Hanford Site in an essential mission-critical operations posture in response to COVID-19, there were no care and custody activities performed.
- Work continued on preparing process, procedures and permits in support of Integrated Disposal Facility (IDF) operational readiness.

MAJOR ISSUES

Issue

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

Corrective Action

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

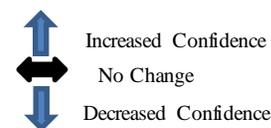
Status

Continuing to use the best-demonstrated available technology to provide adequate configuration and minimize the potential for contamination spread during long-term storage (i.e., protecting boxes with tarps or protective shoring; over-packing drums). Streamlined and consolidated container management procedures. RL authorized the fiscal year (FY) 2020 TRU commercial repackaging, allowing shipments to Perma-Fix Northwest for repackaging to continue throughout the year.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | |
|---|---|------------------------------------|-------|--|-------------------------|---------|---|--|---------|-----|--|---------|-----|
| | | Month | Trend | | | | | | | | | | |
| RL-0013/WBS-013 | | | | | | | | | | | | | |
| Explanation of major changes to the project monthly spotlight chart: Risks WSD-CSA-015, <i>Delays in PDSA/FHA Approval by DOE</i> , and WSD-CSS-009, <i>PDSA Comments Result in Schedule Delays</i> , were removed from the spotlight chart in May as the risks are no longer realized and do not currently pose a significant threat to the project. | | | | | | | | | | | | | |
| Realized Risks (Risks that are currently impacting project cost/schedule) | | | | | | | | | | | | | |
| 13-RCRA-REV9-001: RL-13 - Additional Dangerous Waste Management Units (DWMUs) | Unplanned DWMUs are added to the scope, requiring additional document support, impacting the project in both cost and schedule. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 48 days | ● | ↔ | <p>Risk Event: Ecology provided technical comments on the permit addendum, expanding the number of DWMUs.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct weekly meetings with Ecology and RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No significant changes in <i>May</i>. Impacts associated with realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project. The project does not expect to resolve this realized risk within the current contract period.</p> | Risk Recovery Action(s) | FC Date | % | Conduct weekly meetings with Ecology and RL. | Ongoing | N/A | | | |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | |
| Conduct weekly meetings with Ecology and RL. | Ongoing | N/A | | | | | | | | | | | |
| 13-RCRA-REV9-003: RL-13 - Ecology Delays | Scope supported by Ecology is impacted by delays in Ecology review time that do not align with the permit management schedule. This issue requires that the project take recovery actions that result in schedule impacts. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$0, 96 days | ● | ↔ | <p>Risk Event: Ecology's review time is impacting the permit management schedule.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct routine meetings with Ecology and the contractor to promote communication efforts.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No significant changes in <i>May</i>. Select staff are prepared to respond to comments when they are received. Impacts associated with realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project. The project does not expect to resolve this realized risk within the current contract period.</p> | Risk Recovery Action(s) | FC Date | % | Conduct routine meetings with Ecology and the contractor to promote communication efforts. | Ongoing | N/A | | | |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | |
| Conduct routine meetings with Ecology and the contractor to promote communication efforts. | Ongoing | N/A | | | | | | | | | | | |
| WSD-138: Regulatory Document (Closure Plan with Ecology) Results in Significant Comments from the Regulator | Significant comments from the regulator on closure plans submitted for approval results in nonapproval of the permit or rework, causing schedule impacts to the project. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$0, 96 days | ● | ↔ | <p>Risk Event: Eight closure plans were formally resubmitted to Ecology in August and November 2018. In January 2019, Ecology provided additional comments, changing the closure strategy for several units.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Use a standardized approach to quickly evaluate and categorize comments for resolution.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct routine meetings to address agency comments and to remain current on the influences from agencies.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No significant changes in <i>May</i>. RL informed Ecology that additional document revisions would not be completed at this time. The impacts associated with the realization of this risk are ongoing; as such, this risk will continue to be reported for visibility until it no longer poses a threat to the project. The project does not expect to resolve this realized risk within the current contract period.</p> | Risk Recovery Action(s) | FC Date | % | Use a standardized approach to quickly evaluate and categorize comments for resolution. | Ongoing | N/A | Conduct routine meetings to address agency comments and to remain current on the influences from agencies. | Ongoing | N/A |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | |
| Use a standardized approach to quickly evaluate and categorize comments for resolution. | Ongoing | N/A | | | | | | | | | | | |
| Conduct routine meetings to address agency comments and to remain current on the influences from agencies. | Ongoing | N/A | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | | |
|---|--|------------|-------|--|-------------------------|---------|---|---|----------|------|--|----------|------|---|----------|------|
| | | Month | Trend | | | | | | | | | | | | | |
| RL-0013/WBS-013 | | | | | | | | | | | | | | | | |
| WSD-W135-36: MASF Mockup Construction Subcontractor Performance | <p>The MASF mockup construction contractor fails to perform per the proposal or fails to meet CHPRC expectations, leading to schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$350K, 64 days</p> | ● | ↔ | <p>Risk Event: The MASF mockup construction contractor does not manage their subcontractors effectively and submits fabrication drawings that cannot be approved. Workmanship in the field is not adequate and results in nonconformance report (NCR) conditions that require rework.</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Set clear expectations for quality of shop drawings.</td> <td>Complete</td> <td>100%</td> </tr> <tr> <td>Work with construction contractor to expedite approval of shop drawings for fabrication.</td> <td>Complete</td> <td>100%</td> </tr> <tr> <td>Provide additional oversight of apprentice employees.</td> <td>Ongoing</td> <td>75%</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No significant changes in May. Mockup construction contractor submitted fabrication drawings that were low quality and could not be approved. Multiple rounds of submittal review, comment, resubmit and review were necessary prior to authorization of shop fabrication of the structural steel, causing schedule delay. All shop drawings are now approved. Work in the field was performed using incorrect means and methods by apprentice employees without direct oversight, causing NCR conditions, which required rework, resulting in schedule delay. The contractor has implemented restrictions on performing work with certain tools and additional oversight of apprentice employees.</p> | Risk Recovery Action(s) | FC Date | % | Set clear expectations for quality of shop drawings. | Complete | 100% | Work with construction contractor to expedite approval of shop drawings for fabrication. | Complete | 100% | Provide additional oversight of apprentice employees. | Ongoing | 75% |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Set clear expectations for quality of shop drawings. | Complete | 100% | | | | | | | | | | | | | | |
| Work with construction contractor to expedite approval of shop drawings for fabrication. | Complete | 100% | | | | | | | | | | | | | | |
| Provide additional oversight of apprentice employees. | Ongoing | 75% | | | | | | | | | | | | | | |
| WSD-W135-37: MASF Differing Conditions | <p>MASF mockup construction is impacted by a discovery that the actual configuration/as-found condition of MASF differs from assumed conditions.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$100K, 48 days</p> | ● | ↔ | <p>Risk Event: Extensive walk downs, drawing reviews and interviews with MASF personnel were performed prior to and during the design effort for the MASF mockup to ensure that the design for the mockup structure could be constructed accurately to replicate WESF conditions. During construction, differing as-found conditions were discovered (e.g., lead-based paint, uneven floor surface affecting levelness of the mockup structure).</p> <table border="1"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Incorporated lead abatement controls into a work package.</td> <td>Complete</td> <td>100%</td> </tr> <tr> <td>Perform engineering evaluation of floor levelness and incorporate shims into drawings as required.</td> <td>Complete</td> <td>100%</td> </tr> <tr> <td>Install shims as required.</td> <td>Complete</td> <td>100%</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No significant changes in May. Lead paint was discovered on an existing MASF structure that interfaced with the new WESF mockup structure. The lead-based paint on the structure was abated prior to cutting the structure in order to make the proper tie-in to the WESF mockup. The MASF floor was discovered to be uneven, affecting the levelness of the WESF mockup. The WESF mockup structure must be level in order for the future capsule transfer equipment to operate properly. Extensive shimming of the WESF mockup structure was performed in order to construct the structure.</p> | Risk Recovery Action(s) | FC Date | % | Incorporated lead abatement controls into a work package. | Complete | 100% | Perform engineering evaluation of floor levelness and incorporate shims into drawings as required. | Complete | 100% | Install shims as required. | Complete | 100% |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Incorporated lead abatement controls into a work package. | Complete | 100% | | | | | | | | | | | | | | |
| Perform engineering evaluation of floor levelness and incorporate shims into drawings as required. | Complete | 100% | | | | | | | | | | | | | | |
| Install shims as required. | Complete | 100% | | | | | | | | | | | | | | |
| Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed) | | | | | | | | | | | | | | | | |
| WSD-097: Major Equipment Failure – T Plant | <p>T Plant suffers a major equipment failure (e.g., crane, primary power supply, etc.), resulting in cost impacts and schedule delays.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$3M, 96 days</p> | ● | ↔ | <p>Risk Trigger Metric: During planned facility operation activities, a suspected system component is discovered that requires attention or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC contract.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Implement aggressive corrective action/PM program</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. The project has commenced mitigating strategies (i.e., aggressive surveillance and maintenance activities) to help reduce this risk. The canyon crane is currently operational, and spare parts have been procured for the most critical spares.</p> | Mitigation Action(s) | FC Date | % | Implement aggressive corrective action/PM program | Ongoing | N/A | | | | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Implement aggressive corrective action/PM program | Ongoing | N/A | | | | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | | |
|---|---|------------|-------|---|----------------------|---------|---|---|---------|-----|--|----------|-----|--|---------|-----|
| | | Month | Trend | | | | | | | | | | | | | |
| RL-0013/WBS-013 | | | | | | | | | | | | | | | | |
| High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone) | | | | | | | | | | | | | | | | |
| WSD-CSS-006: Fabrication of the Equipment from the Contractor | Fabrication of critical items for the long-term storage of the Cs and Sr capsules does not go exactly as planned, resulting in design changes and rework. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$5M, 64 days | ● | ↔ | <p>Risk Trigger Metric: Fabrication of required equipment and items does not go according to schedule, requiring redesign or additional components that will affect the project's cost and schedule baseline. Fabrication is not currently anticipated until fiscal month June.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>The scope of each task will be reviewed prior to initiation to ensure that the contractor is aligned for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for in-person interface meetings.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No changes in May. Procurement of transfer (including universal capsule sleeves) and ancillary equipment commenced in January 2020 following RL approval of the Task 5/6 and nine consent packages. Fabrication is scheduled to commence in June 2020.</p> | Mitigation Action(s) | FC Date | % | The scope of each task will be reviewed prior to initiation to ensure that the contractor is aligned for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for in-person interface meetings. | Ongoing | N/A | | | | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| The scope of each task will be reviewed prior to initiation to ensure that the contractor is aligned for the upcoming work. Contractor oversight is accomplished via weekly interface meetings and trips to the contractor's location for in-person interface meetings. | Ongoing | N/A | | | | | | | | | | | | | | |
| FY2020 Key Risks | | | | | | | | | | | | | | | | |
| WSD-086: W&FM Industrial Accident or Contamination | An industrial accident or contamination event requires corrective actions. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$3M, 0 days | ● | ↔ | <p>Risk Trigger Metric: An industrial accident or contamination event requires corrective actions, resulting in cost impacts.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Adhere to CHPRC procedures, safety programs and training programs that are designed to minimize the potential of worker injury.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process large waste boxes (fiberglass reinforced plywood boxes (FRPs)).</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. This risk was identified as a key project risk for FY2020. The project continued to follow CHPRC procedures and safety programs to minimize any industrial accidents or contamination events. Four large waste boxes were processed in FY2020, reducing the risk of a contamination event. As processing of additional FRP large waste boxes is not planned during the remainder period of performance of the PRC, the mitigation action to process FRP large waste boxes has been marked as complete.</p> | Mitigation Action(s) | FC Date | % | Adhere to CHPRC procedures, safety programs and training programs that are designed to minimize the potential of worker injury. | Ongoing | N/A | Process large waste boxes (fiberglass reinforced plywood boxes (FRPs)). | Complete | 100 | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Adhere to CHPRC procedures, safety programs and training programs that are designed to minimize the potential of worker injury. | Ongoing | N/A | | | | | | | | | | | | | | |
| Process large waste boxes (fiberglass reinforced plywood boxes (FRPs)). | Complete | 100 | | | | | | | | | | | | | | |
| 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 the SWOC (excluding TRU retrieval activities) and requires additional resources to respond. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$5M, 0 days | ● | ↔ | <p>Risk Trigger Metric: Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. This risk was identified as a key project risk for FY2020. Surveillances continue to be performed for the project to identify container and container cover abnormalities. The remaining containers require surveillance and enhanced monitoring.</p> | Mitigation Action(s) | FC Date | % | Perform daily/weekly waste container surveillances to identify container abnormalities. | Ongoing | N/A | Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers. | Ongoing | N/A | Process waste packages at a rate funded by RL. | Ongoing | N/A |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Perform daily/weekly waste container surveillances to identify container abnormalities. | Ongoing | N/A | | | | | | | | | | | | | | |
| Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers. | Ongoing | N/A | | | | | | | | | | | | | | |
| Process waste packages at a rate funded by RL. | Ongoing | N/A | | | | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | | |
|--|---|------------|-------|---|----------------------|---------|---|---|---------|-----|--|---------|-----|--|---------|----|
| | | Month | Trend | | | | | | | | | | | | | |
| RL-0013/WBS-013 | | | | | | | | | | | | | | | | |
| WSD-136: CWC/Waste Receiving and Processing (WRAP) Components Fail | <p>CWC facilities and components may reach their end of life. These items will need to be replaced and/or repaired outside of planned funding profiles, resulting in cost impacts.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$4.1M, 0 days</p> | ● | ↔ | <p>Risk Trigger Metric: Maintenance activities at CWC increase due to aging facilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct floor repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conducting doorframe replacements and electrical equipment repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Draft statement of work (SOW) for WRAP roof replacement.</td> <td>6/18/20</td> <td>90</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. This risk was identified as a key project risk for FY2020. The WRAP roof was analyzed for structural integrity following water intrusion. There was insufficient basis for the roof's integrity, which will lead to an eventual roof replacement. A SOW for the roof replacement design will be drafted this year. The delay in the forecasted completion date of mitigation actions is due to the response to COVID-19. The master documented safety analysis container stacking requirements are complete. Maintenance work at CWC will be scheduled based on facility work priorities. <i>The delay in the forecast completion date of mitigation actions is due to the response to COVID-19.</i></p> | Mitigation Action(s) | FC Date | % | Conduct floor repairs as necessary. | Ongoing | N/A | Conducting doorframe replacements and electrical equipment repairs as necessary. | Ongoing | N/A | Draft statement of work (SOW) for WRAP roof replacement. | 6/18/20 | 90 |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Conduct floor repairs as necessary. | Ongoing | N/A | | | | | | | | | | | | | | |
| Conducting doorframe replacements and electrical equipment repairs as necessary. | Ongoing | N/A | | | | | | | | | | | | | | |
| Draft statement of work (SOW) for WRAP roof replacement. | 6/18/20 | 90 | | | | | | | | | | | | | | |
| WSD-140: As-Found-Unknown Conditions - W&FMP Facilities | <p>Unknowns, as found or emergent conditions, impact the operability of one or more W&FMP facilities, requiring recovery actions that result in in-scope unplanned work.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$2M, 0 days</p> | ● | ↔ | <p>Risk Trigger Metric: Unknowns, as found or emergent conditions impact the operability of one or more W&FMP facilities, requiring recovery actions that result in in-scope unplanned work.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. This risk was identified as a key project risk for FY2020. This risk is an accepted risk, as the project cannot mitigate for unknown conditions.</p> | Mitigation Action(s) | FC Date | % | None identified at this time. | N/A | N/A | | | | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| None identified at this time. | N/A | N/A | | | | | | | | | | | | | | |
| WSD-144: Changes to Ecology Strategy | <p>Ecology issues a permit that significantly differs from planned scope, resulting in both cost and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$10M, 192 days</p> | ● | ↔ | <p>Risk Trigger Metric: Ecology issues a permit that does not align with CHPRC's plans. RL does not appeal the permit, causing CHPRC to incorporate all permit requirements.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continuous communication and routine meetings to address agency comments.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Periodic meetings with RL to discuss the impacts of Ecology decisions.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. This risk was identified as a key project risk for FY2020. W&FMP personnel continue to meet routinely with Ecology to resolve comments on permit addenda and preclude issuance of a draft permit different in scope than anticipated.</p> | Mitigation Action(s) | FC Date | % | Continuous communication and routine meetings to address agency comments. | Ongoing | N/A | Periodic meetings with RL to discuss the impacts of Ecology decisions. | Ongoing | N/A | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Continuous communication and routine meetings to address agency comments. | Ongoing | N/A | | | | | | | | | | | | | | |
| Periodic meetings with RL to discuss the impacts of Ecology decisions. | Ongoing | N/A | | | | | | | | | | | | | | |
| WSD-CSA-013: Cask Storage Area (CSA) Site Location Found to Have Extensive Contamination | <p>The CSA location is found to have contaminated soil or volumes of unfavorable (e.g., loose) soils.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$100K, 48 days</p> | ● | ↔ | <p>Risk Trigger Metric: Significant volumes of contaminated or otherwise unsuitable soils are discovered during CSA construction that cause delays and costs, resulting in the required excavation of additional soil and potentially causing the contamination of leased equipment. CSA construction is forecast to commence in March 2020.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. This risk has been identified as a key project risk for FY2020. This risk has been accepted, as the project has taken great precautions to plan the location of the CSA away from any potential contamination. In the unlikely event that contamination is detected within the CSA site location, project costs and a schedule delay will be accepted and shipping the contaminated soil to ERDF for disposal will proceed.</p> | Mitigation Action(s) | FC Date | % | None identified at this time. | N/A | N/A | | | | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| None identified at this time. | N/A | N/A | | | | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | | |
|--|--|------------|-------|--|----------------------|---------|---|--|----------|-----|----------------------------|---------|-----|------------------------------------|---------|-----|
| | | Month | Trend | | | | | | | | | | | | | |
| RL-0013/WBS-013 | | | | | | | | | | | | | | | | |
| WSD-W135-31: Canyon Crane Non-Functional/ Not Serviceable | <p>The WESF crane was put back into limited usage for the W-130 Project; however, the crane is found to be unserviceable or fails during the W-135 project construction and or operational activities to move Cs/Sr capsules to dry storage.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) 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>Perform preventative/corrective maintenance procedures on the crane to facilitate reliability.</td> <td>08/31/20</td> <td>0</td> </tr> <tr> <td>Procure critical spares.</td> <td>9/30/21</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. This risk has been identified as a key risk for FY2020. Facility personnel will complete crane PMs in FY2020. Critical spares will be evaluated and procured prior to the end of FY2021.</p> | Mitigation Action(s) | FC Date | % | Perform preventative/corrective maintenance procedures on the crane to facilitate reliability. | 08/31/20 | 0 | Procure critical spares. | 9/30/21 | 0 | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Perform preventative/corrective maintenance procedures on the crane to facilitate reliability. | 08/31/20 | 0 | | | | | | | | | | | | | | |
| Procure critical spares. | 9/30/21 | 0 | | | | | | | | | | | | | | |
| WSD-IDF-11: Discovery of Unplanned Site Conditions | <p>Unexpected site conditions are encountered during soil excavation activities, resulting in recovery actions.</p> <p>Risk Handling Strategy: Accept</p> <p>Probability: Low (10% to 24%) Worst Case Impacts: \$240K, 16 days</p> | ● | ↔ | <p>Risk Trigger Metric: During excavation (underground trenching for sewer, electrical and potable water), the project encounters unplanned contamination, debris, legacy waste (drums) or utilities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Review of historical as-built drawings.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Site walk downs as needed.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Radiological surveying, as needed.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. This risk has been identified as a key project risk for FY2020. Detailed reviews of existing drawings, site walk downs and continuous site radiological surveys throughout excavation efforts are being executed as best practices, and included in the baseline; therefore, this risk is accepted with residual probability and consequences.</p> | Mitigation Action(s) | FC Date | % | Review of historical as-built drawings. | Complete | 100 | Site walk downs as needed. | Ongoing | N/A | Radiological surveying, as needed. | Ongoing | N/A |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Review of historical as-built drawings. | Complete | 100 | | | | | | | | | | | | | | |
| Site walk downs as needed. | Ongoing | N/A | | | | | | | | | | | | | | |
| Radiological surveying, as needed. | Ongoing | N/A | | | | | | | | | | | | | | |
| 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 | 13.7 | 11.8 | 14.1 | (1.9) | -13.6% | (2.3) | -19.1% |

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$1.9M/-13.6%)

The CM negative schedule variance was the result of the PSWO issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with essential mission-critical operations that could not be performed in a safe and compliant manner consistent with the Center for Disease Control and Prevention (CDC) COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. Non-portable work activities are work that cannot be performed in a remote manner (e.g., telework from home). The bulk of the scope in this account for the period was to complete site preparation activities, continue capsule storage pad and operating pad foundation excavation and utilities potholing. Because the continued construction of CSA involves fieldwork, it was demobilized and placed in safe configuration in late March. As the method of performance of this account is primarily based on physical progress, minimal performance was taken, causing the negative schedule variance.

CM Cost Performance (-\$2.3M/-19.1%)

The CM negative cost variance resulted from a PSWO issued by RL to CHPRC on March 24, 2020. The PSWO covered non-portable work activities not associated with continuation of essential mission-critical operations that could not be performed in a safe and compliant manner consistent with the CDC COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. Non-portable work activities are work that cannot be performed in a remote manner (e.g., telework from home). The costs for direct labor assigned to non-portable work activities were incurred without the performance of planned work, so no earned value was associated with those costs and were the major driver of the negative cost variance. In addition, an error in an invoice payment, against control account 013.25.01.05, Transfer System Fabrication/Delivery, was missed when accruals were submitted last month. The subcontractor's accrual against this work breakdown structure (WBS) is aligned by contract task; the task is a split cost between two WBSs. When separating the accruals, the invoice payment was not accounted for in the actual cost, resulting in a prior period positive variance and was corrected in the current period, resulting in a one-time negative variance.

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 | 1,601.5 | 1,591.8 | 1,509.5 | (9.7) | -0.6% | 82.3 | 5.2% | 1,675.3 | 1598.8 | 89.3 | 76.5 |

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$9.7M/-0.6%)

The CTD schedule variance is within threshold.

CTD Cost Performance (+\$82.3M/+5.2%)

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

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

Variance at Completion (+\$76.5M/+4.6%)

The CTD VAC is within threshold.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

| RL-0013 Solid Waste Stabilization and Disposition | FY2020 | | Variance |
|---|-------------------|-------------------|----------|
| | Projected Funding | Spending Forecast | |
| Waste Stabilization and Disposition | 202.7 | 199.6 | 3.1 |
| Management of Cesium and Strontium Capsules (Line Item) | 14.3 | 1.1 | 13.2 |
| RL-0013 – Total | 217.0 | 200.7 | 16.3 |

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The current FY2020 projected funding level of \$217.0 million reflects the final FY2020 project management baseline annual update submitted to RL in September FY2019, with updates through fiscal month May. Line item funding reflects FY2019 carryover and FY2020 new funding targets. The spending forecast of \$200.7 million reflects a decrease of approximately \$1.2 million from April, primarily due to scope that pushed into FY2021.

Critical Path Analysis

Critical path analysis will be provided upon request.

MILESTONE STATUS

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

| Number | Title | Due Date | Actual Date | Forecast Date | Status/Comment |
|---------------|--|-----------|-------------|---------------|---|
| M-091-53 | Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste | 9/30/2018 | | | Ecology has not agreed to the change form |
| M-091-03N | TPA M-091-03N Submit Revision of TRUM Waste and Mixed Low-level Waste to Ecology | 9/30/2020 | | 9/30/2020 | On schedule |
| M-091-44T | Submit Change Request to Establish Schedule for Achieving Offsite Shipment of All TRUM Waste | 9/30/2020 | | 9/30/2020 | On schedule |
| M-091-49A | Submit a Change Request to Establish a Schedule for Achieving the Retrieval of Retrievably Stored Waste | 9/30/2020 | | 9/30/2020 | On schedule |
| M-091-52-T01C | Remove twenty (20) Additional Mixed Waste Containers from Outside Storage Area A and/or Outside Storage Area B | 11/30/20 | 4/2/2020 | | Complete |

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS/DECISIONS

| Description | CHPRC Delivery Date | Expected RL Due Date |
|---|---------------------|----------------------|
| CSA – RL review/approve PDSA (first FY) | 5/16/2019(A) | 8/3/2020 |
| RL review WESF safety design strategy Revision 3 | 4/7/2020(A) | 6/15/2020 |
| RL approve IDF final hazard categorization | 6/18/2020 | 7/8/2020 |
| RL review of Project W-135, WESF modifications, CD-2/CD-3 documentation | 6/24/2020 | 11/6/2020 |

Section D

Soil and Groundwater Remediation Project (RL-0030)

CH2MHILL
Plateau Remediation Company
a Jacobs company



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

M. A. Wright
Vice President for
Project Technical
Services

May 2020
CHPRC-2020-05, 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

In May, the Soil and Groundwater Remediation Project (S&GRP) continued essential mission-critical operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) partial stop work order (PSWO) issued as a part of the Hanford Site response to the novel coronavirus (COVID-19). Progress continued on the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) remedial process documentation for the River Corridor and Central Plateau. The project team continued to operate groundwater pump and treat (P&T) facilities in a safe and compliant manner. Groundwater treatment and well drilling (including development) that was completed include the following:

| Treatment Facility | Million Gallons Treated | | Chrome (kg) | | Carbon Tet (kg) | | Tech-99 (pCi) | | Uranium (kg) | |
|---------------------------|-------------------------|----------------|-------------|-------------|-----------------|----------------|-----------------------|------------------------|--------------|-------------|
| | CM | FYTD | CM | FYTD | CM | FYTD | CM | FYTD | CM | FYTD |
| DX P&T | 32.3 | 245.5 | 2.2 | 14.4 | | | | | | |
| HX P&T | 25.8 | 175.5 | 3.7 | 24.7 | | | | | | |
| KR-4 P&T | 12.6 | 99.7 | 0.2 | 1.1 | | | | | | |
| KW P&T | 11.8 | 101.6 | 0.5 | 8.7 | | | | | | |
| KX P&T | 30.2 | 292.8 | 2.0 | 16.6 | | | | | | |
| 200 West P&T | 71.1 | 756.8 | 0.5 | 4.0 | 155.0 | 1,314.0 | 5.90x10 ¹⁰ | 9.62 x10 ¹¹ | 0.9 | 51.0 |
| Combined | 183.9 | 1,671.8 | 9.1 | 69.5 | 155.0 | 1,314.0 | 5.90x10 ¹⁰ | 9.62 x10 ¹¹ | 0.9 | 51.0 |
| FY2020 Gold Metric | -- | 2,200.0 | -- | 80.0 | -- | 1,800.0 | -- | N/A | -- | 90.0 |

Current month (CM) Fiscal year (FY) to date (TD)

| Well Drilling Completion by Area* | FY2020 Planned | Current Calendar Month | FY2020 Cumulative |
|-------------------------------------|------------------|------------------------|-------------------|
| 100-KR-4 | 3 | 0 | 3 |
| 100-HR-3 | 9 | 0 | 0 |
| 200-DV-1 | 2 | 0 | 0 |
| 200-ZP-1 | 7 | 0 | 0 |
| M-24 Milestone | 3 | 0 | 0 |
| Total FY2020 Wells | 24 | 0 | 3 |
| Site Wide Boreholes | 0 | 0 | 0 |
| | FY2019 Carryover | Current Calendar Month | Cumulative |
| 200-BP-5 | 2 | 0 | 2 |
| 200-ZP-1 | 1 | 0 | 1 |
| Total FY2019 Carryover Wells | 3 | 0 | 3 |

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

EMS Objectives and Target Status

| Objective Action Plan# | Objective | Due Date | Status |
|------------------------|--|-----------|--------|
| 20-SGRP-OBJ-1-P1 | With the suspension of biological treatment, carbon tetrachloride concentrations will be monitored in the air emissions for measuring granulated activated carbon loading and meeting regulatory limits. | 7/30/2020 | 75% |
| 20-SGRP-OBJ-2-P1 | The number and types of spills at the S&GRP will be tracked, the workforce will be briefed on spill prevention, and if needed, a plan for reducing spills will be created. | 9/30/2020 | 35% |
| 20-SGRP-OBJ-3-P1 | S&GRP operates six P&T facilities that remove contaminants from groundwater at the Hanford Site. The goal is to treat and remediate a total of 2.2 billion gallons of groundwater. | 9/30/2020 | 76% |
| 20-SGRP-OBJ-4-P1 | Utilization of the new Centralized Groundwater CERCLA Waste Storage Area will lead to simplification of waste management and reduction in greenhouse gas emissions from operations vehicles. | 9/30/2020 | 54% |

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

| | CM Quantity | Rolling 12 Month | Comment |
|--------------------------------------|-------------|------------------|---------|
| Days Away, Restricted or Transferred | 0 | 0 | N/A |
| Total Recordable Injuries | 0 | 1 | N/A |
| First Aid Cases | 0 | 4 | N/A |
| Near-Misses | 0 | 0 | N/A |

KEY ACCOMPLISHMENTS

Strategic Integration

- Submitted DOE/RL-2019-70, *Study Plan to Characterize Root Depth and Biomass of Focal Shrub-Steppe Vegetation Species on the Hanford Site Central Plateau*, Decisional Draft, to RL on May 12, 2020.

100-NR-2 Operable Unit (OU)

- Submitted the revised Technical Impracticability (TI) Waiver document, which supports the Draft B remedial investigation/feasibility study (RI/FS) report (DOE/RL-2012-15, *Remedial Investigation/Feasibility Study for the 100-NR-1 and 100-NR-2 Operable Units*) to RL legal counsel for review on May 18, 2020.

100-KR-4 OU

- Transmitted DOE/RL-2018-22, *Feasibility Study for the 100-KR-1, 100-KR-2, and 100-KR-4 Operable Units*, Draft B, to RL on May 18, 2020, for transmittal to the U.S. Environmental Protection Agency (EPA) for review.

- TPA-CN-0891 was approved by RL and EPA on May 5, 2020. This change notice updates the KW Soil Flushing Treatability Test Sampling and Analysis Plan (SAP) (DOE/RL-2018-10) based on observed trends during the first two phases of the treatability test.
- TPA-CN-0892 was approved by RL and EPA on May 5, 2020. This change notice updated the 100-KR-4 groundwater monitoring SAP (DOE/RL-2013-29) to incorporate wells drilled in early FY2020 and adjust sampling frequency for existing monitoring locations based on concentration trends.

Central Plateau

200-BP-5/PO-1 OUs

- Supported the public review process for DOE/RL-2018-58, *Proposed Plan for the Interim Action Remediation of the 200-BP-5 and 200-PO-1 Operable Units*, Revision 0, which began on May 4, 2020. This included supporting the RL brief of the Hanford Advisory Board River and Plateau committee on May 21, 2020.

Central Plateau Resource Conservation and Recovery Act of 1976 (RCRA) Closure Plans

- Finalized changes to the 216-S-10 closure plan with agreement between the Washington State Department of Ecology (Ecology) and RL on May 6, 2020, and the plan is in a frozen status.

200-ZP-1 OU

- Transmitted DOE/RL-2019-76, *Optimization Study Report Sample and Analysis Plan*, Decisional Draft, to RL for review May 27, 2020.
- Transmitted DOE/RL-2009-124, *200 West Pump and Treat Operations and Maintenance Plan*, Revision 6 Decisional Draft, to RL for review May 21, 2020.

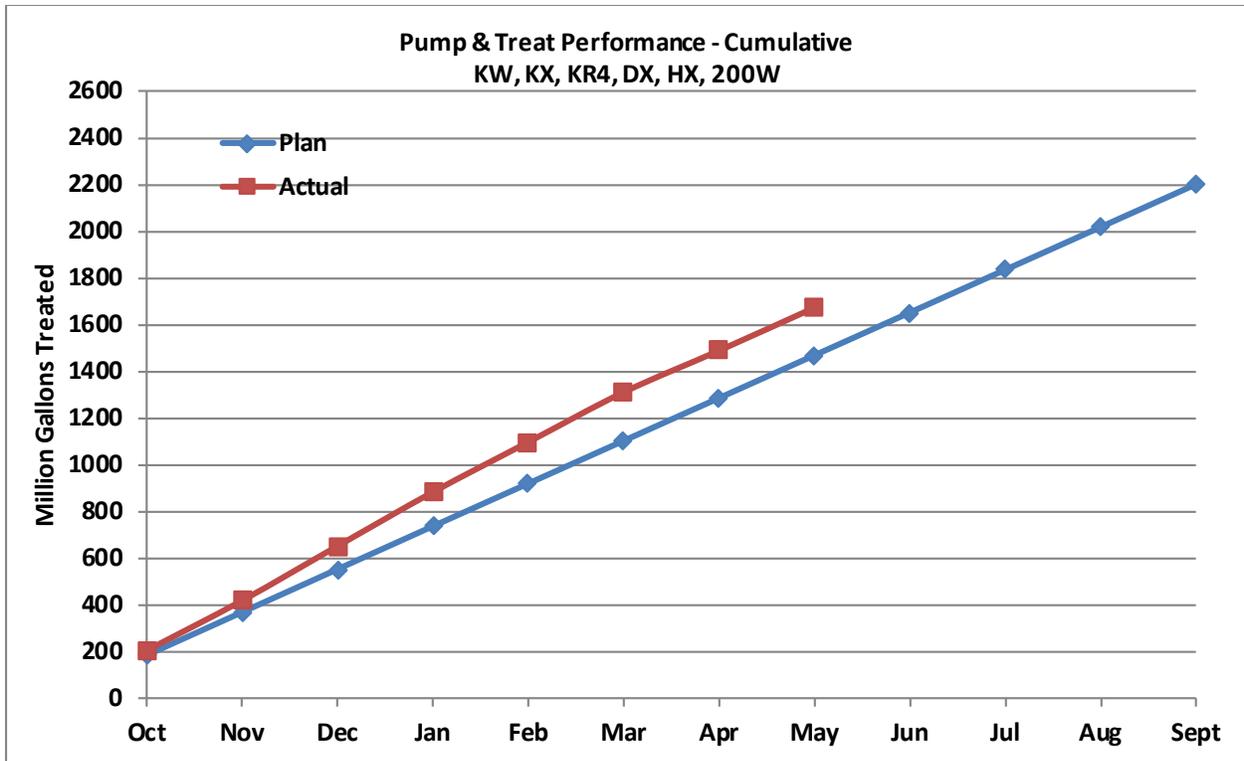
Groundwater P&T Facilities

200 West P&T

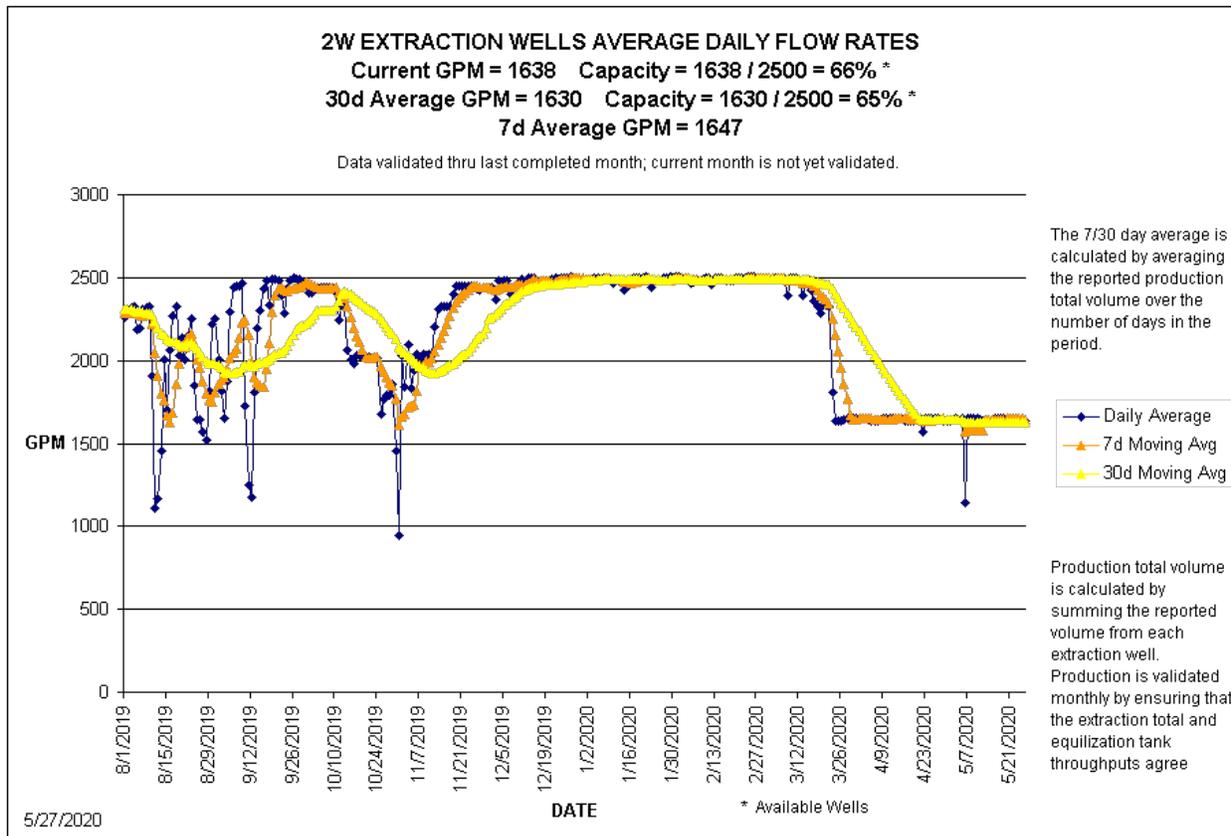
- Operated the 200 West P&T at an average of 1,630 gallons per minute (gpm).

100 Area P&Ts

- Operated the DX P&T at 750 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 298 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 271 gpm, below the facility capacity of 330 gpm.
- Operated the KX P&T at 722 gpm, below the facility capacity of 900 gpm.
- Operated the HX P&T at 585 gpm, below the facility capacity of 900 gpm.



FY2020 P&T Operations



200 West P&T Operations

MAJOR ISSUES

Issue

Progress to complete the 100-BC Area Record of Decision (ROD) is being hindered by concerns from the Yakama Nation (YN) and indications they may issue a notice of intent to sue if the ROD is issued with the current plan for groundwater cleanup. Monitored natural attenuation is the preferred remedy for groundwater, and the YN does not agree with this remedy. YN also asserts that the Cr(VI) 10 µg/L surface water cleanup level is applicable throughout the aquifer per Washington State code. YN has also expressed concerns about uncertainties in modeling and risk assessment and the extent of characterization for the lower aquifer. This issue puts achievement of the RL FY2020 Key Performance Goal, *Obtain 100-BC-Area Record of Decision*, at risk. This issue also has the potential to impact all groundwater OUs with existing Cr(VI) cleanup levels by causing them to change to the lower surface water cleanup level.

Corrective Action

No corrective action has been identified.

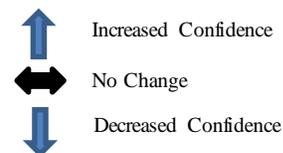
Status

CH2M HILL Plateau Remediation Company (CHPRC) legal and Environmental Protection & Strategic Planning issued a white paper on March 30, 2020, outlining the history and regulation that supports RL's position that the Cr(VI) groundwater cleanup level indicated in the 100-BC-5 proposed plan applies to most of the aquifer, and the surface water cleanup level only applies at the groundwater river interface. An additional white paper by CHPRC was issued on May 7, 2020, that evaluated the CERCLA and *Model Toxics Control Act* (MTCA) requirements for groundwater protection. The white paper recommended maintaining the current cleanup levels of 10 ug/L and 48 ug/L for surface water and groundwater protection, respectively. These white papers will be used to brief senior RL management and facilitate discussions with EPA and Ecology as the agencies work together with their respective technical and legal organizations to address these concerns.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | |
|--|---|---|---|--|--------------------|---------|---|---|---------|-----|
| | | Month | Trend | | | | | | | |
| RL-0030/WBS-030 | | | | | | | | | | |
| Explanation of major changes to the project monthly stoplight chart: The following updates were made to the monthly stoplight chart: 1. The mutual agreement between CHPRC and Mission Support Alliance, LLC (MSA) to pursue a front-end Virtual Server for the Gaia Environmental system has been on hold due to the PSWO. Risk <i>SGW-009: Key Environmental Modeling Hardware Failure</i> , was updated to reflect the current risk posture. 2. Risk <i>SGW-BP5-02: BP5 – IX Skid Uncertainty</i> , was updated to reflect the project’s position to accept this risk due to change to the final design. No viable mitigation or recovery actions are identified. This risk will be removed from the stoplight chart in the next reporting period. | | | | | | | | | | |
| Realized Risks (Risks that are currently impacting project cost/schedule) | | | | | | | | | | |
| SGW-216B-02: 216-B-63 Closure Plan Atypical Comments | Atypical 216-B-63 comments result in multiple rounds of comment resolution that require additional effort and duration. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$174.0K, 80 days | ● | ↔ | Risk Event: RL’s 216-B-63 Closure Plan comments provided in June 2019 requested removal of the pipeline for consistency with the 241-CX Tank System Closure Plan and because they were being addressed in the 200-IS-1 OU. CHPRC was coordinating with both RL and Ecology to resolve this comment while the review was ongoing. Efforts to resolve the pipeline comment were nearing completion between RL and Ecology in July 2019 when additional Ecology comments and research requests were provided from the new Ecology lead. The issue has grown to include a more global conveyance discussion (based on a December 2019 meeting), and new comments have been received that requested additional historic information (based on a January 2020 meeting). CHPRC continues with efforts to support RL in resolving the original pipeline comments and the new comments. Ecology has expressed the desire to incorporate the resolutions into the two other closure plans currently in process (216-S-10 and 216-B-3), as well as other closure plans already certified or frozen. RL or CHPRC have not acted on this request. The issues will be revisited once resolution is reached within this 216-B-63 Closure Plan. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 80%;">Recovery Action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> Recovery Assessment: No significant changes in May. Ecology concurrence on language for the 216-B-63 Closure Plan was received on April 20, 2020. Similar comments on other closure plans will be addressed in the same approach as decided in 216-B-63 Closure Plan. Once resolution on the 216-B-63, 216-S-10 and 216-A-29 Closure Plans is achieved, CHPRC will pursue certification. | Recovery Action(s) | FC Date | % | CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives. | Ongoing | N/A |
| Recovery Action(s) | FC Date | % | | | | | | | | |
| CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives. | Ongoing | N/A | | | | | | | | |
| SGW-216S-01: 216-S-10 Closure Plan Atypical Comments | Atypical 216-S-10 comments result in multiple rounds of comment resolution that require additional effort and duration. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$174.0K, 80 days | ● | ↔ | Risk Event: RL and Ecology comments were originally received in April 2019. Since that date, additional Ecology comments were received in August, November and December 2019 as part of Ecology’s “confirm comment capture” task. Additional comments were received via the 216-B-63 Closure Plan review. <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 80%;">Recovery Action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> Recovery Assessment: No significant changes in May. CHPRC has initiated comment resolution based on the approach agreed to by RL and Ecology for completing the 216-B-63 Closure Plan comments. Round three of comment resolution continues and is scheduled to complete on June 25, 2020. | Recovery Action(s) | FC Date | % | CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives. | Ongoing | N/A |
| Recovery Action(s) | FC Date | % | | | | | | | | |
| CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives. | Ongoing | N/A | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | |
|---|--|------------|-------|--|----------------------|---------|---|---|---------|-----|--|---------|-----|
| | | Month | Trend | | | | | | | | | | |
| RL-0030/WBS-030 | | | | | | | | | | | | | |
| SGW-216A-01: 216-A-29 Closure Plan Atypical Comments | Atypical 216-A-29 comments result in multiple rounds of comment resolution that require additional effort and duration. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$174.0K, 80 days | ● | ↔ | <p>Risk Event: This closure plan was “frozen” by Ecology in April 2019, with the remaining activity of certification and transmittal to occur concurrently with the in-process 216-B-63, 216-B-3 and 216-S-10 Closure Plans. During the 216-B-63 Closure Plan comment resolution meeting held in December 2019, Ecology expressed a desire to update the 216-A-29 Closure Plan upon resolution of the conveyance discussions. During the January 2020 conveyance follow-up meeting with Ecology, new comments were provided regarding a request for additional historical information, and an informal statement that the other certified or frozen closure plans may also need to be revised accordingly.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Assessment: No significant changes in May. The resolution of comments for the 216-B-63 Closure Plan, and the description for conveyances in 216-B-3, will likely cause the need for revision of the currently frozen 216-A-29 Closure Plan. These revisions are needed to provide consistency between the 216-B-63, 216-B-3, 216-A-29 and 216-S-10 Closure Plans, as all four closure plans will be certified in one package.</p> | Recovery Action(s) | FC Date | % | CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives. | Ongoing | N/A | | | |
| Recovery Action(s) | FC Date | % | | | | | | | | | | | |
| CHPRC includes resources to support timely comment resolution, weekly meetings and, if necessary, development of white papers to provide further clarification to stakeholders. CHPRC considers these handling actions standard business practices to support performance objectives. | Ongoing | N/A | | | | | | | | | | | |
| SGW-KR4-05: FS (Feasibility Study) – Greater Than Expected Comments from RL or Regulators | Atypical RL or regulator review comments result in multiple rounds of comment resolution and/or are global in nature, requiring additional time for comment incorporation and/or rework. Risk Handling Strategy: Control Probability: Likely (75% to 90%) Worst Case Impacts: \$120.0K, 48 days | ● | ↔ | <p>Risk Event: Early collaborative reviews of the decisional draft FS by EPA has resulted in a change of approach in the alternatives evolution that created rework of the FS during preparation of the Draft A version.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Develop a standardized approach to quickly evaluate and categorize comments for resolution.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct routine meetings to address agency comments and to remain current on the influences from agencies.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Assessment: No significant changes in May. Continue collaborating with EPA to help reduce the number of comments during their review.</p> | Recovery Action(s) | FC Date | % | Develop a standardized approach to quickly evaluate and categorize comments for resolution. | Ongoing | N/A | Conduct routine meetings to address agency comments and to remain current on the influences from agencies. | Ongoing | N/A |
| Recovery Action(s) | FC Date | % | | | | | | | | | | | |
| Develop a standardized approach to quickly evaluate and categorize comments for resolution. | Ongoing | N/A | | | | | | | | | | | |
| Conduct routine meetings to address agency comments and to remain current on the influences from agencies. | Ongoing | N/A | | | | | | | | | | | |
| 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 Risks identified in May . | | | | | | | | | | | | | |
| FY2020 Key Risks | | | | | | | | | | | | | |
| SGW-009: Key Environmental Modeling Hardware Failure | Computer hardware components for environmental modeling fail, requiring immediate replacement and resulting in cost and schedule impacts to CHPRC and other Hanford Site contractor's projects. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$350K, 25 days | ● | ↔ | <p>Risk Event: A primary node of the Gaia Environmental modeling super computer server fails. This failure results in delays to Composite Analysis and Cumulative Impact Evaluation work activities and requires the purchase and validation of new components.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Implement the use of a virtual server for modelling activities.</td> <td>TBD</td> <td>0</td> </tr> </tbody> </table> <p>Mitigation Assessment: Due to the current work status of the PSWO, the project is currently pursuing a meeting with MSA to further discuss and evaluate the proposed virtual server. Once a viable mitigation action is agreed upon between stakeholders, this risk will be removed from the stoplight chart.</p> | Mitigation Action(s) | FC Date | % | Implement the use of a virtual server for modelling activities. | TBD | 0 | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | |
| Implement the use of a virtual server for modelling activities. | TBD | 0 | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | |
|---|--|------------|-------|---|----------------------|---------|---|-------------------------------|-----|-----|
| | | Month | Trend | | | | | | | |
| RL-0030/WBS-030 | | | | | | | | | | |
| SGW-BP5-02: BP5 – IX Skid Uncertainty | Installation design differs from planning assumptions, causing impacts to cost and schedule. Risk Handling Strategy: Accept Probability: Likely (26% to 74%) Worst Case Impacts: \$1,226.9K, 12 days | ● | ↔ | Risk Event: Ion exchange (IX) Skid design has been changed to include a second filter train to be added to the system to achieve the reduced concentration level targets. This results in in-scope, unplanned procurement of a second IX skid, which is outside of the bounding assumptions. <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: RL design requirements are currently being incorporated into the design. The 90 percent design incorporating these comments is scheduled to complete June 11, 2020. This design will include an additional IX train. No recovery or mitigation actions can be implemented, as this is a directed change per the design requirements and the project has accepted the change in design. This risk will be removed from the stoplight chart next reporting period. | Mitigation Action(s) | FC Date | % | None identified at this time. | N/A | N/A |
| Mitigation Action(s) | FC Date | % | | | | | | | | |
| None identified at this time. | N/A | N/A | | | | | | | | |
| SGW-171: Increase in Routine Sampling & Analysis Requirements | Sampling and characterization requirements increase above planning assumptions due to changes from data quality objective (DQO)/SAP sessions and/or other requested changes to analyses, resulting in cost impacts. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$448K, 0 days | ● | ↔ | Risk Event: During review of the completed SAPs for multiple well locations, it is determined that an increase in the number of samples or complexity of sample type is above the baseline planning. <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No significant changes in May. Although a Sampling Change Board has been formed to review and validate the sampling requirements for optimization, some of the SAPs were not completed during development of the FY2020 baseline budget. For that reason, budgets may not reflect required sampling, and in-scope unplanned work may not be mitigated. | Mitigation Action(s) | FC Date | % | None identified at this time. | N/A | N/A |
| Mitigation Action(s) | FC Date | % | | | | | | | | |
| None identified at this time. | N/A | N/A | | | | | | | | |
| Unassigned Risks (Pending ownership of identified risks/opportunities) | | | | | | | | | | |
| No unassigned risks identified in 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 | 12.1 | 6.3 | 7.5 | (5.8) | -48.3% | (1.2) | -19.4% |

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$5.8M/-48.3%)

The CM negative schedule variance was the result of the PSWO issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with essential mission-critical operations that could not be performed in a safe and compliant manner consistent with the Centers for Disease Control and Prevention COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. Non-portable work activities are activities that cannot be performed in a remote manner (e.g., telework from home). As drilling, sampling and other S&GRP fieldwork is not considered essential mission-critical operations; those activities were demobilized and placed in a safe configuration in late March, resulting in a negative schedule variance.

CM Cost Performance (-\$1.2M/-19.4%)

The CM negative cost variance was also the result of the PSWO. Drilling, sampling and other S&GRP fieldwork is not considered essential mission-critical operations therefore all were demobilized. Although CHPRC incurred the downtime costs of the dedicated staff and subcontract resources, no progress was made on field activities. As the method of performance for fieldwork is based on physical progress in the field, and no progress was achieved, and a negative cost variance was experienced.

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 | 1,712.7 | 1,696.3 | 1,647.8 | (16.4) | -1.0% | 48.5 | 2.9% | 1,755.1 | 1,706.9 | 59.1 | 48.2 |

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$16.4M/-1.0%)

The CTD negative schedule variance is within reporting thresholds.

CTD Cost Performance (+\$48.5M/+2.9%)

The CTD positive cost variance is within reporting thresholds.

Variance at Completion (+\$48.2M/+2.7%)

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 | FY2020 | | Variance |
|---|----------------------|----------------------|----------|
| | Projected Funding | Spending Forecast | |
| Spending Forecast | 126.0 | 116.8 | 9.2 |

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

Projected FY2020 funding in May remained at \$126 million. The spending forecast of \$116.8 million reflects an overall decrease of \$1.7 million, which primarily reflects the impact of work delays resulting from the PSWO.

Critical Path Analysis

Critical path analysis will be provided upon request.

MILESTONE STATUS

The following table is a one-year look ahead of PBS RL-0030, *Hanford Federal Facility Agreement and Consent Order*-enforceable milestones, nonenforceable target due dates and commitments for CHPRC.

| Number | Title | Due Date | Actual Date | Forecast Date | Status/ Comment |
|---------------|--|------------|-------------|------------------------|-----------------------|
| M-015-93C | Initiate Characterization Fieldwork for 200-SW-2 Operable Unit Landfills | 9/30/2018 | | To be determined (TBD) | In dispute resolution |
| M-015-98 | Complete Remedial Investigation of U Plant Related Waste Sites located in 200-WA-1 | 6/30/2019 | | TBD | In dispute resolution |
| M-085-70 | Submit to Ecology a Remedial Investigation/Feasibility Study Work Package for 200-CB-1 | 9/30/2019 | | TBD | In dispute resolution |
| M-015-99 | Complete Remedial Investigation of Plutonium Finishing Plant (PFP) Related Waste Sites Located in 200-WA-1 | 12/31/2019 | | TBD | In dispute resolution |
| M-024-58M | Initiate Discussions of Well Commitments | 6/1/2020 | | 6/1/2020 | On schedule |
| M-024-71-T01 | Conclude Discussions of Well Commitments Initiated under M-024-58 | 8/1/2020 | | 7/30/2020 | On schedule |
| M-085-80 | Submit Remedial Investigation/Feasibility Study Work Plan for 200-CP-1 to Ecology | 9/30/2020 | | 9/15/2020 | On Schedule |
| M-015-112 | Submit Draft B 200-IS-1 RFI/CMS/RI/FS Work Plan to Ecology with Schedule Dates | 11/30/2020 | | 1/25/2022 | At risk |
| M-016-110-T02 | Take Actions Such that Hexavalent Chromium Meets Drinking Water Standards | 12/31/2020 | | N/A | Deleted |
| M-016-119-T01 | Operational System in Place to Contain GW Plumes in 200 NPL Area | 12/31/2020 | | N/A | Deleted |
| M-024-71 | Complete the Construction of All Wells Listed for CY20 and Before | 12/31/2020 | | 12/31/2020 | On schedule |

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS*

| Description | CHPRC Delivery Date | Expected RL Due Date |
|---|---------------------|----------------------|
| RL review of draft annual groundwater report | 5/6/2020(A) | 6/7/2020 |
| RL review of biomobilization/biointrusion root characterization decisional study plan | 5/12/2020(A) | 6/23/2020 |
| RL review of 100-KR-4 Waste Management Area (WMA), Revision 7 | 5/15/2020(A) | 6/13/2020 |
| RL transmits 100-KR-4 FS Draft B for EPA review | 5/19/2020(A) | 6/3/2020 |
| RL review 200-ZP-1 operations and maintenance (O&M) plan/remove bio treatment, Decisional Draft Revision 6 | 5/20/2020(A) | 7/2/2020 |
| RL transmit to Ecology and EPA DQO/SAP, Draft A for defining future extraction well location | 5/25/2020 | 6/1/2020 |
| RL review of KW soil flushing treatability test report decisional draft | 5/26/2020 | 6/24/2020 |
| RL review of the 100 Area P&T annual report | 6/2/2020 | 7/1/2020 |
| RL review of 100-D/H waste site closeout Package B | 6/9/2020 | 6/22/2020 |
| RL review of the 200 Area P&T report | 6/13/2020 | 7/12/2020 |
| RL and Ecology review of the draft west groundwater monitoring plan in support of RCRA Revision 9 permit modification | 6/22/2020 | 7/6/2020 |
| RL transmit 200-BP-5 WMA C drilling SAP, Draft A to regulators for review | 6/23/2020 | 6/29/2020 |
| RL review technical impracticability applicable or relevant and appropriate requirement waiver request decisional draft | 6/23/2020 | 7/22/2020 |
| RL transmit 200-UP-1 Draft Revision 1 remedial design (RD)/removal action work plan (RAWP) to regulators for check review | 6/26/2020 | 7/2/2020 |
| RL transmit 200-UP-1 performance monitoring plan, Revision 1 to EPA for approval | 6/26/2020 | 7/2/2020 |
| RL transmit 200-ZP-1 O&M plan, Draft A to EPA for review | 7/3/2020 | 7/17/2020 |
| RL transmit 100-HR-3 RD/RAWP Draft Revision 0 to regulators for review | 7/20/2020 | 7/20/2020 |
| RL certify and submit 216-S-10 pond and ditch addendum to Ecology | 7/22/2020 | 8/4/2020 |
| RL review of 100-D-H waste site closeout Package C | 7/29/2020 | 8/11/2020 |
| RL review of KW rebound study parent SAP draft | 7/30/2020 | 8/28/2020 |
| RL review of 100-KE soil flushing explanation of significant difference | 7/31/2020 | 8/29/2020 |
| RL transmit 200-EA-1 RI/FS work plan, Draft 0 to regulators | 8/11/2020 | 8/24/2020 |
| RL and Ecology review of the draft east groundwater monitoring plan in support of RCRA Revision 9 permit modification | 8/18/2020 | 8/31/2020 |

*This table identifies key DOE actions/decisions only.

Section E

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

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

May 2020
CHPRC-2020-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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

PROJECT SUMMARY

In May, the Central Plateau Risk Management (CPRM) Project and the West Area Remediation Project (WARP) continued essential mission-critical operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) partial stop work order (PSWO) issued as a part of the Hanford Site response to the novel coronavirus (COVID-19). Essential mission-critical operations performed by the CPRM Project during the reporting period included the monthly As Low As Reasonably Achievable Current Technology (ALARACT) surveys at the canyon facilities and operation of the Central Radiological Count Facility. In the 500 Area, crews completed the weekly Aqueous Makeup inspections. CPRM continued social distancing packing and moves in MO-294 and MO-6114. Finally, CPRM issued the Time Critical Removal Action (TCRA) and Action Memorandum (AM) for the interim stabilization of the 216-Z-2 and 216-Z-9 cribs and the 241-Z-361 tank. WARP worked on setting up work areas to implement social distancing and progressed planning for the sampling and characterization, hazard material removal and demolition related to the demolition of the 234-5Z-BA, 234-5Z-BE and 216-ZP-1 structures.

EMS Objectives and Target Status

| Objective # | Objective | Target | Due Date | Status |
|---------------------|---|--|-----------|--------|
| 20-EMS-CPRM-OBJ1-P1 | Improve compliance, Environmental Management System (EMS) awareness and employee involvement. | Present or facilitate a discussion of EMS topics to personnel on a minimum of four different occasions in fiscal year (FY) 2020 and recruit personnel (other than environmental) to participate in at least two-compliance review/programmatic walk downs. | 9/30/2020 | 30% |

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

| | Current Month | Rolling 12 Month | Comment |
|--------------------------------------|---------------|------------------|---------|
| Days Away, Restricted or Transferred | 0 | 2 | N/A |
| Total Recordable Injuries | 0 | 1 | N/A |
| First Aid Cases | 0 | 12 | N/A |
| Near Misses | 0 | 0 | N/A |

KEY ACCOMPLISHMENTS

CPRM Surveillance and Maintenance

- Completed the monthly ALARACT surveys at the canyon facilities.

Reduction-Oxidation (REDOX) Canyon Risk Mitigation

- Completed a revision to the REDOX Air Monitoring Plan.

Aging Structures Stabilization

- Completed the final specifications for structural stabilization of the 216-Z-2 and 216-Z-9 cribs and 241-Z-361 tank.
- Completed the chemical compatibility evaluation for the 216-Z-2 and 216-Z-9 cribs and the 241-Z-361 tank.
- Awarded the subcontract for a new trailer to be installed at U-Plant to support the stabilization efforts of the 216-Z-2 and 216-Z-9 cribs and the 241-Z-361 tank.
- Received approval from RL and issued the TCRA and AM for stabilization activities.

West Area Remediation Project

- Crews worked on setting up work areas to implement social distancing measures.
- Planning progressed on sampling and characterization, hazard material removal and demolition work packages related to planned demolition of the 234-5Z-BA, 234-5Z-BE and 216-ZP-1 structures.

MAJOR ISSUES

Issue

Management directed a work stand down at REDOX on October 2, 2019, to address a variety of issues, including step-off pad (SOP) upgrades, temporary lighting and lack of ventilation throughout the facility. This management-directed work stand down was intended to obtain feedback from REDOX personnel on recommendations to improve the infrastructure at REDOX to support future work scope and minimize the risk of potential issues the project has experienced previously.

Corrective Action

On October 3, 2019, CPRM and REDOX management held a meeting with REDOX personnel to identify all issues and concerns that workers experience while performing risk mitigation activities at REDOX. From this meeting, a list of actions was developed and assigned to functional managers. A phased approach was established and categorized into two sections to address the issues identified and captured as actions. Phase I consisted of improving infrastructure that would better facilitate entries into radiologically posted areas at REDOX and reviewing all governing documentation (i.e., work packages, radiological work permits, etc.) for adequacy. Phase II addressed the working conditions on the interior of REDOX in radiologically posted areas, including ways to improve ventilation and temporary power needs in the areas where risk mitigation activities were being performed. The list of actions is updated weekly and posted in a location that is easily accessible to all REDOX personnel.

Status

With engagement from REDOX personnel, REDOX management identified a path of improving the infrastructure at REDOX that includes moving the SOP outside the facility. Procurement and activities are complete to improve the SOP. REDOX management and personnel have completed work package reviews and procedure reviews to address the future work scope. The fieldwork installation of the doublewide and shower trailer connections were completed, and the doublewide door in the SOP trailer was installed and

will be operating by July. The development of a work package to install temporary power and lighting within REDOX is expected to finish in June to ensure that Phase II activities can begin after the completion of Phase I. The delay in the forecasted completion date is due to the response to COVID-19.

Issue

In February, electricians entered the 224B Facility and noticed exposed electrical wiring hanging out of the back of a standalone metal equipment rack in the gallery control room. The lead electrician recognized the potential hazard and ordered the room cleared. The initial investigation determined this to be a legacy condition found in the older buildings scheduled for demolition. When the legacy buildings were closed, the common practice was to decommission the building's electrical equipment by air gapping or equipment isolation. However, records of these actions are not part of the current work record, and techniques/requirements have evolved over time.

Corrective Action

Determine how to bring the building to electrical neutrality before going to a cold and dark state and review recent events at the 224B Facility to determine if a common cause or a negative trend exists. In addition, all annual surveillance and maintenance (S&M) rounds on aged facilities are stopped until configuration control is established.

Status

Electrical investigations are on hold until the site wide PSWO is lifted.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- Increased Confidence
- No Change
- Decreased Confidence

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | |
|---|--|------------------------------------|-------|---|-------------------------|---------|---|---|----------------|-----|----------------------------------|----------------|----|
| | | Month | Trend | | | | | | | | | | |
| RL-0040/WBS-040 | | | | | | | | | | | | | |
| Explanation of major changes to the project monthly stoplight chart: There are no major changes to the stoplight chart in May. | | | | | | | | | | | | | |
| Realized Risks (Risks that are currently impacting project cost/schedule) | | | | | | | | | | | | | |
| 224B-007: Cold & Dark Latent Condition | <p>During cold and dark activities, an unexpected condition (e.g., higher-than-expected radiological readings; inaccuracies in historical drawings and documentation; and discovery of unidentified electrical, mechanical or sewer/water utilities/configuration) results in unplanned work resulting in cost and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$100K, 24 days</p> | ● | | <p>Risk Event: The risk event was due to exposed electrical wires discovered during an electrical safe condition being performed, thus posing a potential electrical risk. This was identified for all CPRM legacy facilities that are currently being electrically investigated for potential electrical risk.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Complete electrical isolations.</td> <td>August 2020</td> <td>10</td> </tr> </tbody> </table> <p>Recovery Action Assessment: The forecast completion date for electrical isolations slipped one month to August 2020 in May due to the PSWO. Electrical isolations to complete cold and dark of the 224B Facility are on hold pending lifting of the PSWO. A lockout/tagout (LOTO) was placed on the 224B Facility and had an electrical investigation completed. It was determined the facility will operate on a LOTO status until the facility is electrically cold and dark. Based on the exposed electrical discovery at the 224B Facility, CPRM has performed an extended condition verification across other potential aging facilities that may have the same potential risk factor.</p> | Risk Recovery Action(s) | FC Date | % | Complete electrical isolations. | August 2020 | 10 | | | |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | |
| Complete electrical isolations. | August 2020 | 10 | | | | | | | | | | | |
| 224B-008: Impacted by OHC (Other Hanford Contractors) or Other CH2MHill Plateau Remediation Company (CHPRC) Projects | <p>Delays by OHC or other CHPRC projects impact the schedule and technical approach due to inconsistencies with CHPRC execution, resulting in recovery actions.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Low (10% to 25%) Worst Case Impacts: \$30K, 12 days</p> | ● | | <p>Risk Event: Mission Support Alliance, LLC (MSA) Electrical Utilities (EU) impacted the 224B Facility electrical deactivation. The need for unforeseen electrical isolations due to an asbestos event at 2101M removed the EU planner from completing the work package to support the 224B Facility.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Mitigate OHC delays.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No major changes in May. Insulators were loaned to MSA in June to support asbestos abatement in 2101M.</p> | Risk Recovery Action(s) | FC Date | % | Mitigate OHC delays. | Ongoing | N/A | | | |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | |
| Mitigate OHC delays. | Ongoing | N/A | | | | | | | | | | | |
| REDOX-07: Building Accessibility due to Water Intrusion | <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%) Worst Case Impacts: \$45K, 32 days</p> | ● | | <p>Risk Event: Leaking roofs have allowed water to accumulate in limited access areas of the facility. Due to electrical concerns, REDOX personnel have been unable to access the west end of the North Sample Gallery.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure a contractor to patch the annex roof.</td> <td>September 2020</td> <td>10</td> </tr> <tr> <td>Develop plans to remove annexes.</td> <td>September 2020</td> <td>10</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No major changes in May. The new leak discovered in August continues to be evaluated to identify a path forward. Maintenance crews are prepared to procure a contractor to repair the roofs on the annexes where the leaks are expected to occur. The other plan is looking into the demolition of the annexes at REDOX once personnel from other projects are available and the work is authorized. Plans to prepare the annexes for demolition are being developed for FY2021.</p> | Risk Recovery Action(s) | FC Date | % | Procure a contractor to patch the annex roof. | September 2020 | 10 | Develop plans to remove annexes. | September 2020 | 10 |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | |
| Procure a contractor to patch the annex roof. | September 2020 | 10 | | | | | | | | | | | |
| Develop plans to remove annexes. | September 2020 | 10 | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | |
|---|---|---|--|-------------------------|---------|---|--|---------------|----|--|--------------|-----|---|--------------|----|
| | | Month | Trend | | | | | | | | | | | | |
| RL-0040/WBS-040 | | | | | | | | | | | | | | | |
| <p>REDOX-09: Concerned Citizen</p> <p>Delays caused by public concern (i.e., stakeholders, other Hanford Site workers and concerned citizens) impact the project schedule and technical approach, resulting in recovery actions and causing unplanned, in-scope work.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%) Worst Case Impacts: \$0, 16 days</p> |  |  | <p>Risk Event: A concerned citizen called a stop work, which caused delays and unplanned work necessary to address the required action.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure and install the SOP trailer.</td> <td>July 2020</td> <td>90</td> </tr> <tr> <td>Create and implement a phased approach to address identified concerns.</td> <td>October 2020</td> <td>50</td> </tr> <tr> <td>Upgrade temporary power/lighting and localized ventilation.</td> <td>October 2020</td> <td>10</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No major changes in May. This risk was realized in October 2019. A detailed corrective action list was created with REDOX personnel input. A phased approach schedule was developed and implemented to address infrastructure upgrades necessary to support future work demands. Action items have been assigned to the appropriate responsible manager, and REDOX management is interfacing with personnel for weekly updates on corrective actions. The SOP trailer was delivered in January, and final electrical connections are pending.</p> | Risk Recovery Action(s) | FC Date | % | Procure and install the SOP trailer. | July 2020 | 90 | Create and implement a phased approach to address identified concerns. | October 2020 | 50 | Upgrade temporary power/lighting and localized ventilation. | October 2020 | 10 |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | | | |
| Procure and install the SOP trailer. | July 2020 | 90 | | | | | | | | | | | | | |
| Create and implement a phased approach to address identified concerns. | October 2020 | 50 | | | | | | | | | | | | | |
| Upgrade temporary power/lighting and localized ventilation. | October 2020 | 10 | | | | | | | | | | | | | |
| <p>REDOX-16: Facility Integrity</p> <p>Problems with aging building systems and components (such as roofing and overall structure) result in inoperability or require unscheduled maintenance or outages that impact planned decontamination and decommissioning activities, resulting in schedule delays and cost impacts.</p> <p>Risk Handling Strategy: Transfer</p> <p>Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 0 days</p> |  |  | <p>Risk Event: A leaking roof results in unsafe working conditions for personnel.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform cold and dark activities to shut off building power.</td> <td>December 2020</td> <td>40</td> </tr> <tr> <td>Repair minor roof defects.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No major changes in May. Integrity failures could lead to water issues within radiologically contaminated areas, causing a hazard to personnel. Going cold and dark will minimize the risk for electrical shock due to water. Electrical cold and dark activities have slowed, with electrical engineers and electricians unable to access specific locations of REDOX to continue building the electrical isolation index. The delivery of the substation was delayed due to manufacturer backups. Minor repairs to leaking parts of the roof can significantly reduce water intrusion, and the project workers continue to repair minor roof defects.</p> | Risk Recovery Action(s) | FC Date | % | Perform cold and dark activities to shut off building power. | December 2020 | 40 | Repair minor roof defects. | Ongoing | N/A | | | |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | | | |
| Perform cold and dark activities to shut off building power. | December 2020 | 40 | | | | | | | | | | | | | |
| Repair minor roof defects. | Ongoing | N/A | | | | | | | | | | | | | |
| Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed) | | | | | | | | | | | | | | | |
| <p>REDOX-05: Collapse of Sand Filter</p> <p>Due to the close proximity of equipment in operation (e.g., cranes, forklifts used for waste loadout, and steam lines and steam line stanchion removal activities), building age and structural integrity, a collapse of a REDOX ventilation system sand filter is experienced, resulting in cost and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very low (<10%) Worst Case Impacts: \$260K, 48 days</p> |  |  | <p>Risk Triggers: Due to the close proximity of equipment in operation (e.g., cranes, forklifts used for waste loadout and steam line stanchion removal activities), building age and structural integrity, a collapse of a REDOX ventilation system sand filter is experienced.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish sand filter access boundary.</td> <td>October 2020</td> <td>50</td> </tr> <tr> <td>Implement a communication plan between OHCs and other CHPRC projects.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in May. Current work scope has not yet impacted this potential risk. Based on the contractor schedule, new temporary exhausters for REDOX are not expected to arrive until October 2020. In turn, this delay pushed the forecast dates for mitigation actions to establish the sand filter access boundary. Based on this information, the current plan would move any excavation work near the sand filters to October 2020.</p> | Mitigation Action(s) | FC Date | % | Establish sand filter access boundary. | October 2020 | 50 | Implement a communication plan between OHCs and other CHPRC projects. | Ongoing | N/A | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | |
| Establish sand filter access boundary. | October 2020 | 50 | | | | | | | | | | | | | |
| Implement a communication plan between OHCs and other CHPRC projects. | Ongoing | N/A | | | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | |
|--|--|------------|-------|--|----------------------|---------|---|---|----------------|-----|--|---------|-----|
| | | Month | Trend | | | | | | | | | | |
| RL-0040/WBS-040 | | | | | | | | | | | | | |
| High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone) | | | | | | | | | | | | | |
| ZSS-008: Greater Than Expected Comments from Regulators | <p>Comments from RL regulators or stakeholders on documents submitted for approval are excessive, need multiple rounds of resolution or change requirements that result in increased schedule and labor requirements, causing cost and schedule impacts to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$100K, 16 days</p> | ● | ↑ | <p>Risk Triggers: As regulatory documents are developed to obtain final decisions, the regulator comments impose additional cleanup requirements than what are currently expected, resulting in rework and increased scope. Excessive comments from RL or regulators result in schedule delays during comment resolution.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Develop a standardized approach to quickly evaluate and categorize comments for resolution.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Conduct routine meetings to address agency comments and to remain current on the influences from agencies.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: The TCRA and AM was approved by RL and issued on May 4, 2020, with all regulatory agency comments incorporated and successfully resolved. While the 60-day public comment period on the Aging Structures Project has been extended an additional 30 days through June 29, 2020, the process of obtaining regulatory authorization for the project to proceed under the <i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i> has concluded. This risk is no longer considered to be a threat to the project and will be closed and will be removed from the stoplight chart for June reporting.</p> | Mitigation Action(s) | FC Date | % | Develop a standardized approach to quickly evaluate and categorize comments for resolution. | Ongoing | N/A | Conduct routine meetings to address agency comments and to remain current on the influences from agencies. | Ongoing | N/A |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | |
| Develop a standardized approach to quickly evaluate and categorize comments for resolution. | Ongoing | N/A | | | | | | | | | | | |
| Conduct routine meetings to address agency comments and to remain current on the influences from agencies. | Ongoing | N/A | | | | | | | | | | | |
| FY2020 Key Risks | | | | | | | | | | | | | |
| BOS-003: Facility Integrity | <p>Problems with aging buildings, systems or components (e.g., roofing and structures, etc.) result in inoperability or recovery actions, causing unplanned in-scope work (e.g., unscheduled maintenance and outages).</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Likely (75% to 90%)</p> <p>Worst Case Impacts: \$1M, 0 days</p> | ● | ↔ | <p>Risk Triggers: The project experiences problems with aging building systems and components (e.g., cribs, roofing and structures, etc.) during routine S&M activities. Scheduled maintenance activities must then be performed in addition to unplanned recovery actions.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform lifecycle evaluations of critical structures, systems, and components.</td> <td>8/1/2020</td> <td>85</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in May. This risk was identified as a key project risk for FY2020. A subcontract to perform structural analysis of 231-Z was awarded in late April. The contract work is expected to begin in June/July 2020. Routine S&M activities continue to be performed to mitigate risk.</p> | Mitigation Action(s) | FC Date | % | Perform lifecycle evaluations of critical structures, systems, and components. | 8/1/2020 | 85 | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | |
| Perform lifecycle evaluations of critical structures, systems, and components. | 8/1/2020 | 85 | | | | | | | | | | | |
| REDOX-VS-001: Changes to Stack & Stack Monitoring Requirements Affect the Project Schedule | <p>Additional stack and stack monitoring requirements are issued by the regulators, resulting in cost impacts and schedule delays to the project.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Medium (26% to 74%)</p> <p>Worst Case Impacts: \$1.5M, 96 days</p> | ● | ↔ | <p>Risk Triggers: Regulators issue additional stack and stack monitoring requirements that mandate significant changes to the current plan. The supplemental ventilation unit is currently identified in the air-monitoring plan (AMP), as well as the associated monitoring requirements for the existing stack.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Negotiate changes to the AMP with regulators.</td> <td>September 2020</td> <td>15</td> </tr> </tbody> </table> <p>Mitigation Assessment: No major changes in May. CHPRC continues to meet with representatives of RL, the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Health (DOH) to discuss the ventilation improvements proposed for REDOX to gain endorsement on the proposed changes to the system and stack monitoring. Revision to the AMP will be submitted to RL, EPA and DOH on May 25, 2020, for their review.</p> | Mitigation Action(s) | FC Date | % | Negotiate changes to the AMP with regulators. | September 2020 | 15 | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | |
| Negotiate changes to the AMP with regulators. | September 2020 | 15 | | | | | | | | | | | |
| 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 | 5.0 | 2.8 | 5.6 | (2.2) | -44.5% | (2.9) | -103.6% |

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance: (-\$2.2M/-44.5%)

The CM unfavorable schedule variance was the result of the PSWO issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with essential mission-critical operations that could not be performed in a safe and compliant manner consistent with the Centers for Disease Control and Prevention (CDC) COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. Non-portable work activities is work that cannot be performed in a remote manner (e.g., telework from home). Labor resources were planned at B Plant, REDOX, Plutonium Uranium Extraction Plant (PUREX) and the Plutonium Finishing Plant south waste site were associated with essential mission-critical operations. As the planned work involves fieldwork, it was demobilized and placed in a safe configuration. Fieldwork activities will restart once the PSWO has been lifted and work is authorized to resume.

The cost for the standby of subcontractor equipment remaining on site during this period was charged to control account 040.97.01.04. As the method of earning performance for this account is based on physical progress in the field, no performance was taken, causing the negative schedule variance.

CM Cost Performance: (-\$2.9M/-103.6%)

The CM unfavorable cost variance was the result of the PSWO issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with essential mission-critical operations that could not be performed in a safe and compliant manner consistent with the CDC COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. Non-portable work activities is work that cannot be performed in a remote manner (e.g., telework from home). CHPRC and subcontractor labor assigned to work that could not be performed in a remote manner was charged to the control account 040.97.01.04 to collect and segregate unproductive time caused by the PSWO. The cost for the standby of subcontractor equipment remaining on site during this period was charged to this account. As the method of earning performance for this account is based on physical progress in the field, no performance was taken, causing the negative cost variance.

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 | 604.3 | 591.0 | 582.5 | (13.3) | -2.2% | 8.5 | 1.4% | 638.1 | 635.4 | 52.9 | 2.7 |

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance: (-\$13.3M/-2.2%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$8.5M/+1.4%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$2.7M/+0.4%)

The VAC is within reporting thresholds.

Contract performance report formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

| RL-0040 Nuclear Facility D&D | FY2020 | | Variance |
|---------------------------------|----------------------|----------------------|----------|
| | Projected Funding | Spending Forecast | |
| Spending Forecast | 93.3 | 90.0 | 3.2 |

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

The FY2020 projected funding of \$93.3 million remains unchanged from last month. The FY spending forecast of \$90.0 million includes actions anticipated to achieve funding targets. The spending forecast of \$90.0 million reflects an overall decrease of \$0.2 million.

Critical Path Analysis

Critical path analysis can be provided upon request.

MILESTONE STATUS

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

| Number | Title | Due Date | Actual Date | Forecast Date | Status/ Comment |
|------------|---|-----------|-------------|---------------|--|
| M-016-256 | Complete Removal of All Waste Sites for FY2019 as updated or modified in M-16-17-01 | 9/30/2019 | | TBD | In dispute resolution. In negotiations with RL to adjust the schedule. |
| M-016-250E | Submit to Ecology a 3-Year Rolling Prioritized Schedule to Implement Waste Site Removal Actions | 9/30/2020 | | 9/30/2020 | On schedule. |
| M-085-100 | Submit Removal Action Work Plan for 224T to EPA | 9/30/2020 | | 6/25/2020 | On schedule. |

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

| Description | CHPRC Delivery Date | Expected RL Due Date |
|--|---------------------|----------------------|
| RL review PUREX AM (2016-53) | 12/22/2019(A) | 04/27/2020(A) |
| Regulator review Z cribs TCRA and AM | 03/17/2020(A) | 05/07/2020(A) |
| Regulator approval tier 2 PUREX removal action work plan (RAWP) (2016-47) | 11/18/2019(A) | 05/14/2020(A) |
| Regulator approval and issuance B Plant engineering evaluation/cost analysis (2016-14) | 10/02/2019(A) | 05/14/2020(A) |
| RL and Ecology review PUREX North Closure Plan (2015-72) | 07/18/2019(A) | 06/08/2020 |
| RL review and clearance 224T SAP (2019-37) | 11/19/2019(A) | 06/18/2020 |
| Regulator approval tier 2 PUREX sampling and analysis plan (SAP) (2016-46) | 02/07/2020(A) | 06/17/2020 |
| RL review and clearance 224T RAWP (2019-36) | 02/14/2020(A) | 06/18/2020 |
| RL review PUREX RAWP | 05/20/2020(A) | 07/14/2020 |
| Regulator review PUREX AM (2016-53) | 05/06/2020(A) | 08/21/2020 |

Section F

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

CH2MHILL
Plateau Remediation Company
a Jacobs company



R. M. Geimer
Vice President for
K Basin Operations

May 2020
CHPRC-2020-05, 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)

During May, the KBO Project continued essential mission-critical operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) partial stop work order (PSWO) issued as a part of the Hanford Site response to the novel coronavirus (COVID-19). Essential mission-critical operations included daily operations of the 400 Area and 100K Area water plants throughout the month, the replacement of the 105K West Fuel Storage Basin water ion exchange filter IXM-4, and further implementation of social distancing features in mobile offices, 105K West and the Maintenance and Storage Facility (MASF). Development of the fiscal year (FY) 2021-2023 planning submittal continued. The contract for fabrication of the trailer-mounted substation to support deactivation at 105K West was awarded. A request for proposal (RFP) for installation of a mobile office trailer to support Interim Safe Storage (ISS) construction at 105K East was issued. Fabrication of vertical pipe casing (VPC) and hydraulic power units was completed and the fabrication and installation of VPC for mockup testing was completed. Planning efforts to support resumption of work at the 105K West Facility and soil remediation at the 100K Area continued.

River Risk Management Project (RRMP)

The project continued essential mission-critical operations in compliance with RL PSWO issued as a part of the Hanford Site response to COVID-19 with portable work continuing using temporary alternate work locations as appropriate. Implementation of social distancing was completed for one of the building trade's subcontractors on the project and preparations are underway to implement social distancing for the project Radiological Control organization. Engineering continued to support engineered equipment procurements, revising the current Operations Plan and revising the Project Execution Plan. The project released the 324 Building Structural Formal Design Review Report on May 21, 2020. Equipment procurement continued for the cell dams, universal cutting tool, waste boxes, modified airlock rail system and the B Cell 10-ton crane.

EMS Objectives and Target Status

| Objective # | Objective | Target | Due Date | Status |
|--------------------|---|--|-----------|--------|
| 20-EMS-KBO-OBJ1-P1 | Evaluation of upcoming work activities at the 100K Area, which involves water discharge to the ground at the 100K Area. | Evaluate the upcoming work by the Hanford Fire Department to ensure decontamination and decommissioning (D&D) and soil remediation activities at the 100K Area follow requirements set by DOE/RL-97-67, <i>Pollution Prevention and Best Management Practices Plan for State Waste Discharge Permits ST 4508, ST 4509, and ST 4510, Revision 3, and 100K-STD-OP-52370, Discharges to Ground.</i> | 9/30/2020 | 50% |
| 20-EMS-KBO-OB2-P1 | Improve compliance/pollution and spill prevention. | Evaluate the status of spill prevention, use of secondary containment, universal waste and other recycling compliance, and waste reduction opportunities for compliance with CH2MHILL Plateau Remediation Company (CHPRC) procedures. | 9/30/2020 | 56% |

TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

| | Current Month | Rolling 12 Months | Comment |
|--------------------------------------|---------------|-------------------|---------|
| Days Away, Restricted or Transferred | 0 | 2 | N/A |
| Total Recordable Injuries | 0 | 1 | N/A |
| First Aid Cases | 0 | 12 | N/A |
| Near Misses | 0 | 0 | N/A |

KEY ACCOMPLISHMENTS

100K Basin Operations

- 100K Closure Project:
 - o 100K West Basin Deactivation
 - IXM-4 was replaced at 105K West.
 - Operations Closure personnel began developing training and finalizing procedures for Garnet Filter Media Removal (GFMR) operations in the 105K West Basin.
 - GFMR Readiness Self-Assessment Review Board charter was drafted to provide guidance on Readiness Review Board voting and acceptance of affidavits of readiness.
 - The contract for fabrication of the trailer-mounted substation to support deactivation of 105K West was awarded.
 - An RFP for installation of a mobile trailer to support ISS construction was issued.
 - Fabrication of VPC and hydraulic power units was completed, as well as fabrication and installation of VPC for the mockup.
 - o 100K Soil Remediation
 - The Soil Remediation team worked on planning for activities supporting returning to work in normal work locations.
 - Performed walk down of sites, clearing tumbleweeds from the equipment and inspected equipment for bird nests in preparation to begin work.
 - Applied monthly fixative to disturbed soil at the waste sites in the 100K Area.

RRMP, 324 Building Disposition Project

- Equipment procurements continued for the following:
 - o Cell dams for the 324 Building.
 - o Universal cutting tool.
 - o Water delivery system for the airlock.
 - o Concrete box for soil waste bins.
 - o Modified airlock rail.
 - o Waste bins and waste containers for the 324 Building.

- o Self-leveling lifting device (ready for delivery).
- o B Cell 10-ton crane.
- Miscellaneous:
 - o Essential operations.
 - o Social distancing planning.
 - o Resumption planning.
 - o Temporary alternative work location as appropriate.
- Engineering:
 - o Ongoing support to engineered equipment procurements.
 - o Planning Acrylamide radiological testing at Pacific Northwest National Laboratory.

Project Technical Services

- Training and Procedures
 - o Cancelled procedure 324-PRO-OP-53639 (D4-110-1.5), *324 Building Packaging, Tracking, Storing, and Inspecting of Radioactive Packages*. This procedure was initially written to bridge a gap between 324 Facility safety basis requirements and implementing documents. Since that time, other procedures and documents provide equivalent implementation per the technical basis document gap analysis.
 - o Published changes to procedure 324-PRO-MN-54251(3-IC-003), *Calibration of Pressure, Vacuum and Combination Gauges*, which removed cross-referencing to 324-STD-TQ-53845, *324 Building Dangerous Waste Training Plan*, and updated roles and responsibilities in line with the current owning organization.
- Operations Program
 - o Supported the 324 Building apparent cause analysis for 480 volt disconnect switch cover.

MAJOR ISSUES

Issue

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

Corrective Action

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

Status

Results from a nondestructive assay (NDA) performed on a shielded ion exchange module staged west of 105K West in December through January were evaluated as a test case to determine if the NDA of TCA-1 is feasible for identifying specific radionuclide peaks in a shielded container. While the NDA of the ion exchange module was not deemed successful due to the complex configuration of the shielded module, actinide peaks were identified through the heavy shielding, indicating it will be a viable method for determining if residual solids/sludge contained within TCA-1 need to be removed versus solidified without performing intrusive characterization. Setup of the area and completion of the NDA will be scheduled once non-essential mission-critical operations fieldwork resumes. Results of the NDA will be used to support FY2021 planning activities for dispositioning the TCA contents.

Issue

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

Corrective Action

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

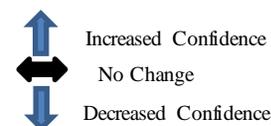
Status

The review team has provided recommendations, and the project is in the process of evaluating and implementing the recommendations.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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



| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|--------------------|---------|---|--|---------|-----|---|---------|-----|---|---------|-----|---|--------|-----|--|---------|-----|--|---------|-----|---|---------|-----|
| | | Month | Trend | | | | | | | | | | | | | | | | | | | | | | | | | |
| RL-0041/WBS-041 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Explanation of major changes to the project monthly stoplight chart: The following changes have been made to the stoplight chart in May:</p> <ol style="list-style-type: none"> Risk RCC-300-296-30, 300-296, <i>Design Changes Result in Increased Subcontractor Change Order(s)/Claims</i>, was updated to reflect completed recovery actions. The final design was issued on May 21, 2020. As a result, this risk will be removed from the stoplight chart following the current period. Risk RCC-300-296-07, 300-296 <i>Failure of a Radiochemical Engineering Cells (REC) Cranes (B Cell, A Cell, A/D & Airlock, and/or Cask Handling Area (CHA) Cranes)</i>, was updated to reflect the impacts of COVID-19 and RL's PSWO. Forecast dates have slipped out and will continue to do so until resumption of work begins. Risk 100K-SR-02, <i>100K Soil Remediation Subcontractor Equipment is Contaminated</i> was removed from the stoplight chart. The project has elected to accept the risk on the basis their Radiological Work Plan supports the approach to survey and release the excavator within the radiological buffer area. Any attachment (hammer, shear or bucket) will be purchased by the project. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Realized Risks (Risks that are currently impacting project cost/schedule) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RCC-300-296-30, 300-296 Design Changes Result in Increased Subcontractor Change Order(s)/Claims | <p>Due to the uncertainty and evolution of developments, design changes may be required upon completion of all design phases.</p> <p>Risk Handling Strategy: Control</p> <p>Probability: Very likely (>90%) Worst Case Impacts: \$3,318K, 136 days</p> |  |  | <p>Risk Event: The verification of the final structural modification design has been delayed due to the realization of other risks (see Recovery Assessment, below) while performing soil verification and pilot holing, requiring additional design effort from the design subcontractor.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contractor prepares and submits a structure modification design - 30 percent to 60 percent (VE2810).</td> <td>8/15/18</td> <td>100</td> </tr> <tr> <td>Perform micropile demonstration and verification to support the structural modification design (VS1220A).</td> <td>1/24/19</td> <td>100</td> </tr> <tr> <td>Structural modifications design micropile comment resolution (VS1220C).</td> <td>5/13/19</td> <td>100</td> </tr> <tr> <td>Perform pilot holing for structural modifications (VS5010).</td> <td>9/7/19</td> <td>100</td> </tr> <tr> <td>Perform pit six soil verification testing/geotech (VS1220B).</td> <td>8/21/19</td> <td>100</td> </tr> <tr> <td>Contractor prepares and submits a structural modification design (VN1220).</td> <td>2/24/20</td> <td>100</td> </tr> <tr> <td>CHPRC/RL review and issue final design.</td> <td>5/21/20</td> <td>100</td> </tr> </tbody> </table> <p>Recovery Assessment: Delays for completing the final structural design have been incurred due to the realization of risks RCC-300-296-31, 300-296 <i>Elevated Contamination Encountered While Performing Structural Modifications</i>, RCC-300-296-01, <i>Latent Conditions Impact Facility Modifications</i>, and the most recent impacts due to COVID-19 and RL's PSWO. The realization of these risks halted fieldwork activities that were supporting completion of the final design. Extensive comments were resolved, and the final design was issued on May 21, 2020. All recovery actions have been completed; therefore, this risk will be closed and removed from the stoplight chart next reporting period.</p> | Recovery Action(s) | FC Date | % | Contractor prepares and submits a structure modification design - 30 percent to 60 percent (VE2810). | 8/15/18 | 100 | Perform micropile demonstration and verification to support the structural modification design (VS1220A). | 1/24/19 | 100 | Structural modifications design micropile comment resolution (VS1220C). | 5/13/19 | 100 | Perform pilot holing for structural modifications (VS5010). | 9/7/19 | 100 | Perform pit six soil verification testing/geotech (VS1220B). | 8/21/19 | 100 | Contractor prepares and submits a structural modification design (VN1220). | 2/24/20 | 100 | CHPRC/RL review and issue final design. | 5/21/20 | 100 |
| Recovery Action(s) | FC Date | % | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contractor prepares and submits a structure modification design - 30 percent to 60 percent (VE2810). | 8/15/18 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Perform micropile demonstration and verification to support the structural modification design (VS1220A). | 1/24/19 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Structural modifications design micropile comment resolution (VS1220C). | 5/13/19 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Perform pilot holing for structural modifications (VS5010). | 9/7/19 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Perform pit six soil verification testing/geotech (VS1220B). | 8/21/19 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contractor prepares and submits a structural modification design (VN1220). | 2/24/20 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHPRC/RL review and issue final design. | 5/21/20 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|------------|-------|--|----------------------|---------|---|---|---------|-----|--|---------|-----|--|---------|-----|--|----------|----|---|---------|---|------------------------------------|---------|---|---------------------------|---------|---|
| | | Month | Trend | | | | | | | | | | | | | | | | | | | | | | | | | |
| RL-0041/WBS-041 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RCC-300-296-07, 300-296 Failure of a Radiochemical Engineering Cells (REC) Cranes (B Cell, A Cell, A/D & Airlock, and/or CHA Cranes) | Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$3,000K, 208 days | | | <p>Risk Event: In August, the REC A/D Crane failed during operations.</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Determine B Cell replacement crane options.</td> <td>3/19/19</td> <td>100</td> </tr> <tr> <td>Award contract – B Cell 10-t crane – 324 Building.</td> <td>6/20/19</td> <td>100</td> </tr> <tr> <td>Vendor submit factory acceptance test /final data package – B Cell 10-ton crane.</td> <td>4/2/20</td> <td>100</td> </tr> <tr> <td>Vendor delivery to Acquisition Verification Service (AVS) – B Cell 10-ton crane.</td> <td>6/15/20</td> <td>0</td> </tr> <tr> <td>Perform follow up A Cell and A/D Crane investigation.</td> <td>6/22/21</td> <td>0</td> </tr> <tr> <td>Procure/fabricate A/D Crane parts.</td> <td>7/12/21</td> <td>0</td> </tr> <tr> <td>Perform A/D Crane repair.</td> <td>8/23/21</td> <td>0</td> </tr> </tbody> </table> <p>Recovery Assessment: It is anticipated that decontamination of the A/D Crane will be necessary prior to performing repairs. Procurement and fabrication of decontamination equipment has been initiated to decrease further impacts to the project. Procurement of spare parts has been delayed due to additional verification of components and measurements that cannot be acquired at this time due to COVID-19 and RL's PSWO impacts. The forecasted completion date for completing A/D Crane investigation, procuring spare parts and performing crane repairs has been updated in the Recovery Action table. To assist with mitigating crane failure, the forecasted completion date for vendor delivery of the B Cell 10-ton Crane to AVS is June 15, 2020. The fabrication of the crane is complete; however, AVS is not accepting receipt inspections during the PSWO.</p> | Recovery Action(s) | FC Date | % | Determine B Cell replacement crane options. | 3/19/19 | 100 | Award contract – B Cell 10-t crane – 324 Building. | 6/20/19 | 100 | Vendor submit factory acceptance test /final data package – B Cell 10-ton crane. | 4/2/20 | 100 | Vendor delivery to Acquisition Verification Service (AVS) – B Cell 10-ton crane. | 6/15/20 | 0 | Perform follow up A Cell and A/D Crane investigation. | 6/22/21 | 0 | Procure/fabricate A/D Crane parts. | 7/12/21 | 0 | Perform A/D Crane repair. | 8/23/21 | 0 |
| Recovery Action(s) | FC Date | % | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Determine B Cell replacement crane options. | 3/19/19 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Award contract – B Cell 10-t crane – 324 Building. | 6/20/19 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vendor submit factory acceptance test /final data package – B Cell 10-ton crane. | 4/2/20 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vendor delivery to Acquisition Verification Service (AVS) – B Cell 10-ton crane. | 6/15/20 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Perform follow up A Cell and A/D Crane investigation. | 6/22/21 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Procure/fabricate A/D Crane parts. | 7/12/21 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Perform A/D Crane repair. | 8/23/21 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RCC-300-296-36, Contamination Experienced During Radiochemical Engineering Cells Operations | During REC cell cleanout (e.g., soil/debris removal, waste handling and facility modifications), the CHA, truck lock or other support area becomes contaminated or the background dose is elevated to a level that operations cannot continue as currently planned. Significant cost and schedule impacts are incurred. Risk Handling Strategy: Control Probability: Very likely (>90%) Worst Case Impacts: \$225K, 70 days | | | <p>Risk Event: On November 14, 2019, low-level contamination was detected on an individual after exiting a radiological step-off pad (SOP).</p> <table border="1"> <thead> <tr> <th>Recovery Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform CHA floor scabbling and apply epoxy floor coating.</td> <td>7/17/19</td> <td>100</td> </tr> <tr> <td>Perform project resumption activities – Contaminated Area/CHA.</td> <td>9/3/20</td> <td>25</td> </tr> <tr> <td>Return to Room 18 work - resumption actions.</td> <td>10/2/20</td> <td>10</td> </tr> <tr> <td>Return to airlock work - resumption actions.</td> <td>10/22/20</td> <td>10</td> </tr> </tbody> </table> <p>Recovery Assessment: No significant changes in May. Resuming work scope in radiologically controlled areas within the building is pending resolution of recovery actions performed under three distinct group sets: general controlled area, Room 18 and the airlock. Upon successful completion of resumption actions and training, each group set will resume fieldwork scope.</p> | Recovery Action(s) | FC Date | % | Perform CHA floor scabbling and apply epoxy floor coating. | 7/17/19 | 100 | Perform project resumption activities – Contaminated Area/CHA. | 9/3/20 | 25 | Return to Room 18 work - resumption actions. | 10/2/20 | 10 | Return to airlock work - resumption actions. | 10/22/20 | 10 | | | | | | | | | |
| Recovery Action(s) | FC Date | % | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Perform CHA floor scabbling and apply epoxy floor coating. | 7/17/19 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Perform project resumption activities – Contaminated Area/CHA. | 9/3/20 | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Return to Room 18 work - resumption actions. | 10/2/20 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Return to airlock work - resumption actions. | 10/22/20 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No critical risks are identified in May. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RCC-300-296-31, 300-296 Elevated Contamination Encountered While Performing Structural Modifications | To validate the assumptions supporting the 324 Building structural modification design, pilot holes will be drilled into the soil beneath B Cell to collect necessary data. If data shows contamination levels are much higher or deeper or the material encountered is different from anticipated, then an alternative approach will require the development and/or fabrication of equipment for contamination mitigation and control. These impacts will limit progress on fieldwork activities. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$3,318K, 256 days | | | <p>Risk Event: Unexpected contamination found while performing structural modification activities.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>This risk is accepted with no planned mitigation actions identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. As low as reasonably achievable (ALARA) review evaluations for process improvements were completed in May. Increased personal protective equipment and additional control measures were successfully implemented. However, these controls have greatly reduced production rates than planned. The residual impacts of this risk are currently accepted with no further mitigation actions identified.</p> | Mitigation Action(s) | FC Date | % | This risk is accepted with no planned mitigation actions identified at this time. | N/A | N/A | | | | | | | | | | | | | | | | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | | | | | | | | | | | | | |
| This risk is accepted with no planned mitigation actions identified at this time. | N/A | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | | |
|---|--|------------|-------|---|----------------------|---------|---|---|----------|-----|---|---------|-----|--------------------------------|---------|---|
| | | Month | Trend | | | | | | | | | | | | | |
| RL-0041/WBS-041 | | | | | | | | | | | | | | | | |
| FY2020 Key Risks | | | | | | | | | | | | | | | | |
| RCC-300-296-01, 300-296 Latent Conditions Impact Facility Modification | Latent conditions, poor visibility in REC cells or drawing omissions, inconsistencies or errors impact facility modifications (e.g., mechanical, electrical industrial hygiene/radiological control hazards), resulting in unplanned work and subsequently, cost and schedule impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$294.5K, 128 days | ● | ↔ | Risk Trigger Metric: Based on a similar event experienced on March 28, 2019, unexpected beta-gamma contamination was detected while performing clearance surveys at the 324 Building SOP. Sampling determined it to be beta contamination (suspected strontium-90) without a corresponding gamma component, resulting in project impacts. <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No significant changes in May. Follow-up contamination surveys were performed throughout the front side areas of the 324 Building using strontium controls (developed for Room 18) with no contamination detected. Based on the historical discovery of an elevated latent contamination level (CHPRC-1801178), this risk will be monitored continuously as routine preventive maintenance (PM) activities are in place to reduce the likelihood of occurrence. | Mitigation Action(s) | FC Date | % | Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities. | Ongoing | N/A | | | | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Perform radiological surveying and analysis of facility drawings to reduce unexpected conditions while preparing for remote soil excavation activities. | Ongoing | N/A | | | | | | | | | | | | | | |
| RCC-300-296-08, 300-296 Failure of Cell Shield Door | Failure of shield door(s) or crane shield door(s) shuts down cleanout of REC cells/airlock, penetration sealing in the airlock and equipment installation and other activities for remote soil removal. It may not be possible to repair a shield door due to radiation dose rate and location, resulting in cost and schedule delays. Risk Handling Strategy: Accept Probability: Likely (75% to 90%) Worst Case Impacts: \$460K, 96 days | ● | ↔ | Risk Trigger Metric: Cell shield door fails, resulting in a shutdown of cleanout activities until repairs can be completed, similar to the event that occurred in September 2019. <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>No discrete mitigation actions have been identified. However, PM activities are being conducted to assure reliability of REC shield doors.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No significant changes in May. To maintain REC shield door operability, engineering evaluations were conducted, resulting in the implementation of monthly performance measures and the procurement of spare parts. These mitigation efforts will reduce the likelihood of cost and schedule consequences, as applicable. | Mitigation Action(s) | FC Date | % | No discrete mitigation actions have been identified. However, PM activities are being conducted to assure reliability of REC shield doors. | Ongoing | N/A | | | | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| No discrete mitigation actions have been identified. However, PM activities are being conducted to assure reliability of REC shield doors. | Ongoing | N/A | | | | | | | | | | | | | | |
| RCC-300-296-15, 300-296 Cell Sealing, Micropile Installation, Interference Removal, Core Drilling and Soil Stabilization Takes Longer Than Planned | Unexpected field conditions are encountered during interference removal, sealing of cell penetrations and/or core drilling work scope. The unexpected field conditions subsequently cause in-scope unplanned work and result in schedule impacts to the project. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$3,317.6K, 96 days | ● | ↔ | Risk Trigger Metric: The project experiences unexpected field conditions outside their control, impacting cell sealing, micropile installation, interference removal, core drilling, and soil stabilization more difficult than planned. <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Mobilize and train a second soil stabilization crew.</td> <td>12/19/19</td> <td>100</td> </tr> <tr> <td>Perform pilot-hole drilling to aid as a mitigation action for micropile installation.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Perform Bond Zone Load Testing</td> <td>9/17/20</td> <td>0</td> </tr> </tbody> </table> Mitigation Assessment: No significant changes in May. Mitigation efforts have reduced the probability of risk occurrence from likely to medium. However, due to the uniqueness involved with the work scope, there is potential for unexpected delays and additional pilot-hole drilling efforts. Mobilizing and training of a second soil stabilization crew was completed on December 19, 2019. | Mitigation Action(s) | FC Date | % | Mobilize and train a second soil stabilization crew. | 12/19/19 | 100 | Perform pilot-hole drilling to aid as a mitigation action for micropile installation. | Ongoing | N/A | Perform Bond Zone Load Testing | 9/17/20 | 0 |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Mobilize and train a second soil stabilization crew. | 12/19/19 | 100 | | | | | | | | | | | | | | |
| Perform pilot-hole drilling to aid as a mitigation action for micropile installation. | Ongoing | N/A | | | | | | | | | | | | | | |
| Perform Bond Zone Load Testing | 9/17/20 | 0 | | | | | | | | | | | | | | |
| RCC-300-296-06, 300-296 Remote Equipment Failure During Operations | Failures of the following procured equipment: the floor saw, master slave manipulators (MSMs) used in REC cells, Remote Excavator Arms, through supports, cell dams, transfer mechanism and cameras and lights. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$1,336K, 90 days | ● | ↔ | Risk Trigger Metric: Failure of remote equipment will result in schedule delays due to equipment replacement and repairs because of radiation damage to other equipment installed in the REC cells. These factors may shorten the operational life of equipment and result in replacing damaged equipment or components. <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Procure MSM manipulators and storage carts.</td> <td>12/30/19</td> <td>100</td> </tr> <tr> <td>Procure universal cutting tool.</td> <td>12/2/20</td> <td>23</td> </tr> </tbody> </table> Mitigation Assessment: No significant changes in May. Potential impacts continue to be monitored and assessed for mitigation as project evolutions continue. The estimate to complete is updated monthly to reflect potential impacts of risk being realized. | Mitigation Action(s) | FC Date | % | Procure MSM manipulators and storage carts. | 12/30/19 | 100 | Procure universal cutting tool. | 12/2/20 | 23 | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Procure MSM manipulators and storage carts. | 12/30/19 | 100 | | | | | | | | | | | | | | |
| Procure universal cutting tool. | 12/2/20 | 23 | | | | | | | | | | | | | | |

| Risk Title | Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | | |
|--|--|------------|-------|--|----------------------|---------|---|--|----------|-----|---|----------|-----|--|----------|-----|
| | | Month | Trend | | | | | | | | | | | | | |
| RL-0041/WBS-041 | | | | | | | | | | | | | | | | |
| RCC-300-296-33, Increased Rad Exposure to Workers | High dose in the airlock causes excessive radiation exposure to personnel, resulting in in-scope unplanned work impacts of cost and/or schedule. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$240K, 36 days | ● | ↔ | <p>Risk Trigger Metric: During REC entries, background and present dose could cause workers to reach allowable dose limits sooner than anticipated, resulting in cost and schedule impacts.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Continue the use of increased shielding and ALARA controls.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procurement of specialized containers - GC/44" bins.</td> <td>7/27/20</td> <td>5</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. Mitigation efforts have reduced the probability of risk occurrence to low. Procurement of specialized waste containers, shield lids, and decontamination efforts has significantly minimized dose potential; however, the uniqueness of the work scope provides the potential for unexpected delays and/or cost impacts.</p> | Mitigation Action(s) | FC Date | % | Continue the use of increased shielding and ALARA controls. | Ongoing | N/A | Procurement of specialized containers - GC/44" bins. | 7/27/20 | 5 | | | |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Continue the use of increased shielding and ALARA controls. | Ongoing | N/A | | | | | | | | | | | | | | |
| Procurement of specialized containers - GC/44" bins. | 7/27/20 | 5 | | | | | | | | | | | | | | |
| 100K-SR-05, Unexpected Site Conditions | Unexpected site conditions are encountered during soil excavation activities, resulting in recovery actions, causing unplanned and project in-scope work and schedule delays. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$760K, 32 days | ● | ↔ | <p>Risk Trigger Metric: During soil excavation activities, different site conditions including underground utilities (i.e., wiring, fiber cable, pipes, asbestos, etc.), unknown construction material and greater-than-expected quantities of contamination could be encountered, resulting in increased volume of remediated soil. In addition, the overburden soil planned for backfill contains contaminants, resulting in the need to create a new clean-fill pit.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Data collection (includes review of the Waste Information Data System information, review of historical drawings, identify contaminants of concern, civil survey, etc.).</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Ground penetrating radar.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Develop/issue an approved excavation permit before remediation begins.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant change in May. The mitigation actions identified above are standard business practices when performing excavation activities on the Hanford Site. These steps are designed to minimize the probability of encountering unknown utilities, structures or contamination.</p> | Mitigation Action(s) | FC Date | % | Data collection (includes review of the Waste Information Data System information, review of historical drawings, identify contaminants of concern, civil survey, etc.). | Ongoing | N/A | Ground penetrating radar. | Ongoing | N/A | Develop/issue an approved excavation permit before remediation begins. | Ongoing | N/A |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Data collection (includes review of the Waste Information Data System information, review of historical drawings, identify contaminants of concern, civil survey, etc.). | Ongoing | N/A | | | | | | | | | | | | | | |
| Ground penetrating radar. | Ongoing | N/A | | | | | | | | | | | | | | |
| Develop/issue an approved excavation permit before remediation begins. | Ongoing | N/A | | | | | | | | | | | | | | |
| 100K-SFGF-02, 105 KW SF & GF – Subcontractor Design Changes During Fab/Construction | During fabrication and installation, problems with design are encountered resulting in design changes, resulting in cost and schedule impacts. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$400K, 32 days | ● | ↔ | <p>Risk Trigger Metric: During installation of the Engineered Container Retrieval and Transfer System tie-in equipment in support of VPC installation and the GFMRS, design issues are identified that could not be determined during mockup testing at MASF, resulting in design changes. This scenario would impact the firm fixed price construction contractor.</p> <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Integrated system testing/operator training in support of KW Basin GFMRS.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>System constructability review and field walk downs will be implemented to reduce the risk.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Perform construction acceptance testing on the GFMRS.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p>Mitigation Assessment: No significant changes in May. Installation of the GFMRS is progressing as construction acceptance testing completed on March 12, 2020. All currently identified mitigation actions have been completed. This risk will continue to be monitored for additional mitigation or changes to the risk posture.</p> | Mitigation Action(s) | FC Date | % | Integrated system testing/operator training in support of KW Basin GFMRS. | Complete | 100 | System constructability review and field walk downs will be implemented to reduce the risk. | Complete | 100 | Perform construction acceptance testing on the GFMRS. | Complete | 100 |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | |
| Integrated system testing/operator training in support of KW Basin GFMRS. | Complete | 100 | | | | | | | | | | | | | | |
| System constructability review and field walk downs will be implemented to reduce the risk. | Complete | 100 | | | | | | | | | | | | | | |
| Perform construction acceptance testing on the GFMRS. | Complete | 100 | | | | | | | | | | | | | | |
| Unassigned Risks (Pending ownership of identified risks/opportunities) | | | | | | | | | | | | | | | | |
| No unassigned risks identified in May. | | | | | | | | | | | | | | | | |

PROJECT BASELINE PERFORMANCE

Current Month (CM)

(\$M)

| WBS 041/RL-0041 Nuclear Facility D&D – River Corridor | Budgeted Cost of Work Scheduled | Budgeted Cost of Work Performed | Actual Cost of Work Performed | Schedule Variance (\$) | Schedule Variance (%) | Cost Variance (\$) | Cost Variance (%) |
|--|--|--|--|------------------------------|-----------------------------|--------------------------|-------------------------|
| Total | 9.6 | 7.1 | 9.6 | (2.5) | -26.0% | (2.4) | -34.2% |

Numbers rounded to the nearest \$0.1 million.

CM Schedule Performance (-\$2.5M/-26.0%)

The unfavorable schedule variance is the result of PSWO issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with essential mission-critical operations that could not be performed in a safe and compliant manner consistent with the Centers for Disease Control and Prevention (CDC) COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. Non-portable work activities consist of work that cannot be performed in a remote manner (e.g., telework from home). Most RL-041 fieldwork is not considered essential mission-critical operations. Therefore, activities were demobilized and placed in safe configuration. CHPRC and subcontractor labor assigned to work that could not be performed in a remote manner were charged to work breakdown structure (WBS) 041.97.01.04 to collect and segregate unproductive time caused by the PSWO. The majority of Earned Value Method is based on physical progress in the field. As a result, minimal performance was taken, causing the unfavorable schedule variance.

CM Cost Performance (-\$2.4M/-34.2%)

The unfavorable cost variance for the 324 Building Disposition Project and 100K Area are the result of the PSWO issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with essential mission-critical operations that could not be performed in a safe and compliant manner consistent with CDC COVID-19 guidelines and the “Stay Home, Stay Healthy” order issued by the governor of Washington State. Non-portable work activities consist of work that cannot be performed in a remote manner (e.g., telework from home). Performance of work supporting the continuation of essential mission-critical operations and activities able to be performed in a remote manner continued to be reported to WBS 041.97.01.04. CHPRC and subcontractor labor assigned to the work scope that could not be performed in a remote manner were charged to WBS 041.97.01.04 to collect and segregate unproductive time caused by the PSWO. The charging of planned labor to WBS 041.97.01.04 created the unfavorable cost variance.

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 | 765.3 | 747.0 | 741.7 | (18.3) | -2.4% | 5.3 | 0.7% | 808.2 | 807.5 | 65.8 | 0.7 |

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance (-\$18.3M/-2.4%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance (+\$5.3M/+0.7%)

The CTD cost variance is within reporting thresholds.

Variance at Completion (+\$0.7K/0.1%)

The variance at completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST (\$M)

| RL-0041 Nuclear Facility D&D – River Corridor | FY2020 | | Variance |
|--|----------------------|----------------------|----------|
| | Projected Funding | Spending Forecast | |
| RL-0041 Spending Forecast | 150.9 | 146.9 | 4.0 |

Numbers are rounded to the nearest \$0.1 million.

Funds/Variance Analysis

There was no change in the FY2020 expected funding of \$150.9 million from April. The spending forecast decreased \$4 million from April, which was primarily due to planned subcontracted work being delayed to FY2021 due the impacts of COVID-19 and the RL-directed PSWO. In addition to the 324 Disposition Project, the change in the forecast is due to a reduction in a subcontractor burn rate (based on their proposal) and associated fee. Also, forecast material costs were reduced since no fieldwork is being performed.

Critical Path Analysis

Critical path analysis can be provided upon request.

MILESTONE STATUS

The following table is a one-year look ahead of project breakdown structure RL-0041 *Hanford Federal Facility Agreement and Consent Order*-enforceable milestones, nonenforceable target due dates and commitments.

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

| Description | CHPRC Delivery Date | Expected RL Due Date |
|---|---------------------|----------------------|
| RL approval Emergency Planning Hazards assessment final | 3/12/2020(A) | 5/28/2020 |

Section G

Fast Flux Test Facility Closure (RL-0042)

CH2MHILL
Plateau Remediation Company
a Jacobs company



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

May 2020
CHPRC-2020-05, 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 (S&M) condition by the Central Plateau Risk Management (CPRM) Project. During the reporting period, the FFTF continued to maintain essential mission-critical operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) partial stop work order (PSWO) issued as a part of the Hanford Site response to the novel coronavirus (COVID-19).

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

During the PSWO due to COVID-19, CPRM crews completed the monthly water plan and septic inspections in the 400 Area. Personnel implemented a baseline change request (BCR) to the fiscal year (FY) 2020 Performance Measurement Baseline to incorporate additional scope associated with the 400 Area Argon System. This BCR incorporated the procurement and installation of the Argon System transmitter, as well as the initiation of the *Resource Conservation and Recovery Act of 1976* permit addendum to remove the FFTF fire system reference.

MAJOR ISSUES

Issue

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

Corrective Action

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

Status

Development of functional requirements for an engineering evaluation has been completed and the project has received direction to proceed from RL. A change to FY2020 planning was implemented in April to support budget requirements to address this task. A Request for Proposal (RFP) is being prepared to solicit prospective engineering firms for evaluation performance. A statement of work has been developed, and a new requisition has been routed for approval in order to issue the RFP.

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 | 0.1 | (0.0) | -6.1% | 0.1 | 40.6% |

Numbers are rounded to the nearest \$0.1 million.

CM Schedule Performance: (-\$0.0M/-6.1%)

The CM schedule variance is within reporting thresholds.

CM Cost Performance: (+\$0.1M/+40.6%)

The CM cost variance is within reporting thresholds.

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

| RL-0042 FFTF Closure | Budgeted Cost of Work Scheduled | Budgeted Cost of Work Performed | Actual Cost of Work Performed | Schedule Variance (\$) | Schedule Variance (%) | Cost Variance (\$) | Cost Variance (%) | Budget at Completion (BAC) | Estimate at Completion (EAC) | Estimate to Complete (ETC) | Variance at Completion (VAC) |
|----------------------------|--|--|--|------------------------------|-----------------------------|--------------------------|-------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|
| Total | 30.8 | 30.7 | 25.9 | -0.0 | -0.1% | 4.9 | 15.8% | 32.3 | 27.6 | 1.8 | 4.7 |

Numbers are rounded to the nearest \$0.1 million.

CTD Schedule Performance: (-\$0.0M/-0.1%)

The CTD schedule variance is within reporting thresholds.

CTD Cost Performance: (+\$4.9M/+15.8%)

The CTD favorable cost variance is due to reduction in S&M requirements at FFTF because the facility was deactivated. In addition, the efficient use of resources supporting deactivation activities within the project scope of work contributed to this favorable cost variance.

Variance at Completion: (+\$4.7M/+14.5%)

The VAC reflects efficient use of resources supporting deactivation activities.

Contract Performance Report Formats are provided in Appendix A.

FUNDS VS. SPEND FORECAST (\$M)

| RL-0042 FFTF Closure | FY2020 | | Variance |
|---|----------------------|----------------------|----------|
| | Projected Funding | Spending Forecast | |
| Spending Forecast | 4.8 | 3.8 | 1.0 |
| Numbers are rounded to the nearest \$0.1 million. | | | |

Funds Analysis

FY2020 projected funding of \$4.8 million includes support for electrical component failures and configuration challenges, interest by regulators requiring additional inspections and a recent failure of the water system/water piping. The spending forecast of \$3.8 million aligns with the RL Integrated Priority List.

Critical Path Analysis

Critical path analysis is not applicable to this project. The contract scope is the performance of interim S&M activities pending facility disposition.

MILESTONE STATUS

None currently identified.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

None currently identified.

Appendix A

Contract Performance

Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company

a Jacobs company



May 2020
CHPRC-2020-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

DOLLARS IN

Thousands of \$

FORM APPROVED
OMB No. 0704-0188

| | | | | | | | | | | | | | | | | | |
|--|---------------------------------|--|---------------------------------|--|---------------------------------|--------------------------------------|--|-------------------------------|----------------------------|-----------|---------------------------|-------------------------|-------------|---------------|----------------|---------------|---------|
| 1. CONTRACTOR | | 2. CONTRACT | | 3. PROGRAM | | 4. REPORT PERIOD | | | | | | | | | | | |
| a. NAME CH2M HILL Plateau Remediation Company | | a. NAME Plateau Remediation Contract | | a. NAME Plateau Remediation Contract | | a. FROM (YYYYMMDD) 2020 / 04 / 27 | | | | | | | | | | | |
| b. LOCATION (Address and ZIP Code) Richland, WA | | b. NUMBER RL14788 | | b. PHASE | | b. TO (YYYYMMDD) 2020 / 05 / 24 | | | | | | | | | | | |
| c. TYPE CPAF | | d. SHARE RATIO | | c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18 | | | | | | | | | | | | | |
| 5. CONTRACT DATA | | | | | | | | | | | | | | | | | |
| a. QUANTITY 1 | b. NEGOTIATED COST 6,852,614 | c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 7,802 | d. TARGET PROFIT/FEE 305,070 | e. TARGET PRICE 7,157,684 | f. ESTIMATED PRICE 7,113,101 | g. CONTRACT CEILING 7,157,684 | h. ESTIMATED CONTRACT CEILING 7,113,101 | 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. WORST CASE 6,840,734 | | c. MOST LIKELY 6,808,030 | | 6,860,416 | | | b. TITLE Prime Contract Compliance Manager | | | | | | | | | | |
| a. BEST CASE 6,759,834 | | c. SIGNATURE | | d. DATE SIGNED (YYYYMMDD) | | | | | | | | | | | | | |
| 8. PERFORMANCE DATA | | | | | | | | | | | | | | | | | |
| CAPN.PBS ITEM (1) | CURRENT PERIOD | | | | | CUMULATIVE TO DATE | | | | | REPROGRAMMING ADJUSTMENTS | | | AT COMPLETION | | | |
| | BUDGETED COST | | ACTUAL COST WORK PERFORMED | | VARIANCE | | BUDGETED COST | | ACTUAL COST WORK PERFORMED | | VARIANCE | | | | | | |
| | WORK SCHEDULED (2) | WORK PERFORMED (3) | COST WORK PERFORMED (4) | SCHEDULE (5) | COST (6) | WORK SCHEDULED (7) | WORK PERFORMED (8) | COST WORK PERFORMED (9) | SCHEDULE (10) | COST (11) | COST VARIANCE (12a) | SCHEDULE VARIANCE (12b) | BUDGET (13) | BUDGETED (14) | ESTIMATED (15) | VARIANCE (16) | |
| RL-0011 Nuclear Mat Stab & Disp PFP | 0 | 0 | 2,943 | 0 | -2,943 | 1,143,564 | 1,129,858 | 1,239,004 | -13,706 | -109,146 | 0 | 0 | 0 | 1,143,564 | 1,253,721 | -110,157 | |
| RL-0012 SNF Stabilization & Disp | 0 | 0 | 0 | 0 | 0 | 759,593 | 759,593 | 729,813 | 0 | 29,780 | 0 | 0 | 0 | 759,593 | 729,813 | 29,780 | |
| RL-0013 Solid Waste Stab & Disp | 13,651 | 11,795 | 14,050 | -1,856 | -2,255 | 1,601,502 | 1,591,766 | 1,509,510 | -9,735 | 82,257 | 0 | 0 | 0 | 1,675,271 | 1,598,768 | 76,503 | |
| RL-0030 Soil & Water Rem-Grndwtr/Vadose | 12,114 | 6,267 | 7,480 | -5,848 | -1,213 | 1,712,742 | 1,696,331 | 1,647,828 | -16,411 | 48,503 | 0 | 0 | 0 | 1,755,126 | 1,706,933 | 48,193 | |
| RL-0040 Nuc Fac D&D - Remainder Hanfrd | 4,969 | 2,760 | 5,620 | -2,209 | -2,859 | 604,285 | 591,016 | 582,547 | -13,269 | 8,469 | 0 | 0 | 0 | 638,075 | 635,422 | 2,653 | |
| RL-0041 Nuc Fac D&D - RC Closure Proj | 9,628 | 7,127 | 9,564 | -2,501 | -2,436 | 765,257 | 746,999 | 741,713 | -18,257 | 5,287 | 0 | 0 | 0 | 808,243 | 807,536 | 707 | |
| RL-0042 Nuc Fac D&D - FTF Proj | 250 | 235 | 139 | -15 | 95 | 30,756 | 30,738 | 25,876 | -18 | 4,862 | 0 | 0 | 0 | 32,315 | 27,641 | 4,673 | |
| b. COST OF MONEY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| c. GENERAL AND ADMINISTRATIVE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| d. UNDISTRIBUTED BUDGET | 0 | | | | | | | | | | | | | | | | |
| e. SUBTOTAL | 40,612 | 28,183 | 39,796 | -12,428 | -11,612 | 6,617,698 | 6,546,302 | 6,476,290 | -71,396 | 70,012 | 0 | 0 | 0 | 6,812,187 | 6,759,834 | 52,354 | |
| f. MANAGEMENT RESERVE | 48,197 | | | | | | | | | | | | | | | | |
| g. TOTAL | 40,612 | 28,183 | 39,796 | -12,428 | -11,612 | 6,617,698 | 6,546,302 | 6,476,290 | -71,396 | 70,012 | 0 | 0 | 0 | 6,860,384 | | | |
| 9. RECONCILIATION TO CONTRACT BUDGET BASELINE | | | | | | | | | | | | | | | | | |
| a. VARIANCE ADJUSTMENT | | | | | | | | | | | | | | | | | |
| b. TOTAL CONTRACT VARIANCE | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | -71,396 | 70,012 | | | | 6,860,384 | 6,759,834 | 100,550 |

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

CLASSIFICATION (When Filled In)

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

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

| | | | | | | | |
|--|--|---|--|---|--|--------------------------------------|--|
| 1. CONTRACTOR | | 2. CONTRACT | | 3. PROGRAM | | 4. REPORT PERIOD | |
| a. NAME CH2M HILL Plateau Remediation Company | | a. NAME Plateau Remediation Contract | | a. NAME Plateau Remediation Contract | | a. FROM (YYYYMMDD) 2020 / 04 / 27 | |
| b. LOCATION (Address and ZIP Code) Richland, WA | | b. NUMBER RL14788 | | b. PHASE | | b. TO (YYYYMMDD) 2020 / 05 / 24 | |
| c. TYPE CPAF | | d. SHARE RATIO | | c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18 | | | |

| WBS.Resp Org Group ITEM (1) | CURRENT PERIOD | | | | | CUMULATIVE TO DATE | | | | | REPROGRAMMING ADJUSTMENTS | | | AT COMPLETION | | |
|---|--------------------|--------------------|-------------------------|--------------|----------|--------------------|--------------------|-------------------------|---------------|-----------|---------------------------|-------------------------|-------------|---------------|----------------|---------------|
| | BUDGETED COST | | ACTUAL | VARIANCE | | BUDGETED COST | | ACTUAL | VARIANCE | | COST VARIANCE (12a) | SCHEDULE VARIANCE (12b) | BUDGET (13) | BUDGETED (14) | ESTIMATED (15) | VARIANCE (16) |
| | WORK SCHEDULED (2) | WORK PERFORMED (3) | COST WORK PERFORMED (4) | SCHEDULE (5) | COST (6) | WORK SCHEDULED (7) | WORK PERFORMED (8) | COST WORK PERFORMED (9) | SCHEDULE (10) | COST (11) | | | | | | |
| 34 - Env Program & Strategic Png | 1,038 | 1,142 | 1,115 | 104 | 27 | 109,506 | 107,000 | 100,018 | -2,506 | 6,982 | 0 | 0 | 0 | 112,820 | 104,420 | 8,400 |
| 35 - Business Services | 0 | 0 | 0 | 0 | 0 | 476,879 | 476,879 | 453,595 | 0 | 23,284 | 0 | 0 | 0 | 476,879 | 453,595 | 23,284 |
| 36 - Prime Contract & Proj Integr | 0 | 0 | 17,039 | 0 | -17,039 | 1,111 | 1,111 | 40,376 | 0 | -39,265 | 0 | 0 | 0 | 1,111 | 45,376 | -44,265 |
| 37 - Resource Mgmt & Strategic Intg | 107 | 107 | 73 | 0 | 34 | 9,443 | 9,443 | 6,258 | 0 | 3,185 | 0 | 0 | 0 | 9,926 | 6,743 | 3,183 |
| 38 - Project Technical Services | 0 | 0 | 0 | 0 | 0 | 118,497 | 118,497 | 99,132 | 0 | 19,364 | 0 | 0 | 0 | 118,497 | 99,132 | 19,364 |
| 3B - PFP Closure Project | 1,677 | 353 | 1,628 | -1,324 | -1,275 | 1,058,184 | 1,042,772 | 1,155,193 | -15,412 | -112,421 | 0 | 0 | 0 | 1,076,214 | 1,193,794 | -117,580 |
| 3C - Waste & Fuels Management Project | 10,722 | 9,095 | 6,792 | -1,627 | 2,302 | 1,400,052 | 1,393,574 | 1,305,668 | -6,478 | 87,907 | 0 | 0 | 0 | 1,456,833 | 1,373,713 | 83,120 |
| 3D - Soil & Groundwater Remediation | 11,049 | 5,098 | 3,660 | -5,951 | 1,438 | 1,501,322 | 1,487,417 | 1,433,763 | -13,905 | 53,654 | 0 | 0 | 0 | 1,540,272 | 1,488,286 | 51,986 |
| 3G - K Basin Oper & Plateau Remediation Project | 4,521 | 3,581 | 2,768 | -940 | 813 | 1,027,549 | 1,021,020 | 985,539 | -6,529 | 35,481 | 0 | 0 | 0 | 1,048,494 | 1,015,319 | 33,175 |
| 3H - River Risk Management Project | 7,982 | 6,193 | 3,649 | -1,789 | 2,544 | 372,267 | 357,280 | 374,785 | -14,987 | -17,505 | 0 | 0 | 0 | 411,055 | 426,915 | -15,860 |
| 3K - Central Plateau Risk Reduction | 3,515 | 2,615 | 3,072 | -900 | -456 | 542,889 | 531,309 | 521,962 | -11,580 | 9,347 | 0 | 0 | 0 | 560,088 | 552,540 | 7,547 |
| 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) | 40,612 | 28,183 | 39,796 | -12,428 | -11,612 | 6,617,698 | 6,546,302 | 6,476,290 | -71,396 | 70,012 | 0 | 0 | 0 | 6,812,187 | 6,759,834 | 52,354 |
| f. MANAGEMENT RESERVE | | | | | | | | | | | | | | 48,197 | | |
| g. TOTAL | 40,612 | 28,183 | 39,796 | -12,428 | -11,612 | 6,617,698 | 6,546,302 | 6,476,290 | -71,396 | 70,012 | 0 | 0 | 0 | 6,860,384 | | |

| CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE | | | | | | | | | | | | | DOLLARS IN THOUSANDS | | | | | Form Approved OMB No. 0704-0188 | | |
|---|-------------------------|-------------------------------|--|---------------------|--|---------------------|---|---------------------|---|--|--|--------------|--|--------------|-------------------------------|--------------|---|------------------------------------|--------------------------|----------------------|
| 1. CONTRACTOR CH2M HILL Plateau Remediation Company | | | 2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO: | | | | 3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE d. YES X 9/18/2009 | | | 4. REPORT PERIOD a. FROM: 2020/04/26 b. TO: 2020/05/24 | | | | | | | | | | |
| 5. CONTRACT DATA | | | a. ORIGINAL NEGOTIATED COST \$4,312,366 | | b. NEGOTIATED CONTRACT CHANGE \$2,540,247 | | c. CURRENT NEGOTIATED COST (A + B) \$6,852,614 | | d. ESTIMATED COST AUTH UNPRICED WORK \$7,802 | | e. CONTRACT BUDGET BASE (C + D) \$6,860,416 | | f. TOTAL ALLOCATED BUDGET \$6,860,384 | | g. DIFFERENCE (E - F) \$32 | | | | | |
| h. CONTRACT START DATE 6/19/2008 | | | i. DEFINITIZATION DATE 6/19/2008 | | j. PLANNED COMPL DATE 9/30/2020 | | k. CONT COMPLETION DATE 9/30/2020 | | | l. EST COMPLETION DATE 9/30/2020 | | | | | | | | | | |
| 6. PERFORMANCE DATA | | | BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE) | | | | | | | | | | | | | | | | | |
| ITEM (1) | BCWS CUM TO DATE (2) | BCWS FOR REPORT PERIOD (3) | SIX MONTH FORECAST | | | | | | FY09-13 | | | | | | | | | | UNDISTRIB BUDGET (18) | TOTAL BUDGET (19) |
| | | | +1 Jun-20 (4) | +2 Jul-20 (5) | +3 Aug-20 (6) | +4 Sep-20 (7) | +5 Oct-20 (8) | +6 Nov-20 (9) | FY09-13 (10) | FY14 (11) | FY15 (12) | FY16 (13) | FY17 (14) | FY18 (15) | FY19 (16) | FY20 (17) | | | | |
| a. PM BASELINE (BEGIN OF PERIOD) | 6,577,087 | 56,002 | 45,166 | 56,779 | 44,276 | 55,859 | 0 | 0 | 3,391,477 | 391,653 | 471,323 | 504,826 | 485,028 | 470,649 | 563,065 | 546,419 | 0 | 6,824,439 | | |
| b. BASELINE CHANGES AUTH DURING REPORT PERIOD | | | | | | | | | | | | | | | | | | | | |
| BCR-013-20-015R0 - Implement Approved TPA Milestone Changes | | | | | | | | | | | | | | | | 0 | | 0 | | |
| BCR-013-20-018R0 - Remove IDF Pad Construction Scope from PMB | | | | | | | | | | | | | | | | (1,086) | | (1,086) | | |
| BCR-013-20-020R0 - W&F Scope Reductions | | | | | | | | | | | | | | | | (2,748) | | (2,748) | | |
| BCR-013-20-021R0 - W-135 Scope Reductions | | | | | | | | | | | | | | | | (205) | | (205) | | |
| BCR-013-20-022R0 - Revised Shipping Schedule | | | | | | | | | | | | | | | | (1,894) | | (1,894) | | |
| BCR-PRC-20-017R0 - Schedule Logic Changes - NO COBRA REPORTS | | | | | | | | | | | | | | | | 0 | | 0 | | |
| BCR-PRC-20-017R0 - Schedule Logic Changes - NO COBRA REPORTS | | | | | | | | | | | | | | | | 0 | | 0 | | |
| BCR-040-20-011R0 - 200W Tier 2 CERCLA Removal Action Documentation | | | | | | | | | | | | | | | | 60 | | 60 | | |
| BCR-042-20-005R0 - RL-042 Install Argon System Transmitter & Deact FFTF Fire Sy | | | | | | | | | | | | | | | | 86 | | 86 | | |
| BCR-030-20-015R0 - RL-0030 Scope Revisions | | | | | | | | | | | | | | | | (813) | | (813) | | |
| BCR-040-20-010R0 - Remove FY2020 RL-0040 CPRM Scope | | | | | | | | | | | | | | | | (3,973) | | (3,973) | | |
| BCR-041-20-008R0 - Remove FY2020 RL-0041 KBO Scope | | | | | | | | | | | | | | | | (1,678) | | (1,678) | | |
| BCR-PRC-20-016R0 - MOD 735 Implementation - Fee Adjustment | | | | | | | | | | | | | | | | 0 | | 0 | | |
| BCR-PRC-20-016R0 - MOD 735 Implementation - Fee Adjustment | | | | | | | | | | | | | | | | 0 | | 0 | | |
| BCR-PRC-20-016R0 - MOD 735 Implementation - Fee Adjustment | | | | | | | | | | | | | | | | 0 | | 0 | | |
| BCR-PRC-20-016R0 - MOD 735 Implementation - Fee Adjustment | | | | | | | | | | | | | | | | 0 | | 0 | | |
| BCR-PRC-20-014R0 - Alignment of CBB with Mod 735 | | | | | | | | | | | | | | | | 0 | | 0 | | |
| BCRA-PRC-20-018R0 - HPIC Updates May FY2020 | | | | | | | | | | | | | | | | 0 | | 0 | | |
| c. PM BASELINE (END OF PERIOD) | 6,617,698 | 40,612 | 43,915 | 54,794 | 42,347 | 53,433 | 0 | 0 | 3,391,477 | 391,653 | 471,323 | 504,826 | 485,028 | 470,649 | 563,065 | 534,167 | 0 | 6,812,187 | | |
| 7. MANAGEMENT RESERVE | | | | | | | | | | | | | | | | | | 48,197 | | |
| 8. TOTAL | | | | | | | | | | | | | | | | | | 6,860,384 | | |

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) 2020 / 04 / 27 | |
| b. LOCATION (Address and ZIP Code) Richland, WA | | b. NUMBER RL14788 | | b. PHASE | | b. TO (YYYYMMDD) 2020 / 05 / 24 | |
| c. TYPE CPAF | | d. SHARE RATIO | | c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18 | | | |

| 5. PERFORMANCE DATA | | | | | | | | | | | | | | | |
|---|------------------------------------|---|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|------------------|--------------------|----------|----------|----------|--------------------------|
| WBS.Resp Org Group ORGANIZATIONAL CATEGORY (1) | ACTUAL CURRENT PERIOD (2) | ACTUAL END OF CURRENT PERIOD (Cumulative) (3) | FORECAST (Non-Cumulative) | | | | | | | | | | | | AT COMPLETION (15) |
| | | | SIX MONTH FORECAST BY MONTH (Enter names of months) | | | | | | ENTER SPECIFIED PERIODS | | | | | | |
| | | | +1 JUN 2020 (4) | +2 JUL 2020 (5) | +3 AUG 2020 (6) | +4 SEP 2020 (7) | +5 OCT 2020 (8) | +6 NOV 2020 (9) | DEC 2020 (10) | JAN 2021 (11) | ATCOMPLETE (12) | (13) | (14) | | |
| 300 - Office of the President | 14 | 2,286 | 13 | 16 | 17 | 17 | - | - | - | - | - | - | - | - | 2,348 |
| 303 - Internal Audit | 4 | 629 | 5 | 4 | 4 | 4 | - | - | - | - | - | - | - | - | 646 |
| 304 - General Counsel | 3 | 577 | 4 | 4 | 4 | 4 | - | - | - | - | - | - | - | - | 591 |
| 32 - Safety Health Security & Quality | 54 | 8,936 | 63 | 64 | 64 | 64 | - | - | - | - | - | - | - | - | 9,190 |
| 34 - Env Program & Strategic Plng | 33 | 6,113 | 39 | 40 | 40 | 38 | - | - | - | - | - | - | - | - | 6,271 |
| 35 - Business Services | 48 | 8,498 | 59 | 59 | 63 | 66 | - | - | - | - | - | - | - | - | 8,745 |
| 36 - Prime Contract & Proj Integr | 1,071 | 6,796 | 39 | 37 | 38 | 38 | - | - | - | - | - | - | - | - | 6,949 |
| 37 - Resource Mgmt & Strategic Intg | 38 | 3,638 | 50 | 49 | 45 | 45 | - | - | - | - | - | - | - | - | 3,827 |
| 38 - Project Technical Services | 31 | 9,069 | 39 | 39 | 39 | 39 | - | - | - | - | - | - | - | - | 9,226 |
| 3B - PFP Closure Project | 41 | 54,875 | 196 | 165 | 203 | 189 | 199 | 195 | 183 | 116 | 41 | - | - | - | 56,361 |
| 3C - Waste & Fuels Management Project | 184 | 60,968 | 407 | 401 | 406 | 399 | 17 | 6 | 6 | 22 | 23 | - | - | - | 62,653 |
| 3D - Soil & Groundwater Remediation | 110 | 44,467 | 279 | 284 | 288 | 277 | 48 | 44 | 45 | 18 | 4 | - | - | - | 45,754 |
| 3G - K Basin Oper & Plateau Remediation Project | 86 | 35,815 | 217 | 219 | 221 | 216 | 64 | 45 | 33 | 26 | 104 | - | - | - | 36,960 |
| 3H - River Risk Management Project | 95 | 10,373 | 228 | 230 | 226 | 231 | 27 | 28 | 26 | 25 | 179 | - | - | - | 11,573 |
| 3K - Central Plateau Risk Reduction | 109 | 21,568 | 258 | 258 | 255 | 256 | 17 | 5 | 11 | 3 | 4 | - | - | - | 22,636 |
| g. TOTAL DIRECT | 1,922 | 274,606 | 1,897 | 1,870 | 1,912 | 1,883 | 372 | 323 | 304 | 210 | 354 | - | - | - | 283,731 |

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

| CLASSIFICATION (When Filled In) | | | | | | | | | |
|--|-------------|--|-----------------------|-------------------------|---|-----------------|---|---|------------|
| CONTRACT PERFORMANCE REPORT FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES | | | | | | | | FORM APPROVED OMB No. 0704-0188 | |
| 1. CONTRACTOR | | 2. CONTRACT | | | 3. PROGRAM | | | 4. REPORT PERIOD | |
| a. NAME CH2MHILL Plateau Remediation Company | | a. NAME Plateau Remediation Contract | | | a. NAME Plateau Remediation Contract | | | a. FROM (YYYY/MM/DD) 2020/04/27 | |
| b. LOCATION (Address and ZIP Code) Richland, WA 99354 | | b. NUMBER DE-AC06-08RL14788 | | b. PHASE Base | | | b. TO (YYYY/MM/DD) 2020/05/24 | | |
| | | c. TYPE CPAF | d. SHARE RATIO | | c. EVMS ACCEPTANCE 2009/09/18 NO YES X | | | | |
| | BCWS | BCWP | ACWP | SV in \$ | SV in % | CV in \$ | CV % | SPI | CPI |
| Current: | 40,612 | 28,183 | 39,796 | (12,428) | -30.6% | (11,612) | -41.2% | 0.69 | 0.71 |
| Cumulative: | 6,617,698 | 6,546,302 | 6,476,290 | (71,396) | -1.1% | 70,012 | 1.1% | 0.99 | 1.01 |
| | BAC | EAC | VAC in \$ | VAC in % | TCPI | | | | |
| At Complete: | 6,812,187 | 6,759,834 | 52,354 | 0.8% | 0.94 | | | | |
| Explanation of Variance/Description of Problem: | | | | | | | | | |
| Current Period Schedule and Cost Variance: The current month (CM) negative schedule and cost variances were the result of the PSWO issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with continuation of minimum safe operations that could not be performed in a safe and compliant manner consistent with the Centers for Disease Control and Prevention COVID-19 guidelines and the "Stay Home, Stay Healthy" order issued by the governor of Washington State. Non portable work activities is work that cannot be performed in a remote manner (e.g., telework from home). A large amount of discrete scope across the projects was demobilized and placed in safe configuration in late March. CHPRC and subcontractor labor assigned to work that could not be performed in a remote manner charged to segregated accounts for unproductive time caused by the PSWO. The cost for the standby of subcontractor equipment remaining on site during this period was also charged to these segregated accounts. As the method of earning performance for discrete scope is based on physical progress in the field, no performance was taken on many accounts, causing the negative schedule and cost variances | | | | | | | | | |
| Cumulative Schedule Variance: The variance is within reporting thresholds. | | | | | | | | | |
| Cumulative Cost Variance: The variance is within reporting thresholds. | | | | | | | | | |
| Impact: | | | | | | | | | |
| Current Period Schedule: The current month schedule variance is not expected to impact the overall contract schedule. | | | | | | | | | |
| Current Period Cost: Cost impacts are being estimated and will be incorporated in the project estimate to complete (ETC). | | | | | | | | | |
| Cumulative Schedule: N/A | | | | | | | | | |
| Cumulative Cost: N/A | | | | | | | | | |
| Corrective Action: | | | | | | | | | |
| Current Period Schedule: No corrective actions have been identified. | | | | | | | | | |
| Current Period Cost: No corrective actions necessary. | | | | | | | | | |
| Cumulative Schedule: N/A | | | | | | | | | |
| Cumulative Cost: N/A | | | | | | | | | |
| Monthly Summary (to include technical causes of VARs, Impacts, and Corrective Action(s): | | | | | | | | | |
| CHPRC continues to track completion of the contract within budget. Currently, a variance at completion of \$52.4 million is projected, with an additional \$48.2 million of management reserve (MR) for a total positive variance of \$100.6 million. For May, the project was 30.6 percent behind schedule and 41.2 percent over planned cost. Contract to date, the project was 1.1 percent behind schedule and 1.1 percent under planned cost. | | | | | | | | | |
| The difference between the Contract Budget Base and the Total Allocated Budget on Format 3 changed by \$2.7M for the month of May. The change is due to incorporation of BCRs to align the PMB to Correspondence No. 2001502, Contract Modification 735, Definitization of Modification 718, FY20 Extension. The \$32K delta is a result of rounding over time for implementation of multiple change order definitizations | | | | | | | | | |
| 14 BCRs were implemented in the current period. They included: BCR-013-20-018R0, Remove IDF Pad Construction Scope from PMB BCR-013-20-020R0, RL-0013 Waste and Fuels Scope Reductions BCR-013-20-021R0, RL-0013 W-135 Scope Revisions BCR-013-20-022R0, Revised Shipping Schedule BCR-030-20-015R0, RL-0030 Scope Revisions | | | | | | | | | |

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

BCR-040-20-010R0, Remove FY2020 RL-0040 CPRM Scope from PMB
 BCR-040-20-011R0, 200W Tier 2 CERCLA Removal Action Documentation
 BCR-041-20-008R0, FY2020 RL-0041 KBO Scope from PMB
 BCR-042-20-005R0, RL-0042 Install Argon System Transmitter & Deact FTF Fire System
 BCR-PRC-20-014R0, Alignment of CBB with Mod 735 Contract Cost
 BCR-PRC-20-015R0, Implement Approved TPA Milestone Changes
 BCR-PRC-20-016R0, Mod 735 Implementation – Fee Adjustment
 BCR-PRC-20-017R0, Schedule Logic Corrections
 BCRA-PRC-20-018R0, HPIC Updates May FY2020

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

Variance in Performance BAC and EAC: The VAC between the BAC and EAC this month is a +\$52.4 million, +0.8% and is within reporting thresholds.

Format 1 and 3 Contract Data:

Contract Price Adjustments

| | | |
|---|--------------------------------|---------|
| CPS - In Process | | |
| | Total Authorized Unpriced Work | \$7,802 |
| Approved Adjustments to Contract Price (not reflected in B.4-1 Table) | | |
| | Total Negotiated Cost Changes | - |
| Grand Total Adjustments | | 7,802 |

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

Undistributed Budget Activity

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

There was no change to UB in May.

Management Reserve Activity

| BCR Number | Title | PBS | Fiscal Year | MR |
|------------------|--------------------------------------|-----|-------------|-----------|
| BCR-PRC-20-014R0 | <i>Alignment of CBB with Mod 735</i> | 40 | 2020 | \$(167.4) |

Fee Activity

| BCR Number | Title | PBS | Fiscal Year | Fee |
|------------------|-------------------------------|----------------|-------------|----------|
| BCR-PRC-20-016R0 | <i>MOD 735 Implementation</i> | 13, 30, 40, 41 | 2020 | \$27,000 |

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: 6/18/2020 | Approved by: | Date: |
|--|---------------------------|---------------------|--------------|

Appendix B

Project Services and Support (WBS 000)

CH2MHILL
Plateau Remediation Company



M. T. Hughey
Vice President for
Safety, Health, Security
and Quality

M. A. Wright
Vice President for
Project Technical
Services

May 2020
CHPRC-2020-05, 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
Vice President for
Business Services
Chief Financial Officer

D. A. Gray
Vice President for
Resource Management
and Strategic Integration

This section is reported quarterly.

Appendix C

Capital Asset Projects

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

May 2020
CHPRC-2020-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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 2020
CHPRC-2020-05, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

In May, the Plutonium Finishing Plant (PFP) Closure Project team continued essential mission-critical operations in compliance with the U.S. Department of Energy (DOE), Richland Operations Office (RL) partial stop work order (PSWO). Essential mission-critical operations consisted of a survey of PFP radiological boundaries and applying fixative to the PFP demolition area. Additionally, a small complement of resources continued to perform limited planning activities in support of implementation of social distancing in anticipation of the future return to normal operations.

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

KEY ACCOMPLISHMENTS

RL-0011.C2 Accomplishments:

- Due to the novel coronavirus (COVID-19), a national emergency was declared on March 13, 2020, and on March 24, 2020, RL issued a PSWO as a part of the Hanford Site response to COVID-19. The PFP site was transitioned to essential mission-critical operations and has maintained that configuration. Essential mission-critical operations consisted of completion of required surveillances and maintenance to protect government property and maintain safety and environmental compliance. These efforts included surveying PFP radiological boundaries and applying fixative to the PFP demolition area.

MAJOR ISSUES

Issue

The project’s fiscal year (FY) 2020 forecast reflects spending approximately \$4.5 million more than the entire allotted funding carryover balance. While RL-0011 was allocated a supplemental \$4.9 million, additional funding is required in FY2020 to complete PFP demolition.

Corrective Action

Resolve funding shortfall. Shift personnel assigned to the PFP Project to support the West Area Remediation Project (WARP) in RL-0040 when work resumption is expected in mid-June to conserve the limited inventory personal protective equipment (PPE) following return to normal operations until site PPE inventory and resupply can support completing of the RL-0011C.2 project. A secondary benefit of shifting labor resources to WARP activities will be to reduce the near-term RL-0011 spending rate until this issue is resolved.

Status

CHPRC is working with RL to address this issue, with resolution expected in June. A \$3 million funds reallocation between projects has been identified and should resolve prior to any fund overrun. The temporary shift of personnel from PFP to WARP to conserve limited PPE inventory is underway.

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/C.2 | | | | | | | | | | | | | |
| 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) | | | | | | | | | | | | | |
| PFP-P5-007: Delay of PRF Debris Load Out | The loadout of Plutonium Reclamation Facility (PRF) debris is delayed. Risk Handling Strategy: Accept Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 32 days | ● | ↓ | <p>Risk Event: The project has not executed debris loadout at the productivity rate that was planned. The project has experienced accumulation of water during PRF rubble loadout and more soil per loadout entry than expected.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: left;">Risk Recovery Action(s)</th> <th style="text-align: left;">FC Date</th> <th style="text-align: left;">%</th> </tr> </thead> <tbody> <tr> <td>Communicate PRF loadout options with RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p>Recovery Action Assessment: No major changes in May. Crews are loading out more soil associated with debris collection than expected. Additional loadout may be needed that will push project completion. A change recommended by craft personnel in the demolition approach has shown early signs of improved performance.</p> | Risk Recovery Action(s) | FC Date | % | Communicate PRF loadout options with RL. | Ongoing | N/A | Encourage additional worker involvement. | Ongoing | N/A |
| Risk Recovery Action(s) | FC Date | % | | | | | | | | | | | |
| Communicate PRF loadout options with RL. | Ongoing | N/A | | | | | | | | | | | |
| Encourage additional worker involvement. | Ongoing | 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) | | | | | | | | | | | | | |
| No high threat risks identified in May. | | | | | | | | | | | | | |

| Unmitigated Risk Impacts | Assessment | | Comments | | | | | | | | | | | | | | | |
|---|---|---|---|----------------------|---------|---|--|---------|-----|--|---------|-----|--|---------|-----|---|---------|-----|
| | Month | Trend | | | | | | | | | | | | | | | | |
| RL-0011/C.2 | | | | | | | | | | | | | | | | | | |
| FY2020 Key Risks | | | | | | | | | | | | | | | | | | |
| PFP-P4-002: Weather Impacts During 236-Z Demolition | Inclement weather, including moderate winds, low or high temperatures, and above average snowfall or thunderstorms will result in in-scope unplanned work and schedule impacts to the project. Risk Handling Strategy: Control Probability: Low (10% to 25%) Worst Case Impacts: \$0, 30 days |   | Risk Trigger: High winds and cold weather may impact the project in the winter and spring seasons. Average winds above 15 mph shut down demolition activities, and average winds above 30 mph require additional surveys. Cold weather prevents the foggers from operating and, therefore, shuts down fieldwork activities. <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in May . There were no weather events that impacted the project in May . | 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 | | | | | | | | | | | | | | | | |
| PFP-P-004: Stop Work From Concerned Workers | Concerned workers can implement a stop work to address off-normal or safety issues. The work cannot be restarted until the implementation of corrective actions is completed, resulting in schedule impacts to the project. Risk Handling Strategy: Control Probability: Medium (26% to 74%) Worst Case Impacts: \$0, 16 days |   | Risk Trigger: During PFP demolition activities, an increase in stop works could result in delays. <table border="1"> <thead> <tr> <th>Mitigation Action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Update communications as positions change.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide new maps with entry/exit instructions when boundaries are revised.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Encourage additional worker involvement.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Increase frequency of post-job reviews.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> Mitigation Assessment: No major changes in May . Increased communication and worker involvement to avoid confusion and concern to minimize stop works have continued; stop works may impact the project schedule going forward. | Mitigation Action(s) | FC Date | % | Update communications as positions change. | Ongoing | N/A | Provide new maps with entry/exit instructions when boundaries are revised. | Ongoing | N/A | Encourage additional worker involvement. | Ongoing | N/A | Increase frequency of post-job reviews. | Ongoing | N/A |
| Mitigation Action(s) | FC Date | % | | | | | | | | | | | | | | | | |
| Update communications as positions change. | Ongoing | N/A | | | | | | | | | | | | | | | | |
| Provide new maps with entry/exit instructions when boundaries are revised. | Ongoing | N/A | | | | | | | | | | | | | | | | |
| Encourage additional worker involvement. | Ongoing | N/A | | | | | | | | | | | | | | | | |
| Increase frequency of post-job reviews. | Ongoing | N/A | | | | | | | | | | | | | | | | |
| Unassigned Risks (Pending ownership of identified threats/opportunities) | | | | | | | | | | | | | | | | | | |
| No unassigned risks identified in May . | | | | | | | | | | | | | | | | | | |

CRITICAL PATH ANALYSIS

The PFP critical path schedule begins with the completion of PRF loadout, which is anticipated by November 19, 2020, meeting the requirements for the *Hanford Federal Facility Agreement and Consent Order* Milestone M-083-00A, “Plutonium Finishing Plant (PFP) Facility Transition and Selected Disposition Activities.” Demolition completion will be followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities, completing by February 24, 2021.

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 | 2/24/2021 | Work resumption is expected in late September due to a phased resumption approach and to conserve personal protective equipment following COVID-19 impacts. |

*Due date reflects Critical Decision-4 (CD-4) due date with RL contingency.

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

Appendix C.2

RL-0011.C2 - Demolition of PFP Facilities

Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

CH2MHILL
Plateau Remediation Company

a Jacobs company



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

May 2020
CHPRC-2020-05, 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_C2 PFP Demolition Capital Asset Project | | a. FROM (YYYYMMDD) 2020 / 04 / 27 | |
| b. LOCATION (Address and ZIP Code) Richland, WA | | b. NUMBER RL14788 | | b. PHASE | | b. TO (YYYYMMDD) 2020 / 05 / 24 | |
| | | c. TYPE CPAF | | d. SHARE RATIO | | c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18 | |

| | | | | | | | | |
|-------------------------|-------------------------------|--|-------------------------------|----------------------------|-------------------------------|--------------------------------|--|-------------------------------|
| 5. CONTRACT DATA | | | | | | | | |
| a. QUANTITY 1 | b. NEGOTIATED COST 131,476 | c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 7,802 | d. TARGET PROFIT/FEE 5,000 | e. TARGET PRICE 136,476 | f. ESTIMATED PRICE 187,259 | g. CONTRACT CEILING 136,476 | h. ESTIMATED CONTRACT CEILING 187,259 | 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. WORST CASE 183,763 | | c. MOST LIKELY 182,259 | | 139,278 | | b. TITLE Prime Contract Compliance Manager | |
| a. BEST CASE 181,686 | | | | | | c. SIGNATURE | |
| | | | | | | d. DATE SIGNED (YYYYMMDD) | |

| | | | | | | | | | | | | | | | | | | | |
|--|---|--------------------|--------------------|----------------------------|--------------|----------|--------------------|--------------------|-------------------------|----------------------------|-----------|----------|---|---------------------------|-------------------------|---------------|---------------|----------------|---------------|
| 8. PERFORMANCE DATA | | | | | | | | | | | | | | | | | | | |
| CAPN.PBS Control Account.PARS 2 WBS (2) | | CURRENT PERIOD | | | | | | CUMULATIVE TO DATE | | | | | | REPROGRAMMING ADJUSTMENTS | | AT COMPLETION | | | |
| | | BUDGETED COST | | ACTUAL COST WORK PERFORMED | | VARIANCE | | BUDGETED COST | | ACTUAL COST WORK PERFORMED | | VARIANCE | | COST VARIANCE (12a) | SCHEDULE VARIANCE (12b) | BUDGET (13) | BUDGETED (14) | ESTIMATED (15) | VARIANCE (16) |
| | | WORK SCHEDULED (2) | WORK PERFORMED (3) | COST WORK PERFORMED (4) | SCHEDULE (5) | COST (6) | WORK SCHEDULED (7) | WORK PERFORMED (8) | COST WORK PERFORMED (9) | SCHEDULE (10) | COST (11) | | | | | | | | |
| ITEM (1) | | | | | | | | | | | | | | | | | | | |
| RL-0011 Nuclear Mat Stab & Disp PFP | | | | | | | | | | | | | | | | | | | |
| RL_0011_C2.05 Disposition PFP Facility | 0 | 0 | 811 | 0 | -811 | 138,704 | 125,416 | 169,902 | -13,289 | -44,486 | 0 | 0 | 0 | 0 | 0 | 138,704 | 181,686 | -42,981 | |
| b. COST OF MONEY | 0 | 0 | 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 | 0 | 0 | |
| d. UNDISTRIBUTED BUDGET | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| e. SUBTOTAL | 0 | 0 | 811 | 0 | -811 | 138,704 | 125,416 | 169,902 | -13,289 | -44,486 | 0 | 0 | 0 | 0 | 0 | 138,704 | 181,686 | -42,981 | |
| f. MANAGEMENT RESERVE | | | | | | | | | | | | | | | | 573 | | | |
| g. TOTAL | 0 | 0 | 811 | 0 | -811 | 138,704 | 125,416 | 169,902 | -13,289 | -44,486 | 0 | 0 | 0 | 0 | 0 | 139,278 | | | |
| 9. RECONCILIATION TO CONTRACT BUDGET BASELINE | | | | | | | | | | | | | | | | | | | |
| a. VARIANCE ADJUSTMENT | | | | | | | | | | | | | | | | | | | |
| b. TOTAL CONTRACT VARIANCE | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | -13,289 | -44,486 | | | 139,278 | 181,686 | -42,408 | | | |

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

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

| | | | | | | | |
|--|--|---|--|--|--|---|--|
| 1. CONTRACTOR | | 2. CONTRACT | | 3. PROGRAM | | 4. REPORT PERIOD | |
| a. NAME CH2M HILL Plateau Remediation Company | | a. NAME Plateau Remediation Contract | | a. NAME RL_0011_C2 PFP Demolition Capital Asset Project | | a. FROM (YYYYMMDD) 2020 / 04 / 27 | |
| b. LOCATION (Address and ZIP Code) Richland, WA | | b. NUMBER RL14788 | | b. PHASE | | b. TO (YYYYMMDD) 2020 / 05 / 24 | |
| | | 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 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) | | | | | | | |
| ITEM (1) | | | | | | | | | | | | | | | | | |
| 3B - PFP Closure Project | 0 | 0 | 811 | 0 | -811 | 138,704 | 125,416 | 169,902 | -13,289 | -44,486 | 0 | 0 | 0 | 138,704 | 181,686 | -42,981 | |
| 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 | 811 | 0 | -811 | 138,704 | 125,416 | 169,902 | -13,289 | -44,486 | 0 | 0 | 0 | 138,704 | 181,686 | -42,981 | |
| f. MANAGEMENT RESERVE | | | | | | | | | | | | | | 573 | | | |
| g. TOTAL | 0 | 0 | 811 | 0 | -811 | 138,704 | 125,416 | 169,902 | -13,289 | -44,486 | 0 | 0 | 0 | 139,278 | | | |

CLASSIFICATION (When Filled In)

| CONTRACT PERFORMANCE REPORT | | | | | | | | | | | | | | Form Approved | | | | | | |
|--|-------------------------|-------------------------------|---------------------|--|---------------------|---|---------------------|--|---|--|--------------|--|--------------|------------------------------|--------------|--------------|--------|---|--------------------------|----------------------|
| FORMAT 3 - BASELINE | | | | | | | | | | | | | | OMB No. 0704-0188 | | | | | | |
| DOLLARS IN THOUSANDS | | | | | | | | | | | | | | | | | | | | |
| 1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA | | | | 2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO: | | | | 3. PROGRAM RL_0011_C2 PFP Demolition Capital Asset Project a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009 | | | | 4. REPORT PERIOD a. FROM: 2020/04/27 b. TO: 2020/05/24 | | | | | | | | |
| 5. CONTRACT DATA | | | | | | | | | | | | | | | | | | | | |
| a. ORIGINAL NEGOTIATED COST 51,683 | | | | b. NEGOTIATED CONTRACT CHANGE \$79,792 | | c. CURRENT NEGOTIATED COST (A + B) \$131,476 | | d. ESTIMATED COST AUTH UNPRICED WORK \$7,802 | | e. CONTRACT BUDGET BASE (C + D) \$139,278 | | f. TOTAL ALLOCATED BUDGET \$139,278 | | g. DIFFERENCE (E - F) \$0 | | | | | | |
| h. CONTRACT START DATE 6/19/2008 | | | | i. DEFINITIZATION DATE 6/19/2008 | | j. PLANNED COMPL DATE 9/30/2020 | | k. CONT COMPLETION DATE 9/30/2020 | | | | l. EST COMPLETION DATE 9/30/2020 | | | | | | | | |
| 6. PERFORMANCE DATA | | | | | | | | | | | | | | | | | | | | |
| 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-20 (4) | +2 Jul-20 (5) | +3 Aug-20 (6) | +4 Sep-20 (7) | +5 Oct-20 (8) | +6 Nov-20 (9) | FY09-13 (10) | FY14 (11) | FY15 (12) | FY16 (13) | FY17 (14) | FY18 (15) | FY19 (16) | FY20 (17) | | | | |
| a. PM BASELINE (BEGIN OF PERIOD) | 138,704 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,090 | 29,182 | 19,407 | 628 | 66,598 | 16,800 | 0 | 138,704 | |
| b. BASELINE CHANGES AUTH DURING REPORT PERIOD | | | | | | | | | | | | | | | | | | 0 | 0 | 0 |
| c. PM BASELINE (END OF PERIOD) | 138,704 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,090 | 29,182 | 19,407 | 628 | 66,598 | 16,800 | 0 | 138,704 | |
| 7. MANAGEMENT RESERVE | | | | | | | | | | | | | | | | | | | | 573 |
| 8. TOTAL | | | | | | | | | | | | | | | | | | | | 139,278 |

**CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

| | | | | | | | |
|--|--|---|----------------|---|--|--------------------------------------|--|
| 1. CONTRACTOR | | 2. CONTRACT | | 3. PROGRAM | | 4. REPORT PERIOD | |
| a. NAME CH2M HILL Plateau Remediation Company | | a. NAME Plateau Remediation Contract | | a. NAME RL_0011_C2 PFP Demolition Capital Asset Project | | a. FROM (YYYYMMDD) 2020 / 04 / 27 | |
| b. LOCATION (Address and ZIP Code) Richland, WA | | b. NUMBER RL14788 | | b. PHASE | | b. TO (YYYYMMDD) 2020 / 05 / 24 | |
| | | 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 MAY 2020 (4) | +2 JUN 2020 (5) | +3 JUL 2020 (6) | +4 AUG 2020 (7) | +5 SEP 2020 (8) | +6 OCT 2020 (9) | NOV 2020 (10) | DEC 2020 (11) | JAN 2021 (12) | ATCOMPLETE (13) | (14) | |
| 3B - PFP Closure Project | 9 | 4,973 | 158 | 104 | 12 | 12 | 17 | 94 | 83 | 40 | 44 | 0 | 0 | 5,537 |
| g. TOTAL DIRECT | 9 | 4,973 | 158 | 104 | 12 | 12 | 17 | 94 | 83 | 40 | 44 | 0 | 0 | 5,537 |

| CLASSIFICATION (When Filled In) | | | | | | | | | |
|--|---|--|--|-----------|----------------------------------|-------------|---------|------|-------------------|
| CONTRACT PERFORMANCE REPORT | | | | | | | | | FORM APPROVED |
| FORMAT 5 - Explanations and Problem Analysis | | | | | | | | | 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) 2020/04/27 | | | | |
| b. LOCATION (Address and ZIP Code) Richland, WA | b. NUMBER RL14788 | b. PHASE | | | b. TO (YYYYMMDD) 2020/05/24 | | | | |
| | c. TYPE CPAF | d. SHARE RATIO | c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2009 / 09 / 18 | | | | | | |
| Direct Projects | | | | | | | | | |
| 5. Evaluation | Budget | Earned | Actuals | SV in \$ | SV in % | CV in \$ | CV in % | SPI | CPI |
| Current: | 0.0 | 0.0 | 811.2 | 0.0 | 0 | -811.2 | 0 | 0 | 0.00 |
| Cumulative: | 138,704.4 | 125,415.9 | 169,901.6 | -13,288.5 | -9.6% | -44,485.7 | -35.5% | 0.90 | 0.74 |
| | BAC | EAC | VAC in \$ | VAC in % | TCPI to BAC | TCPI to EAC | | | |
| At Complete: | 138,704.4 | 181,685.9 | -42,981.5 | -31.0% | 0 | 1.13 | | | |
| Explanation of Variance/Description of Problem: | | | | | | | | | |
| Current Month: | | | | | | | | | |
| Schedule Variance: The current month schedule variance is within thresholds. | | | | | | | | | |
| Cost Variance: The current month negative cost variances were the result of the Partial Stop Work Order (PSWO) issued to CHPRC by RL on March 24, 2020. The PSWO covered non-portable work activities not associated with continuation of minimum safe operations that could not be performed in a safe and compliant manner consistent with The Centers for Disease Control and Prevention (CDC) COVID-19 guidelines and the "Stay Home, Stay Healthy" order issued by the Governor of Washington State. Non-portable work activities are work that cannot be performed in a remote manner (e.g., telework from home). The Project was demobilized and placed in safe configuration in late March. CHPRC and subcontractor labor assigned to work that could not be performed in a remote manner were charged to control account 011.97.01.04 to collect and segregate unproductive time caused by the PSWO. As the method of earning performance is based on physical progress in the field, no performance was taken, causing the negative cost variances. | | | | | | | | | |
| Cumulative to Date: | | | | | | | | | |
| Schedule Variance: The cumulative to date schedule variance is within thresholds. | | | | | | | | | |
| Cost Variance: The cumulative negative cost variance is associated with MSA resources arriving to support PFP demolition that were planned as P/Q shift support. Additionally, Readiness Assessment activities lagged due to a delay in the start of 236-Z Demolition and increased requirements to show readiness resulting in increased costs due to additional time and effort required from subcontracted and direct labor resources. The apportioned project management activities (i.e. project oversight and planning) and support activities are ongoing, while a delay in the discrete field work is resulting in minimal apportioned BCWP. Demolition mobilization activities took longer than originally assumed because of recommendations made during the readiness assessment and purchasing unplanned PBS fixative to support 236-Z demolition. In addition, significant winter weather impacts (i.e., snow, wind, freezing rain, etc.) have been recognized on the Hanford Site. Site closures, freezing temperatures and significant snowfall that required clearing of the demolition zone rather than performing physical demolition on the facilities while a constant staff provides demolition support services is a contributing factor. Unplanned Management Assessment efforts for the 234-5Z and 291-Z facilities took longer than originally assumed. Impacts associated with the Stop Work that was initiated by the HAMTC union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As the project gets further into the demolition phase of the PRF Canyon, increased utilization of Personnel Protective Equipment to align with the original plan as well as increased material procurements to align with the scope being performed (i.e., P-100 filters, Labounty Shear, additional fixative, etc.) are also contributing to this variance. An adjustment to the General & Administrative (G&A) Rate for FY2017 resulted in a reduction to the Performance Measurement Baseline (PMB) of \$463K. Finally, impacts from a contamination event that occurred on Friday, December 15, 2017, swing shift where RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis was conducted and resumption actions identified. | | | | | | | | | |
| This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities. | | | | | | | | | |
| Impact: | | | | | | | | | |
| Schedule Impact: Completion of all demolition activities followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities forecast to occur in February 2021. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of November 30, 2017, was not met. | | | | | | | | | |
| Cost Impact: A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017. | | | | | | | | | |
| Corrective Action: | | | | | | | | | |
| Demolition and load out activities are progressing at an effective speed to mitigate potential safety and stop work concerns. The current forecast slab on grade date is November 19, 2020. | | | | | | | | | |
| Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s): | | | | | | | | | |
| There was no change in the difference between the Contract Budget Base and the Total Allocated Budget on Format 3 for the month of May. | | | | | | | | | |
| The following items are addressed, as applicable: | | | | | | | | | |
| 1. Schedule Margin Analysis: No drawdowns of schedule margin were made in the month of May. | | | | | | | | | |
| 2. 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 = \$181,686; Most Likely = \$182,259; Worst Case = \$183,763. The Best Case EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no realization of remaining risks. The Most Likely EAC is the ACWP plus what management believes is the most likely outcome based on a knowledgeable estimate of all authorized work, known risks, unknown risks, and probable future conditions. The Worst Case EAC is the ACWP plus the ETC plus realization of all identified risks, plus the scope identified in the Trend Log. The Best/Worst and Most Likely EAC values are documented in the Format 1 Report. | | | | | | | | | |
| 7. Negative CV > VAC: No change in the month of 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: Jason Knowlton | | | Date: 6/16/2020 | | Approved by: | | Date: | | |