CHPRC-2016-12
Revision 1

Monthly Performance Report

December 2016

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

P.O. Box 1600
Richland, Washington 99352

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APPROVED
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Release Approval Date

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Monthly Performance Report

L. Ty Blackford
President and Chief Executive Officer

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DE-AC06-08RL14788
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EXECUTIVE SUMMARY

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

- The Plutonium Finishing Plant (PFP) Closure Project has continued demolition of the fourth floor of Plutonium Reclamation Facility (PRF). The project reconfigured the waste load out queue for more efficient load out of demolition debris. The U.S. Department of Energy (DOE) declared 242-Z (McCluskey Room) ready for demolition scheduled to begin late December.
- The Waste and Fuels Management Project Stabilization and Ventilation Project (W-130) team began the final phase of hot cell grouting for the Waste Encapsulation and Storage Facility Stabilization and Ventilation Project (W-130) to stabilize legacy contamination and completed the first lifts of grout into A, B, C and D cells. Hot cell grout placement is 77 percent complete overall.

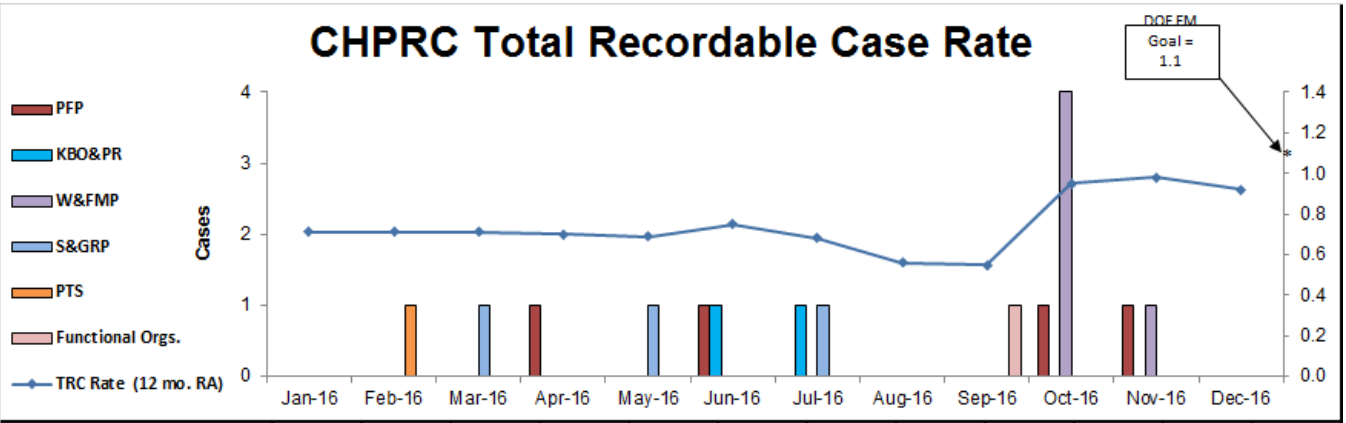
Demolition continues on the fourth floor of the PRF.

- The K Basins Operations and Remediation Project completed delivery of more than 270 tools and components to the 100K Area that will be used to remove sludge.
- Soil and Groundwater crews continued maintenance activities at the 200 West Pump and Treat Facility. Crews have completed stainless steel conversions at 200 West for the extraction wells at the pump and treat.
- Workers at the 618-10 Burial Ground and Environmental Restoration Disposal Facility (ERDF) accomplished a successful shipment (road closure) of waste that was sent to ERDF on Friday, December 2, 2016. Work on steel vertical pipe unit (row 1) remediation is expected to begin in January.

- The December 2016 President's Zero Accident Council (PZAC) meeting was hosted by the Business Services organization. The three main ideas for the meeting were:
  - Holiday Electrical Safety.
  - De-stress the holidays by planning ahead and setting yourself up for Success.
  - Upcycling & re-gifting ideas and ways to recycle your holiday trash.
- Four "*Thinking Target Zero*" (TTZ) bulletins were published to convey important occupational, safety, health, and environmental messages:
  - Winter personal protective equipment
  - Risk behaviors
  - Safety & seasonal stress management
  - Wood smoke and air pollution
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
  - Four Lessons Learned: Savannah River Nuclear Solutions Site – Club Car Safety Glass Door Shatters After Swinging Open; Candle and Tree Fire Lab Footage – Water Your Tree Daily; Y-12 National Security Complex – use of specialty heavy lifting alternative versus using crane for a critical lift; and Nevada Test Site – avoid blind picks (lifts) whenever possible or hold enhanced pre-job briefing.
  - Weekly Ethics Moments
  - Stairway safety
  - Hard hats in winter
  - Social media reminder
  - Work delays and closures
  - Exertion in cold weather
  - Winter travel reminder
  - Year-end dosimeter exchange
  - Safe use of chemical deicers
- A Special Safety Bulletin was issued on December 7, 2016, regarding the MSA OptimAir® TL Powered Air Purifying Respirator (PAPR) cartridge and spark cover installation.
- The *Kudos Corner* recognized individuals and teams who made a significant contribution to safety at work, home or play:
  - Kudos to the PFP demolition team for the safe and compliant start to demolition. They've successfully removed the fifth and sixth floors of the Plutonium Reclamation Facility and are making good progress demolishing the fourth floor.
  - Kudos to the Waste Receiving and Processing (WRAP Facility) team for safely receiving the first large container of transuranic mixed waste from PFP demolition. To ensure the large waste box, containing a glove box recently removed from the Plutonium Reclamation Facility, would fit through the doors for storage inside building 2404-WB, the crews conducted a mock-up. After the successful mock-up, the team safely received the first container on December 6, 2016.
  - Kudos to a member of the communications team for helping to shovel and clear sidewalks of snow at 2420 Stevens before work last week during an unexpected snowfall.
  - Kudos to various CHPRC project teams who donated their time and efforts this holiday season. Have a Happy Holiday.

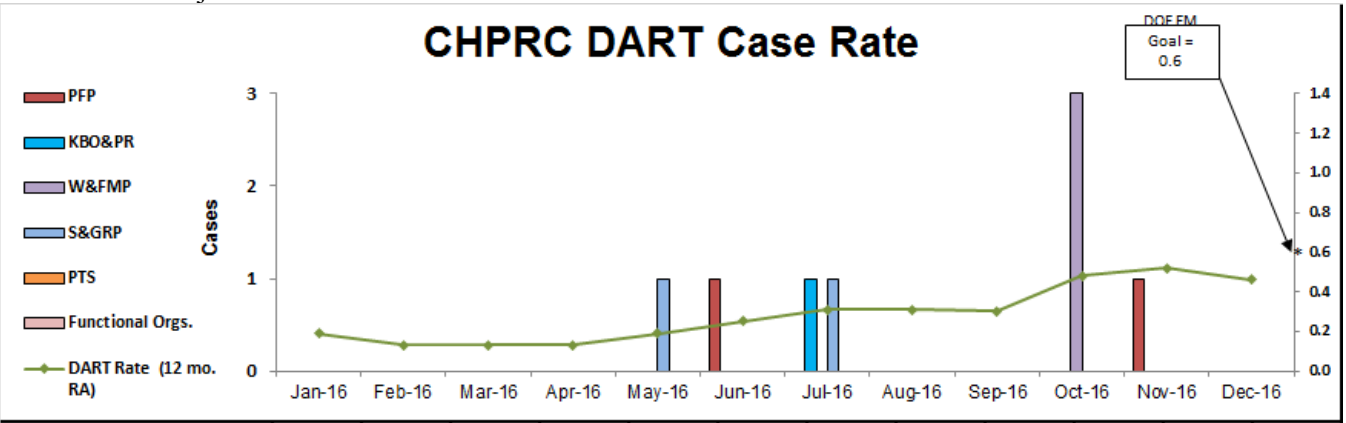
TARGET ZERO PERFORMANCE

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



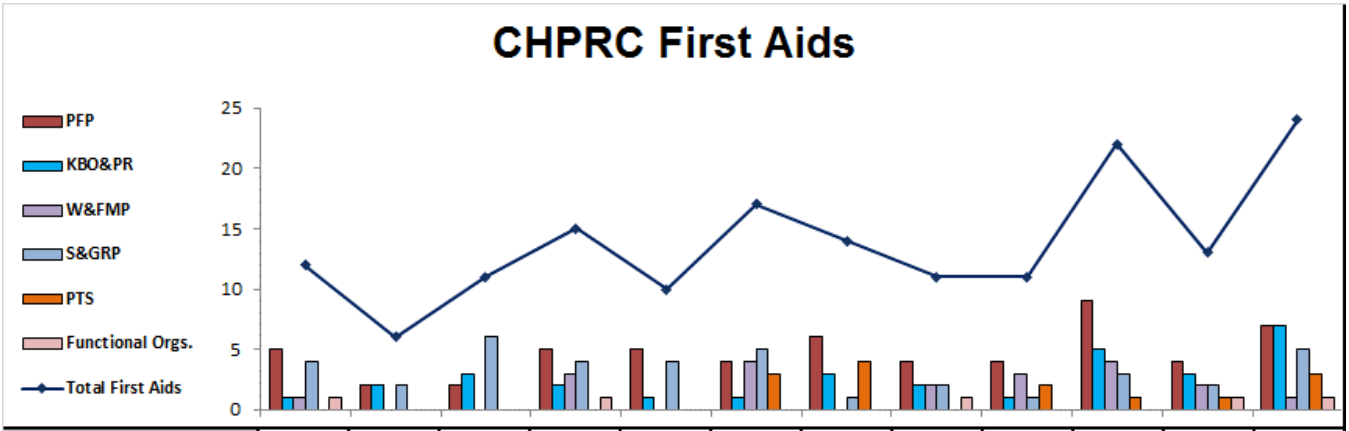
	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
PFP	0	0	0	1	0	1	0	0	0	1	1	0
KBO&PR	0	0	0	0	0	1	1	0	0	0	0	0
W&FMP	0	0	0	0	0	0	0	0	0	4	1	0
S&GRP	0	0	1	0	1	0	1	0	0	0	0	0
PTS	0	1	0	0	0	0	0	0	0	0	0	0
Functional Orgs.	0	0	0	0	0	0	0	0	1	0	0	0
Recordable Cases	**0**	**1**	**1**	**1**	**1**	**2**	**2**	**0**	**1**	**5**	**2**	**0**
TRC Rate (12 mo. RA)	**0.71**	**0.71**	**0.71**	**0.70**	**0.69**	**0.75**	**0.68**	**0.56**	**0.55**	**0.95**	**0.98**	**0.92**

Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.92 is based on a total of 16 Recordable injuries. There were no Recordable cases for December.



	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
PFP	0	0	0	0	0	1	0	0	0	0	1	0
KBO&PR	0	0	0	0	0	0	1	0	0	0	0	0
W&FMP	0	0	0	0	0	0	0	0	0	3	0	0
S&GRP	0	0	0	0	1	0	1	0	0	0	0	0
PTS	0	0	0	0	0	0	0	0	0	0	0	0
Functional Orgs.	0	0	0	0	0	0	0	0	0	0	0	0
DART Cases	**0**	**0**	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**3**	**1**	**0**
DART Rate (12 mo. RA)	**0.19**	**0.13**	**0.13**	**0.13**	**0.19**	**0.25**	**0.31**	**0.31**	**0.30**	**0.48**	**0.52**	**0.46**

Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.46 is based upon a total of eight Days Away cases. There were no DART cases in December.



	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
PFP	5	2	2	5	5	4	6	4	4	9	4	7
KBO&PR	1	2	3	2	1	1	3	2	1	5	3	7
W&FMP	1	0	0	3	0	4	0	2	3	4	2	1
S&GRP	4	2	6	4	4	5	1	2	1	3	2	5
PTS	0	0	0	0	0	3	4	0	2	1	1	3
Functional Orgs.	1	0	0	1	0	0	0	1	0	0	1	1
Total First Aids	**12**	**6**	**11**	**15**	**10**	**17**	**14**	**11**	**11**	**22**	**13**	**24**

First Aid Case Summary: CHPRC reported 24 first aid cases in December. The contributors were 12 abrasions/bruises/contusions, 10 sprains/strains/pains, one cuts/lacerations/punctures and one misc. (burns, rashes, repetitive motion, etc.) injury.

KEY ACCOMPLISHMENTS

Projects

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

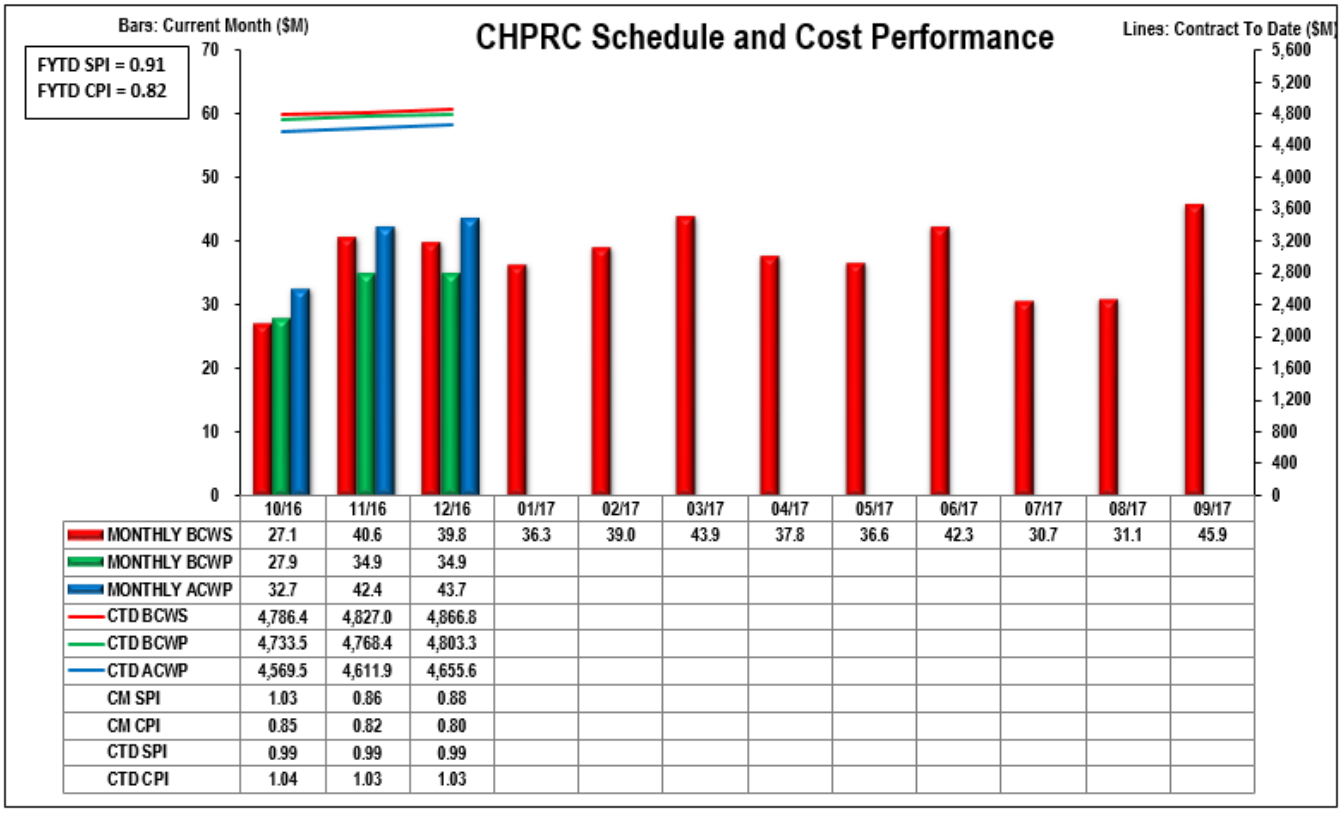
Project Services and Support (PTS)

- Refer to the Appendix B section of this report for specific Overhead support and Sections A through G as well as Appendix C of this report for specific Project support.

MAJOR ISSUES

Refer to Sections A through G as well as Appendix C of this report for the project specific Major Issues.

EARNED VALUE MANAGEMENT



	10/16	11/16	12/16	01/17	02/17	03/17	04/17	05/17	06/17	07/17	08/17	09/17
MONTHLY BCWS	27.1	40.6	39.8	36.3	39.0	43.9	37.8	36.6	42.3	30.7	31.1	45.9
MONTHLY BCWP	27.9	34.9	34.9									
MONTHLY ACWP	32.7	42.4	43.7									
CTD BCWS	4,786.4	4,827.0	4,866.8									
CTD BCWP	4,733.5	4,768.4	4,803.3									
CTD ACWP	4,569.5	4,611.9	4,655.6									
CM SPI	1.03	0.86	0.88									
CM CPI	0.85	0.82	0.80									
CTD SPI	0.99	0.99	0.99									
CTD CPI	1.04	1.03	1.03									

	$M Current Period					$M Contract to Date					$M Contract Period		
	Budgeted Cost		Actual Cost	Variance		Budgeted Cost		Actual Cost	Variance				
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost	BAC	EAC	Variance
RL-0011 - Nuclear Materials Stab & Disp PFP	2.6	1.1	9.4	(1.5)	(8.3)	975.8	920.0	971.7	(55.8)	(51.7)	980.3	1,054.6	(74.3)
RL-0012 - SNF Stabilization & Disposition	6.9	8.5	7.3	1.6	1.2	640.6	643.3	615.7	2.7	27.6	740.2	713.0	27.2
RL-0013 - Solid Waste Stab & Disposition	8.2	6.5	6.7	(1.7)	(0.1)	1112.9	1114.0	1044.1	1.1	69.9	1,341.8	1,287.6	54.2
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	10.8	9.3	8.4	(1.5)	0.9	1312.5	1298.6	1266.6	(14.0)	31.9	1,566.2	1,496.3	69.8
RL-0040 - Nuc Fac D&D - Remainder	1.7	1.5	1.7	(0.2)	(0.1)	429.9	425.7	394.9	(4.2)	30.8	473.9	447.9	26.0
RL-0041 - Nuc Fac D&D - RC Closure Project	9.4	7.9	10.1	(1.5)	(2.2)	372.4	379.1	344.0	6.7	35.1	536.9	489.6	47.3
RL-0042 - Nuc Fac D&D - FFTF Project	0.2	0.2	0.2	(0.0)	(0.1)	22.6	22.6	18.5	(0.0)	4.1	26.5	23.5	3.0
(Values are rounded to the nearest $0.1M) Total	39.8	34.9	43.7	(4.9)	(8.8)	4,866.8	4,803.3	4,655.6	(63.5)	147.7	5,665.8	5,512.6	153.2
(Values do not have UB breakout)													

** In regards to RL-0041, CHPRC has implemented the River Corridor Closure Contract (RCCC) transitioned scope into the Performance Measurement Baseline (PMB) for Earned Value Management (EVM) reporting purposes. When the change orders (CO #304, #305, #306) are definitized, BCRs will be processed to align the PMB with the definitized values.*

Performance Summary

CHPRC continues to track completion of contract scope within budget and is currently projecting a Variance at Completion of $153.2 million with $68.8 million of Management Reserve (MR) for a total positive variance of $222 million. For December, the project was 12.3 percent behind schedule and 25.2 percent over planned cost. Contract to Date (CTD), the project was 1.3 percent behind schedule and 3.1 percent under planned cost.

The current month negative schedule variance is primarily due to PBS RL-0013 shipments shut down due to freezing temperatures and icy roads delaying Perma-Fix Northwest (PFNW) return shipments of TC152 and TC153 and shipment of TC155 and TC156 to PFNW. This is partially offset by PBS RL-0012 accelerating the field schedule by working overtime in order to achieve sludge retrievals by 2018.

The current month negative cost variance is primarily due to PBS RL-0011 delay in completion of the PFP Project to achieve slab on grade. The delay is causing a needed extension of Min Safe and Maintenance resources without BCWS to support the remaining D&D work scope until the facility becomes ready for demolition. In addition; asbestos abatement, E4 duct removal, and process vacuum removal are all requiring more time and additional resource quantities to complete work as a result of confined spaces and the activities are more complex than originally assumed. Also contributing to the current month negative cost variance is PBS RL-0041 unplanned equipment purchases. The variance is partially offset due to PBS RL-0012 efficiencies achieved by centralizing Program Management responsibilities to reduce overall resource requirements to the PBS.

FUNDING ANALYSIS
FY2017 Funds vs. Fiscal Year Spend Forecast
($M)

PBS	Project	FY2017 Projected Funding	FY2017 Spending Forecast	FY2017 Variance
Estimate at Complete				
RL-0011	Nuclear Materials Stabilization and Disposition	104.9	112.6	(7.7)
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	36.6	32.4	4.2
RL-0012	15-D-401 Sludge Retrieval Project	57.8	49.4	8.5
RL-0013	Waste and Fuels Management Project	103.3	91.5	11.8
RL-0030	Soil, Groundwater and Vadose Zone Remediation	130.7	106.5	24.2
RL-0040	Nuclear Facility D&D, Remainder of Hanford	36.1	22.2	13.9
RL-0041	Nuclear Facility D&D, River Corridor	139.4	100.4	39.0
RL-0042	Fast Flux Test Facility Closure	3.9	2.2	1.7
	Total Estimate at Complete	**612.6**	**517.2**	**95.5**
Incremental Scope Pending Change Management				
RL-0011	Nuclear Materials Stabilization and Disposition	0.0	0.0	0.0
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	0.0	3.3	(3.3)
RL-0012	15-D-401 Sludge Retrieval Project	0.0	0.0	0.0
RL-0013	Waste and Fuels Management Project	0.0	11.4	(11.4)
RL-0030	Soil, Groundwater and Vadose Zone Remediation	0.0	24.1	(24.1)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	13.9	(13.9)
RL-0041	Nuclear Facility D&D, River Corridor	0.0	31.2	(31.2)
RL-0042	Fast Flux Test Facility Closure	0.0	0.0	0.0
	Total Incremental Work Scope	**0.0**	**83.8**	**(83.8)**
Total Fiscal Year Spend Forecast				
RL-0011	Nuclear Materials Stabilization and Disposition	104.9	112.6	(7.7)
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	36.6	35.7	0.9
RL-0012	15-D-401 Sludge Retrieval Project	57.8	49.4	8.5
RL-0013	Waste and Fuels Management Project	103.3	102.9	0.4
RL-0030	Soil, Groundwater and Vadose Zone Remediation	130.7	130.6	0.1
RL-0040	Nuclear Facility D&D, Remainder of Hanford	36.1	36.1	0.0
RL-0041	Nuclear Facility D&D, River Corridor	139.4	131.6	7.8
RL-0042	Fast Flux Test Facility Closure	3.9	2.2	1.7
	Total	**612.6**	**601.0**	**11.6**

Funds/Variance Analysis

FY2017 expected funding did not change during the month of December, and remains at $612.6 million. The Spending Forecast increased by $12.4 million from November. PBS RL-0011 increased $10.2 million due to schedule delays, and the RL-0012 Sludge Retrieval Project increased $2.9 million for ECRTS STSC Procurements and ECRTS Readiness and Startup in support of accelerated Sludge removal.

BASELINE CHANGE REQUESTS

In December 2016, CHPRC approved and implemented 12 Baseline Change Requests (BCRs) into the Performance Measurement Baseline (PMB). Each change request is identified in the table below:

Change Request #	Title	PBS	Summary of Change
BCR-011-17-001R0	*Incorporate CO #313, Initiate Characterization/ Sampling Analysis of 236-Z and 242-Z Facilities*	RL-0011	This BCR incorporated the scope associated with the $350K Not to Exceed (NTE) value for Change Order (CO) 313, Initiate Characterization/Sampling Analysis of 236-Z and 242-Z Facilities. This BCR increased the PMB value by $350K.
BCR-011C-17-003R0	*PFP CAP 2 Demolition Equipment MR Draw*	RL-0011	This BCR drew Management Reserve (MR) for in-scope un-planned work associated with the procurement of Demo Equipment (Fogger). This BCR increased the PMB value by $477K.
BCR-012C-17-007R0	*SRP ECRTS Procurement and Annex & In Basin Equipment Installation MR Draw*	RL-0012	This BCR drew MR to address in-scope un-planned work associated with the subcontracts for STSC procurement and Annex Equipment Installation. This BCR increased the PMB value by $1,827K.
BCR-030-17-006R0	*Incorporate CO #316, GW Engineering Reports & Monitoring Plans for DWMUs*	RL-0030	This BCR incorporated the scope associated with the $1,007.9K Not to Exceed (NTE) value for Change Order (CO) #316, Groundwater Engineering Reports and Groundwater Monitoring Plans for Dangerous Waste Management Units (DWMU). This BCR increased the PMB value by $1,008K.
BCR-030-17-007R0	*Incorporate CO #312 Biomobilization and Biointrusion Evaluation Plan*	RL-0030	This BCR incorporated the scope associated with the $350K increase in the Not to Exceed (NTE) value for Change Order (CO) #312, Biomobilization and Biointrusion Evaluation Plan. This BCR increased the PMB value by $350K.
BCR-030-17-008R0	*RL-030 TPA Milestone Schedule Coding Revisions*	RL-0030	This BCR incorporated Tri-Party Agreement change notice M-37-15-01, which was approved by RL and the agencies to modify Tri-Party Agreement Milestones M-037-10 and M-037-11 and create a new interim milestone M-037-13. This BCR does not change the PMB value.
BCR-041-17-007R0	*Incorporate CO #305, Infrastructure Upgrades and Trailer Purchases*	RL-0041	This BCR incorporated scope and NTE increase associated with RL Change Order #305, 300-296 infrastructure upgrades and trailer purchases in support of the 300 Area and Mockup facility. This BCR increased the PMB value by $2,219K.
BCR-PRC-17-009R0	*Detailed planning for T Plant Readiness Activities to Support K Basin Sludge Retrieval*	RL-0012, RL-0013	This BCR planned the detail for T Plant readiness activities supporting the KW Basin Sludge Retrieval Operational Readiness Review and an activity to support the initial sludge shipment upon start of sludge retrieval operations at K Basin. The detailed planning of this scope into discrete work activities will allow the work to be managed more effectively, accurate performance to be taken and the SRP project to make logic ties to support from T Plant Operations. This BCR does not change the PMB value.
BCRA-PRC-17-010R0	*HPIC Updates December 2016*	RL-0011, RL-0012, RL-0013, RL-0030, RL-0041, 000's	This BCR incorporated December FY2017 Hanford Programs Integrated Control Module (HPIC) updates. This BCR does not change the PMB value.

BCRA-PRC-17-012R0	*HPIC Updates per Communication CH1611-10*	RL-0041	This BCR documented the HPIC coding changes for ERDF VP Organization, established FOC, FOC Group, Responsible Org, and Responsible Org Group codes for RL-0041. This BCR does not change the PMB value.

The Allocated (Distributed) Budget increased by $6,231K.

Undistributed Budget Activity

BCR Number	Title	PBS	Fiscal Year	UB
BCR-041C-17-008R0	*PBS RL-041 Undistributed Budget Adjustments December 2016*	RL-0041	2017 - 2018	$0K
BCR-PRC-17-011R0	*Undistributed Budget Adjustments December 2016*	RL-0011, RL-0013, RL-0030, RL-0040, RL-0041	2017-2018	$7,763K

The Undistributed Budget increased by $7,763K.

Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
BCR-011C-17-003R0	*PFP CAP 2 Demolition Equipment MR Draw*	RL-0011	2017 - 2018	$-477K
BCR-012C-17-007R0	*ECRTS Procurement MR Draw*	RL-0012	2017 - 2018	$-1,827K

Overall, there was a decrease in Management Reserve (MR) of $2,304K during December.

Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2017 - 2018	N/A

Overall, there was no change to Fee during December.

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

December 2016 Summary of Changes

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	Contract Period Total	Total PMB
November 2016 Estimate									
PMB	3,391,477	391,653	471,323	504,826	447,632	444,884	2,260,317	5,651,794	5,651,794
MR	0	0	0	0	38,587	32,537	71,124	71,124	71,124
Fee	155,504	14,325	14,501	27,804	10,461	18,636	85,726	241,230	241,230
Total	*3,546,981*	*405,978*	*485,824*	*532,630*	*496,680*	*496,057*	*2,417,168*	*5,964,149*	*5,964,149*
December 2016 Change									
PMB									
Change to PMB	*0*	*0*	*0*	*0*	*3,382*	*10,612*	*13,994*	*13,994*	*13,994*
MR									
Change to MR	*0*	*0*	*0*	*0*	*-2,004*	*-300*	*-2,304*	*-2,304*	*-2,304*
Fee									
Change to Fee	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Change	*0*	*0*	*0*	*0*	*1,378*	*10,312*	*11,690*	*11,690*	*11,690*
December 2016 Estimate									
PMB	3,391,477	391,653	471,323	504,826	451,014	455,496	2,274,311	5,665,788	5,665,788
MR	0	0	0	0	36,583	32,237	68,821	68,821	68,821
Fee	155,504	14,325	14,501	27,804	10,461	18,636	85,726	241,230	241,230
Total	*3,546,981*	*405,978*	*485,824*	*532,630*	*498,058*	*506,369*	*2,428,858*	*5,975,839*	*5,975,839*

Changes to/Utilization of Management Reserve in December 2016

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	Total
November 2016 MR Totals								
RL-0011	0	0	0	0	7,288	0	7,288	7,288
RL-0012	0	0	0	0	8,094	3,562	11,656	11,656
RL-0013	0	0	0	0	4,249	7,208	11,456	11,456
RL-0030	0	0	0	0	8,883	10,380	19,263	19,263
RL-0040	0	0	0	0	1,941	439	2,380	2,380
RL-0041	0	0	0	0	8,095	10,847	18,942	18,942
RL-0042	0	0	0	0	38	101	139	139
Total	*0*	*0*	*0*	*0*	*38,587*	*32,537*	*71,124*	*71,124*
December 2016 MR Changes/Utilization								
RL-0011	0	0	0	0	(477)	0	-477	-477
RL-0012	0	0	0	0	(1,527)	(300)	-1,827	-1,827
RL-0013	0	0	0	0	0	0	0	0
RL-0030	0	0	0	0	0	0	0	0
RL-0040	0	0	0	0	0	0	0	0
RL-0041	0	0	0	0	0	0	0	0
RL-0042	0	0	0	0	0	0	0	0
Total	*0*	*0*	*0*	*0*	*-2,004*	*-300*	*-2,304*	*-2,304*
December 2016 MR Totals								
RL-0011	0	0	0	0	6,811	0	6,811	6,811
RL-0012	0	0	0	0	6,567	3,262	9,829	9,829
RL-0013	0	0	0	0	4,249	7,208	11,456	11,456
RL-0030	0	0	0	0	8,883	10,380	19,263	19,263
RL-0040	0	0	0	0	1,941	439	2,380	2,380
RL-0041	0	0	0	0	8,095	10,847	18,942	18,942
RL-0042	0	0	0	0	38	101	139	139
Total	*0*	*0*	*0*	*0*	*36,584*	*32,237*	*68,821*	*68,821*

SELF-PERFORMED WORK

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

Contract-to-Date Actual Awards & Mods 10/1/2008 - 12/31/2016 Reporting Category				Projection to FY2018 Planned Subcontracting: $2,947,647,483 Contract-to-date awards: $2,427,841,298 Bal remaining to award: $519,806,185	
	$ Value	%	Goal %	Goal award$	Bal to Goal
SB	$1,340,908,063	54.21%	49.3%	$1,453,190,209	$112,282,146
SDB	$232,984,631	9.42%	8.2%	$241,707,094	$8,722,463
SWOB	$260,693,933	10.54%	7.5%	$221,073,561	-$39,620,372
HUB	$54,431,753	2.20%	2.2%	$64,848,245	$10,416,491
VOSB	$186,879,277	7.56%	3.5%	$103,167,662	-$83,711,615
SDVO	$107,970,234	4.37%	1.3%	$38,319,417	-$69,650,817
NAB	$49,720,872	2.01%	N/A	PRC clause H.20 small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
Large	$642,694,866	25.98%	N/A		
GOVT	$2,699,296	0.11%	N/A		
GOVT CONT	$482,866,522	19.52%	N/A		
EDUCATION	$109,239	0.00%	N/A	CHPRC Contract Value:	$5,732,255,464
NONPROFIT_	$3,775,987	0.15%	N/A	17% rqmt:	$974,483,429
FOREIGN	$424,861	0.02%	N/A	SB actual:	$1,340,908,063
Total	$2,473,478,834	100.00%	N/A	Bal to rqmt	-$366,424,634

Notes:

1. Since the CHPRC contract award in October 2008, CHPRC has subcontracted $2.5 billion in goods and services with over 54 percent going to small businesses. Nearly all subcontracting goals have been exceeded.
2. Approximately 91 percent of the total dollars arise from service and staffing contracts and contract amendments with 6 percent of the remaining expenditures arising from P-Card purchases and 3 percent from the balance in purchase orders for materials and equipment.
3. Data is summarized by business categories (Women Owned Minority Business Enterprise codes) in accordance with socioeconomic reporting requirements. Small business categories overlap and should not be added together.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

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

DOE ACTIONS / DECISIONS

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

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

T. E. Bratvold
Vice President for
PFP Closure Project

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The removal of plutonium-contaminated process equipment continued with a particular focus on removing gloveboxes, associated piping, and ductwork. All gloveboxes have been removed from E4 ventilation and all preparations for demolition starting in Plutonium Reclamation Facility (PRF) are complete. Initiation of demolition on the PRF started on November 8, 2016.

The Plutonium Finishing Plant (PFP) Closure Project continues to maintain PFP facilities compliant with authorization agreement requirements.

Significant accomplishments in December included:

- Transitioned 242-Z/ZA into the documented safety analysis (DSA) demolition phase.
- Initiated preparations for removal of HA-7A, HC-7C, and HC-18M gloveboxes from 234-5Z.
- Core drilled 60 holes in 234-5Z pipe trench covers preparatory to grouting. Core drilling is 67% complete.
- Continued preparations for the draining, venting, isolating, drying, and epoxy filling of Transuranic (TRU) drain lines in the 234-5Z below-grade tunnels.
- Continued demolition activities on 236-Z Facility.
- Abated 15 feet of asbestos.
- Removed or dispositioned in place 338 feet of process vacuum piping.
- Shipped 32m^3 TRU Waste.
- Shipped 351m^3 Low Level Waste/Mixed Low Level Waste (LLW/MLLW).

Key Metrics

Key Performance Indicators	*Current Month*	*Contract To Date*
COMPLETE Glovebox/ Hood Removed or Dispositioned in Place	-	232 gloveboxes/hoods
COMPLETE KPP Rooms/Areas Ready for Demo	-	60 rooms/areas
Asbestos/ Asbestos Containing Material (ACM) Removed	15	26,731 feet
Process Vacuum Piping Dispositioned	338	5,840 feet
COMPLETE Process Transfer Line Dispositioned	-	1,525 feet
COMPLETE Pencil Tank Units Removed (Shipped)	-	196 pencil tank units
Buildings Ready for Demo	-	48 structures
Buildings Demolished or Removed	-	47 structures
Non-radioactive Waste Shipped	-	76 m^3
Transuranic /Transuranic Mixed (TRU/TRU-M) Shipped	32 m^3	2,290 m^3
LLW/MLLW Shipped	351 m^3	8,035 m^3

Environmental Management System (EMS) Objectives and Target Status

Objective #	Objective	Targets	Actions	Due Date	Status
16-EMS-PFP-OB1-T1	Minimize emissions resulting from demolition of 234-5Z, 236-Z, 242-Z, and 291-Z.	Inspect 234-5Z, 236-Z, 242-Z, and 291-Z for the presence of asbestos containing materials (ACM)and produce a report identifying ACM requiring removal or abatement and methods for protecting remaining ACM from resulting in visible emissions.	1. Issue report documenting thorough inspection of 236-Z 2. Issue report documenting thorough inspection of 242-Z 3. Issue report documenting thorough inspection of 234-5Z 4. Issue report documenting thorough inspection of 291-Z	08/16/16 05/26/16 01/26/17 01/31/17	100% 100% 90% 0%
17-EMS-PFP-OB1-T1	Reduce the risk of noncompliance with environmental requirements during demolition at PFP.	Reduce risk of noncompliance with applicable environmental requirements by enhancing the environmental screening process for demolition packages for 242Z, 234-5Z, and 291Z. Thereby reducing the overall impacts from PFP's significant aspects.	1. Create ready for demolition checklist for 242Z/ZA 2. Review 242Z/ZA demolition work package against environmental requirements 3. Create ready for demolition checklist for 291Z 4. Review 291Z demolition work package against environmental requirements 5. Create ready for demolition checklist for 234-5Z 6. Review 234-5Z demolition work package against environmental requirements	11/30/16 12/29/16 02/28/17 03/30/17 03/30/17 04/27/17	100% 100% 0% 0% 0% 0%

TARGET ZERO PERFORMANCE

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	• November Reclassification 11/17/2016 - Employee twisted left knee when foot slipped off step. Employee was taken to HPMC, examined, and diagnosed as having a left knee strain/sprain. Employee was released to return to work with restrictions of not to work on unstable or uneven surfaces, no kneeling/ crawling/ squatting, limit stairs to employee tolerance. (24231)
Total Recordable Injuries	0	2	N/A
First Aid Cases	7	57	• 12/2/2016 - Employee was taking coupon samples with a corded drill. The drill bound up on the metal forcing the stabilizing handle of the drill to rotate striking his right cheek. The employee was taken to HPMC where he was examined and diagnosed as having a bruised right cheek. He was released to return to work without restriction. (24249) • 12/2/2016 - Employee was carrying a box of batteries when left hand contacted a doorjamb causing a small cut and a bump on the knuckles of left hand. Employee was taken to HPMC, examined, and diagnosed as having a contusion of the left hand. Wound care was given and employee was released to return to work with the restriction of protecting wound from contamination potential. (24248) • 12/5/2016 - Employee was cutting a tie wrap with right hand from a metal object using blunt-ended scissors. When the scissors cut through the tie wrap, the metal object shifted and the scissors came down on left hand. Employee was taken to HPMC, examined, and diagnosed as having an open wound on hand and fingers. Wound care was given and a dressing was applied. Employee was released to return to work with a restriction to protect the wound from contamination. (24253) • 12/8/2016 - Employee completed performing instrument checks in the Demo Trailer and was going to next work location walked down the snow-covered slope, he slipped and fell on his left knee. He was taken to HPMC where he was examined and diagnosed as having a contusion of his left knee. No treatment was given and he was released to return to work without restriction. (24266) • 12/13/2016 - Employee was surveying employees out of the Radiological Buffer Area for the PRF D&D activities. After being outside for about an hour, his fingers and feet were numb. The employee was taken to HPMC where he was examined and diagnosed as having joint pain in his left hand. No treatment was given and he was released without any restrictions related to this event. (24272) • 12/14/2016 - Employee was removing ice from the top of a Roll-on/roll-off (RORO) container used for hauling debris to EDRF. A shovel was placed under the ice and pulled down hard on to loosen the ice. Employee's right thumb knuckle struck the top to the container. Employee was taken to HPMC, examined, and diagnosed as having a contusion of right thumb. A cold pack was administered and employee was released to return to work with a restriction of no lifting, griping,

	Current Month	Rolling 12 Month	Comment
			pushing, pulling the right hand. Because of continued pain, the employee reported to HPMC on 12-19-16 for further evaluation. X-ray results were negative for fractures. The HPMC restriction was lifted. (24271) • 12/30/2016 - Employee performing radiological routines located in the basement/tunnels of 234-5Z, was attempting to step over a pipe crossover when they inadvertently struck the side of face and head against a protruding pipe, causing a fall to the concrete floor, landing on back and right side hip. Employee was taken to HPMC and referred to the Kadlec emergency room for further evaluation and treatment. (24289)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0011 Accomplishments

- Completed implementation of documented safety analysis (DSA) and technical safety requirements (TSR) revision 14.
- Calculations and simulation results for PFP building losses were provided, which indicated heating needs to protect the facility Fire Protection System during the winter season. Further support depends on obtaining actual facility supply air flow and in-leakage data.
- With PTS support, Revision 24 to the Building Emergency Plan was issued.

234-5Z

- Abated 15 feet of asbestos.
- Removed or dispositioned in place 338 feet of process vacuum piping.
- Core drilled 60 holes in 234-5Z pipe trench covers preparatory to grouting. Core drilling is 67%complete.
- Continued preparations for the draining, venting, isolating, drying, and epoxy filling of TRU drain lines in the 234-5Z below-grade tunnels.
- Initiated preparations for removal of HA-7A, HC-7C, and HC-18M gloveboxes from 234-5Z.

PFP Waste Operations

- Shipped 32m^3 TRU/TRU-M waste.
- Shipped 351m^3 LLW/MLLW.

242-Z

- Applied paint in 242-Z to fix contamination.
- Isolated E3 duct connected from 242-Z to 234-5Z.
- Transitioned 242-Z/ZA into the documented safety analysis (DSA) demolition phase.

Demolition Activities

- Continued demolition activities on 236-Z Facility.

MAJOR ISSUES

Issue:

On October 24, 2016, a stop work was issued at PFP on the use of Mine Safety Appliances (MSA), OptimAir TL powered air purifying respirators (PAPRs). The stop work was the result of the discovery of paint inside the blower housing (past the filter). Upon further investigation, it was discovered that with the MSA OptimAir TL PAPR in configuration of using the chemical-OV cartridges in conjunction with the "bumper guard," there was no seal between the filter and the blower, allowing air to bypass the filter.

Corrective Action:

- All in service MSA OptimAir TL PAPRs at PFP were removed from service.
- An intrusive survey of the internals of several PAPRs were conducted.
- New PAPRs were put into service.
- Initiated an investigation of the affected time period in which this configuration was utilized.

Status:

- Developing a list of affected employees.
- Collecting air sample data for the time period in which this configuration was worn.
- PFP continues to collect air sample data associated with the use of the bumper guard in conjunction with the Chemical-OV cartridge.
- Completed list of employee's that were issued chemical-OV cartridges during the time period in which bumper guards were used at PFP.
- Continue to collect survey/air sample data from effected time period.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

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

Increased Confidence

No Change

Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0011/WBS-011.OA				
Explanation of major changes to the project monthly stoplight chart: No major changes to the monthly stoplight chart in the month of December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
PFP-096: PPE availability or failed respirator equipment impacts planned D&D work	Due to old generation PPE, respirator equipment fails planned D&D work and impacts project with cost and schedule delays. **Risk Handling Strategy:** Accept **Probability:** Likely (75% to 90%) **Worst Case Impacts:** $1,000K, 24 days			**Risk Event:** The project is currently experiencing respirator equipment failing due to old generation respirators. **Risk Recovery action(s)** / **Risk Date** / **FC Date** / **%** Procure additional PPE with new generation respirator equipment. / 04/15/16 / Ongoing / Ongoing **Mitigation Assessment:** No changes in the month of December. This risk was designated to be realized based on several events related to failed PPE. Discussion will be held with CHPRC's Change Control Coordinator concerning the usage of management reserve to procure additional PPE to avoid future field work impacts. The mitigation strategies have been put in place, as a result, the risk strategy is to accept with no further mitigation actions.
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				

<table>
<tr><th>Risk Title</th><th>Unmitigated Risk Impacts</th><th colspan="2">Assessment
Month | Trend</th><th>Comments</th></tr>
<tr><td colspan="5">RL-0011/WBS-011.OA</td></tr>
<tr><td>PFP-092-02: Final Facility Characterization Identifies Unexpected Hold-up</td><td>Unexpected or late discovery of radiological (Pu) or chemical (Asbestos) holdup requiring added facility deactivation.
Risk Handling Strategy: Control

Probability: Medium (26% to 74%)
Worst Case Impacts: $190K, 16 days</td><td>  </td><td>  </td><td>Risk Trigger: Will continue throughout project lifecycle until Demolition activities commence.
<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Complete 234-5Z Duct Level and backside inspections to identify piping with TSI dropping through to the first floor ceiling void.</td><td>Complete</td><td>100</td></tr><tr><td>Collaborate with Safeguards to develop and approve Safeguards termination criteria for remnant piping and duct work.</td><td>01/26/17</td><td>25</td></tr><tr><td>Collaborate with Criticality Safety to recognize the reduced removal action necessary for Safeguards termination and as feasibly warranted, revise CSER requirements to achieve a criticality incredible state</td><td>02/08/17</td><td>10</td></tr></table>Mitigation Assessment:
Final compilation of the PRF radiological source term, no longer poses a risk for added facility deactivation effort. TSI inspections in void areas was completed in the month of December. Based on the inspections, additional TSI was identified through visual inspections that was not part of the original engineering estimate that was used to develop the RL-011 baseline. Access to existing known wall areas with TSI is being created as necessary to support ongoing abatement activity. While probabilities for triggering this risk from an asbestos characterization perspective have reduced, there is an emerging radiological characterization risk trigger associated with Safeguards termination of piping and duct work remnants in 234-5Z. Through the termination process there is also possibility that added segments of piping and ductwork may be identified that are in need of further characterization. While characterization results demonstrate low amounts of residual Pu, there is no current mechanism in place for Safeguards termination. Unlike conditions in the PRF, it is not practicable to retrieve the extent of unterminated stubs of piping and ductwork during D&D of 234-5Z. Facility deactivation is then prompted to completely remove these remnants or further NDA is needed to demonstrate that no accountable g-Pu remains. The added mitigating action focuses on eliminating these consequences and then structuring criticality safety requirements for incredibility, accordingly. Given the potential impact the 234-5Z demolition schedule, per PRC-MP-PC-40167, this risk is assessed as critical.</td></tr>
<tr><td colspan="5">High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</td></tr>
<tr><td>PFP-DEMO-24: Stop work from concerned workers</td><td>Concerned workers results in a stop work to address an off-normal or safety issue. The work cannot be restarted until the implementation of corrective actions is completed.
Risk Handling Strategy: Accept

Probability: Likely (75% to 90%)
Worst Case Impacts: $0K, 24 days</td><td>  </td><td>  </td><td>Risk Trigger: The project has experienced stop works from concerned workers due to SCBA cylinders, failed respirator equipment, chemical concerns, contamination events, and jurisdictional issues.
<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>None identified at this time</td><td>N/A</td><td>N/A</td></tr></table>Mitigation Assessment:
No major changes in the month of December.
The mitigation strategies have been put in place, as a result, the risk strategy is to accept with no further mitigation actions.</td></tr>
<tr><td colspan="5">Unassigned Risks (Pending ownership of identified risks/opportunities)</td></tr>
<tr><td colspan="5">No unassigned risks identified in the month of December.</td></tr>
</table>

PROJECT BASELINE PERFORMANCE
Current Month
($M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled (BCWS)	Budgeted Cost of Work Performed (BCWP)	Actual Cost of Work Performed (ACWP)	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)
Total	2.6	1.1	9.4	(1.5)	-58.6%	(8.3)	-785.1%

Numbers are rounded to the nearest $0.1 million.

CM Schedule Variance: (-$1.5M/-58.6%)

The current month negative schedule variance is primarily due to delay of demolition and installation of the cover cap following demolition of the 234-5Z and 291-Z facilities and the apportioned control accounts (i.e., 011.05.C3.01, 011.05.C3.03, and 011.05.C3.04). The demolition of these facilities has been delayed due to resources being redirected to support ready for demolition activities associated with 234-5Z, 242-Z, and 236-Z (other project critical path work). In addition, demolition experienced further delays as a result of inclement weather and equipment failures.

CM Cost Variance: (-$8.3M/-785.1%)

The current month negative cost variance is due to the delay in completion of the PFP Project to achieve slab on grade. The delay is causing a needed extension of Min Safe and Maintenance resources without BCWS to support the remaining D&D work scope until the facility becomes ready for demolition. In addition; asbestos abatement, E4 duct removal, and process vacuum removal are all requiring more time and additional resources to complete work as a result of confined spaces and the activities are more complex than originally assumed. Delays in asbestos are a result of the unplanned removal of a wall in 234-5Z Aces 2. Electrical isolations are required for each section of wall and has caused considerably more time than planned further delaying asbestos abatement activities. As a result of the wall removal and electrical isolations, it was discovered that 9.4K feet of additional asbestos was between the walls that would need to be removed. This is a recognized risk (PFP-092-02) and a BCR is planned to incorporate this additional work into the PFP baseline. Additional insulators have temporarily been hired to attempt to recover schedule and mitigate the removal of the additional footage of asbestos. Some of the labor cost variance is attributed to these additional unplanned resources. E4 removal above the scrubber cell has taken longer than planned due to more robust set-up and electrical isolation being required. Process vacuum removal on the west end of 234-5Z is also taking longer and utilizing more resources than planned. Scaffold builds are required for each section removed, slowing progress, and contributing to the variance. Subcontracted labor support costs are higher than planned due to the extension of field work completion dates. This is a result of impacts from the discrete work scope falling behind schedule. In addition, consumable materials are costing more than planned due to the extended time frame that it is taking to complete discrete field work and additional Personal Protective Equipment (PPE) requirements (PAPRs, SCBA, etc.) to support implementation of more stringent radiological controls requirements. In addition, demolition experienced further delays as a result of inclement weather and equipment failures, while MSA resources and cross-cut support continued charging. Resources assisting with troubleshooting and recovery actions were charging their time while minimal performance was gained.

Contract-to-Date ($M)

WBS 011/ RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
Total	975.8	920.0	971.7	(55.8)	-5.7%	(51.7)	-5.6%	980.3	1,054.6	(74.3)

Numbers are rounded to the nearest $0.1 million

Contract-to-Date (CTD) Schedule Variance (-$55.8M/-5.7%)

The CTD unfavorable schedule variance relates to re-sequencing of D&D discrete work to align with availability of D&D workers causing a delay in start of work on 242-Z activities. Also contributing to the variance, the 234-5Z Backside Rooms team was assigned to higher priority work scope associated with unplanned door modifications, which supported the in-situ size reduction efforts on the HC-9B and HA-9A Gloveboxes located in 234-5Z. Delays have been caused by Stop Works on discrete D&D work associated with Beryllium, tight fitting masks, demister, weather (heat), PremAire breathing air systems and suits, chemical smells, contamination cleanup efforts as a result of a malfunctioning criticality alarm system, and radiological events. Also, duct level characterization, process vacuum, transfer and drain line teams were previously assigned to perform other critical path work in the 236-Z PRF, 242-Z Americium Facility, and Remote Mechanical A (RMA)/ Remote Mechanical C (RMC) key performance parameters (KPP) glovebox removal work efforts. As a result of this realignment of plant priorities and changing approach (area vs. system) to performing work within the balance of 234-5Z, characterization, and process equipment (e.g., ducting, piping, filter box etc.) removal is lagging. In addition, progress on the D&D project management Work Breakdown Structure (WBS) element is apportioned to the discrete D&D work scope and contributes to this variance. Impacts have also been recognized, resulting from a chemical reaction when working on the PRF canyon floor cleanup efforts, failure of the PRF Canyon Crane, increased characterization efforts for safeguards termination issues, impacts from a contamination event resulting from a false criticality alarm during preventive maintenance activities, cleanup of a contamination event in 234-5Z, Room 264, delays in electrical isolations in PRF, and greater than anticipated efforts to prepare the PRF canyon for demolition. Delays in asbestos are a result of the unplanned removal of a wall in 234-5Z Aces 2. Electrical isolations are required for each section of wall and has caused considerably more time than planned further delaying asbestos abatement activities. As a result of the wall removal and electrical isolations, it was discovered that 9.4K feet of additional asbestos was between the walls that would need to be removed. This is a recognized risk (PFP-092-02) and a BCR is planned to incorporate this additional work into the PFP baseline. Delay of demolition and installation of the cover cap following demolition of the 234-5Z and 291-Z facilities and the apportioned control accounts (i.e., 011.05.C3.01, 011.05.C3.03, and 011.05.C3.04) are also contributing to the variance. The demolition of 234-5Z and 291-Z has been delayed due to resources being redirected to support ready for demolition activities associated with 234-5Z, 242-Z, and 236-Z (other project critical path work). In addition, demolition experienced additional delays as a result of inclement weather and equipment failures. This is partially offset by completion of E4 characterization and scope avoidance as a result of favorable results from room characterization, removal of gloveboxes, demolition of the sixth floor, fifth floor, fourth floor, and South Canyon Airlock on 236-Z in PRF, and demolition of 2727-Z and 2729-Z facilities.

CTD Cost Variance (-$51.7M/-5.6%)

The negative CTD cost variance is primarily a result of prior year unrecoverable costs as well impacts to D&D work scope and extending Level-of-Effort and support services, consistent with delayed activities,

in support of completing Tri-Party Agreement Milestone M-083-00A. In addition, unplanned costs to support implementation of efficiency initiatives at PFP (i.e., foaming and PremAire Breathing Air), and increased training as a result of assignment of new Health Physics Techs, and D&D workers (as the result of HAMTC lamping process) to PFP have also contributed to this variance. This is partially offset by utilization of fewer breathing air suits and hoses being used than originally planned for 242-Z entries as a result of fewer field work team members required to perform hands-on work in 242-Z because of the confined space and size of suits (three suits per day vs. five).

Variance at Completion (-$74.3M/-7.6%)

The Variance at Completion (VAC) unfavorable variance is reflective of previous inability to achieve 20 percent increased efficiency associated with time on respirator as assumed in the baseline plan. The Collective Bargaining Agreement was accepted and recognized efficiencies are continuing to be recognized with more time on mask and implementation of the value engineering initiatives associated with high mass gloveboxes and grouting. Extended hotel loading costs as a result of delays in demolition ready and demolition activities caused by issues identified in the contract to date (CTD) schedule variance above are also driving the negative VAC. As a result of the wall removal and electrical isolations, it was discovered that 9.4K feet of additional asbestos was between the walls that would need to be removed. This is a recognized risk (PFP-092-02) and has been incorporated into the VAC. This is partially offset by recognized efficiencies due to characterization data in the 234-5Z duct level allowing piping and ducting to be left in place for demolition. The variance at completion is reflective of PFP's current projected date to reach slab on grade no later than September 30, 2017.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST ($M)

	FY2017		
WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	**Projected Funding**	**Spending Forecast**	**Variance**
Spending Forecast	104.9	112.6	-7.7
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0011 - Total	104.9	112.6	-7.7

Numbers are rounded to the nearest $0.1 million

Funds/Variance Analysis

Fiscal year (FY) 2017 expected funding for PBS RL-0011 is $104.9 million. The Fiscal Year Spend Forecast (FYSF) for December increased to $112.6 million. Increase to the required funds is a result of impacts from weather delays on demolition and additional asbestos that has been discovered in the 234-5Z facility causing delays in the ready for demolition status and extending the hotel load costs to maintain PFP in a safe and compliant capacity. The funds for estimate to complete (ETC) for regular scope are adequate to support current work. Continuing to recognize efficiencies will be necessary to support slab removal.

Critical Path Schedule

The PFP Critical Path Schedule is a resource-driven float path in which the critical path starts Asbestos abatement throughout 234-5Z, which leads to final Cold & Dark activities. This transitions 234-5Z to be ready for demolition. Demolition of 234-5Z will occur in the following sequence: 234-5ZA, Frontside, A-Labs, Backside Rooms/Plutonium Process Support Laboratories (PPSL), RMA Process Lines, RMC Process Lines, and the RADTU & Basement areas. Once the 234-5Z and 291-Z facilities have been demolished, the Tri-Party Agreement Milestone – M-083-00A - *PFP Facility Transition and Selection Disposition Activities* will have been met.

MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB Annual Update, implemented in September 2013, and subsequent approved baseline change requests (BCRs) define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a two-year look ahead of commitments and Tri-Party Agreement enforceable milestones.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-083-00A	PFP Facility Transition and Selection Disposition Activities	09/30/17		8/29/17	During the month of December, the PFP project lost 29 days on the schedule from the November month end forecast completion date of the Tri-Party Agreement milestone for the PFP Project to reach Slab on Grade. This is as a result of lack of RCT resources, identification of need for removal of additional asbestos, unusual inclement weather, and realignment of the remaining activities in the FES to reach ready for demolition status in the 234-5Z facility. As the PFP Project continues to make progress on the behind schedule critical path work scope being performed, it is expected efficiencies will be recognized, evaluated, and implemented to recover some schedule delays.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
CONTRACT			
J.12/C.2.2, C.2.3	PBS-11, Plutonium Finishing Plant Closure Project	Offsite Transportation of Radioactive Material: RL provides equipment and government drivers to transport TRU materials outbound/inbound between the Hanford Site and Perma-Fix Northwest (PFNW) locations. RL is the authorized shipper and acts as signatory on the shipping papers, and ensures DOE Manual 460.2-1 is complied with. RL arranges for Commercial Motor Vehicle Safety Alliance (CVSA) level VI vehicle inspections and verifies that the government drivers meet the applicable Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or Transportation Safety Document (TSD) requirements.	Ongoing

DOE ACTIONS / DECISIONS

None at this time

Section B
Spent Nuclear Fuel Stabilization and Disposition (RL-0012)

R. M. Geimer
Vice President for
K Basin Operations and
Plateau Remediation
(KBO&PR)

M. A. Wright
Vice President for
Project Technical
Services

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

1. Based upon discussions between RL and CHPRC Senior Management, the Sludge Treatment Plant (STP) Team has modified the field execution schedule (FES) to implement acceleration opportunities that could potentially facilitate the transfer of all sludge to T Plant in fiscal year (FY) 2018. In order to meet the accelerated schedule, support from CHPRC and RL is required for the following assumptions:
    - Significant overtime/weekend work will be required to reduce schedule duration.
    - Reduced approval time on safety documentation.
    - CD-4 approval will occur concurrently with sludge retrieval operations.
    - Approval of integrated Documented Safety Analysis (DSA) will occur within 120 days of submittal.
2. The 100K Operations group continued maintaining facilities in a safe and compliant condition, supporting continued debris dose mapping and relocation activities in 105KW Basin and performance of several monthly and quarterly routines during the period. In addition, support has been provided to Sludge Removal Project (SRP) for Annex/ In-Basin equipment installation and facility modifications.
3. The effort to retrieve and containerize the sludge pile in the KW Basin Center Bay discovered during debris mapping continues as resources allow.
4. The DOE Safety Basis Review Team (SBRT) completed their initial review of the 105K West Facility DSA and technical safety requirement (TSR). Proposed resolutions are in development. CHPRC staff will continue to work with the SBRT to address comments as efficiently as possible, with the expectation that the 120-day RL review schedule can be achieved. The DSA/TSR must be approved and implemented prior to K Basin Preoperational Acceptance Testing (KPAT) activities that transfer 105K West Basin water into the 105K West Annex.
5. The final draft of the One-Time Request for Shipment (OTRS) is with the Project for final review and approval. The development of the OTRS continues on schedule.

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Dart Injuries	0	1	N/A
Recordable Injuries	0	1	N/A
First Aids	4	16	• 12/13/16: While working in a cluttered area, the employee fell, landing on arm. Body part affected: Arm (24268) • 12/13/16: While using a band saw, employee experienced eye irritation. Body part affected: Eye (24267) • 12/20/16: While walking, employee slipped on ice and fell. Body part affected: Hip (24273) • 12/28/16: While applying ice melt, employee fell on ice. Body part affected: Hip (24283)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0012 Accomplishments

KW Basin Sludge Retrieval Capital Assest Project

- Engineered Container Retrieval and Transfer System (ECRTS) Process Equipment Procurement:
  - Procurement Set #8: Sludge Transport & Storage Container (STSC) Vessels – The iron contamination root causal analysis was internally approved and formally transmitted to RL. ABW was subsequently authorized to proceed with all fabrication activities for STSC 414-424 within the provision of the corrective action plan. CHPRC personnel are working on contract change orders required prior to proceeding with testing/cleaning STSC 402-409.
  - Procurement Set #9: Safety Significant STSC Assemblies (Instrumentation & Appurtenances) – HiLine personnel completed installing STSC Instrumentation & Appurtenances on STSC 410, 412, and 413 and have successfully completed Mass Spectrometer Leak Decay testing. CHPRC personnel have successfully reviewed final data packages for STSC 410, 412, & 413. CHPRC personnel are also currently verifying comment incorporation on the Becht Engineering model/calculation that provides the seismic response spectra that will be utilized when testing the STSC Instrumentation & Appurtenances.
  - Maintenance and Storage Facility (MASF) Facility –
    The MASF test team completed the effort to re-establish the ECRTS mockup and finalized leak testing of the spare ECRTS production equipment. The MASF team also completed the process of removing the two Instrument Spools from the test pool. The MASF Pre-Operational Acceptance Test (MPAT) final test report is in the internal review process, and solid progress is

being made on producing the documentation to support the K-Basin Preoperational Acceptance Test (KPAT) at the 105KW Basin/Annex early next calendar year.

PTS

- Engineering Services
  - Reviewed fabrication/construction submittals for Sludge Treatment Project (STP) Engineered Container Retrieval and Transfer System (ECRTS).
  - 1803K RW Tank Insulation Repairs (100K Water Treatment Facilities/Water Storage Tank)
    - Scope of work for installation contractor completed, Engineering Change Request and Facility Management Package released.
  - Emergency Preparedness
    - Closed all of Action 1 items Condition Reporting and Resolution System items for the following reports: CR-2016-1541/1641/1426/0808.
- Training and Procedures
  - Completed 100K Operations fourth quarter continuing training cycle.
  - Implemented new Monorail Hoist qualification training.
  - Commenced Engineered Container Retrieval & Transfer System (ECRTS) classroom training.
- Field Work
  - KW Annex Construction
    - Completed installation of the north side exterior nitrogen bottle awning.
    - Completed installation of the vertical hose chase.
    - Completed hydrostatic test on transfer and decant hose between Annex and Basin.
    - Completed preparation of Truck Scale base plates for grouting.
    - Completed prep and application of primer for albi clad application.
    - Installed the mechanical room supplemental cooling condensing units.
  - KW Basin In Basin Modifications Construction
    - Completed the instrument air piping extension for H-750 from the Xago to the facility.
    - Completed preparation work at EC-230 and EC-240 for Instrument Spool installation.
    - Installed both Center and East Bay Instrument Spool assemblies and completed associated underwater connections.
    - Performed final routing of ECRTS cables between panels along with terminations and securement at the panels.
  - T Plant Modification Construction
    - Completed Water Addition System design change installation work per RLD-TPLANT-021.
    - Completed Construction Acceptance Testing on the Water Addition System.
    - Performed rebar scanning in the tunnel in preparation for the Nitrogen Purge System.
    - Started installation of the Nitrogen Purge System in the tunnel.
    - Received Nitrogen Purge system design change. Issued change order to the contractor for expedited material procurement.

MAJOR ISSUES

T Plant
Issue:
T Plant Construction is experiencing an approximate 4.5-month field execution schedule delay on completion of the Nitrogen Purge System (no impact to critical path):

1) Nitrogen system design changes issued in late December have resulted in a delay to the delivery of SS nitrogen material.

2) Nitrogen gas was not included as part of the FFP contract award.
3) Nitrogen System Acceptance Test Procedure (ATP) is in engineering development and then needs final approval by the Design Authority (DA).

Corrective Actions:

1) Contractor provided change order to expedite procurement of the revised SS nitrogen components. Engineering has provided a workaround to expedite the Staubli connector needed for the CAT.
2) Firm fixed price (FFP) contractor provided a change order to fill the nitrogen bottles required to support the CAT testing, and therefore the potential schedule delay has been mitigated.
3) ECRTS Design Agent and T Plant DA to expedite completion and final approval of the revised Nitrogen ATP. Once approved construction planner to expedite related construction work package approval.

Status:

1) Nitrogen system design changes were completed in late December. Remaining long lead SS nitrogen material has been ordered and is anticipated to be released for construction on or before the end of January 2017.
2) Contractor provided change order to fill nitrogen bottles and will provide in support of CAT. No schedule impacts anticipated.
3) ECRTS Design Agent and T Plant DA issuing revised ATPs for review week of January 16, 2017, and anticipate final approval for all ATPs by January 26, 2017. Construction ATP work package has been drafted and will be issued for final approval immediately following the release of the ATPs.

Sludge Removal Project

Issue:

Based upon iron contamination discoveries in STSC 402, 403, and 410-413, ABW was instructed to conduct free iron testing of STSC 404-409.

Corrective Action:

ABW and CHPRC Technical Staff have developed procedures to aggressively remove iron contamination from STSCs and validate cleanliness via free iron testing of all 12 STSCs fabricated in FY2016 (first production run).

Status:

1. STSC 410-413 were cleaned, retested, and accepted by CHPRC.
2. STSC 404-409 have been shipped back to Arlington, WA, for testing, cleaning, and retesting, as appropriate. This work scope is on hold until CHPRC and ABW reach agreement on the change order submitted for testing, cleaning, and retesting STSC 410-413.
3. STSC 402-403 remain at HiLine (with instrumentation/appurtenances installed) and will be tested, cleaned, and retested by HiLine personnel, due to the difficulty and expense of returning these vessels to Arlington, WA, with instrumentation and appurtenance installed.
4. CHPRC has completed a causal analysis, which provides the basis for settling outstanding change orders and resolving this issue.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

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

Increased Confidence
No Change
Decreased Confidence

	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0012/WBS-012				
Explanation of major changes to the project monthly stoplight chart: No major changes to the monthly stoplight chart in the month of December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
STP-072: Delayed STSC/ECRTS Procurement & Delivery	Material delivery and fabrication issues at ECRTS vendor facilities delay the delivery of the components to the Sludge Treatment Plant (STP) resulting in cost impacts and schedule delays. **Risk Handling Strategy:** Control **Probability:** Medium (26% to 74%) **Worst Case Impacts:** $3,000K 120 days			**Risk Event:** Event 1: This risk has been realized. Rust was discovered in STSCs. As a result, additional testing and cleaning is required to quantify and correct this condition. Event 2: Due to leak test failures encountered on the TLSB expansion joints, engineering processed a design change to revise the design to replace the expansion joint with a pipe spool. The late change and downstream procurement effort has pushed related installation activities onto project critical path. These components were installed in the 105K West Basin in late December. **Recovery Action Assessment:** Contracting with NACE Certified SME to provide technical support in establishing acceptance criteria and monitoring progress to achieve receipt acceptance criteria. STSCs 410-413 were successfully cleaned and shipped to the Hanford site. ABW is on hold for further cleaning until a CO for STSCs 410-413 is settled with CHPRC, explaining the slip in completion date. The change order is forecasted to complete in January 2017.
STP-125-B: Inclement Weather - ECRTS Annex/In-Basin Equip.	Inclement weather and site closure days will have a day-for-day impact on construction execution and contractor performance with ECRTS equipment delivery and placement in the Annex or Basin. **Risk Handling Strategy:** Accept **Probability:** Likely (75% to 90%) **Worst Case Impacts:** $50K, 12 days			**Risk Event:** The project has incurred lost time delays as a result of inclement weather. The project incurred site closure days on 12/15 and 12/20 and early release on 12/14. **Recovery Action Assessment:** Project estimates, per RL, allow only fair weather estimating practices and do not consider the impacts associated with normal local weather conditions. The implication is that planned time in the Annex and Basin will be reduced during both warm and cold weather. Common weather conditions such as high winds, ice storms, snow storms, and lightning will cause work scope delays potentially extending the project schedule duration and increasing costs. Work/Rest regiments can consume 2-4 hours each day and ice, snow, and wind closures have a day-to-day impact on the project schedule. No additional mitigation actions have been identified at this time.

Risk recovery action(s)	Risk Date	FC Date	%
Test at MASF	05/31/16	Complete	100
Install in 105KW Basin	05/31/16	Complete	100
Finalize Field FES activities dates consistent with change order.	5/13/16	1/31/17	0%

Risk recovery action(s)	Risk Date	FC Date	%
Obtain weather conditions for the area and adjust daily work scope/schedule accordingly	12/15/16	Ongoing	N/A

<table>
<tr><th></th><th>Unmitigated Risk Impacts</th><th colspan="2">Assessment
Month | Trend</th><th>Comments</th></tr>
<tr><td colspan="5">RL-0012/WBS-012</td></tr>
<tr><td>STP-123-B: Design Maturity - ECRTS Annex/In-Basin Equip.</td><td>Finalization of design media for the ECRTS equipment installation will result in changes to both cost and schedule.

Risk Handling Strategy: Accept

Probability: Medium (26% to 74%)
Worst Case Impacts: $912K, 64 days</td><td>  </td><td>  </td><td>Risk Event:
The project realized additional cost and schedule impacts in December due to the need to add design details for a Cask Leak Test Tool/Panel in the KW Modified Annex (DCN-STP-ECRTS-485). The project will now be required to design, procure, fabricate, and install SRP Cask Leak Test Tool & Panel at the Annex Facility utilizing a vacuum decay leak test as a change in method of performance.

<table>
<tr><th>Risk recovery action(s)</th><th>Risk Date</th><th>FC Date</th><th>%</th></tr>
<tr><td>Prepare Design Change (DCN-STP-ECRTS-485) to provide details on new Sludge Transportation Cask Leak Test Tool & Associated Control Panel.</td><td>12/01/16</td><td>1/15/17</td><td>50</td></tr>
<tr><td>Award Contract Change Order to HiLine to Fabricate Hardware</td><td>12/1/16</td><td>1/31/17</td><td>0</td></tr>
<tr><td>Prepare Design Details to Install Leak Test Panel (ME-605)</td><td>12/01/16</td><td>2/28/17</td><td>0</td></tr>
<tr><td>Fabricate Leak Test Tool & Panel</td><td>12/01/16</td><td>3/31/17</td><td>0</td></tr>
<tr><td>Install ME-605 Panel in Annex Facility</td><td>12/01/16</td><td>4/15/17</td><td>0</td></tr>
</table>

Recovery Action Assessment:
The need to design, fabricate, and install a Cask Leak Test Tool/Panel resulted from a change in approach the project was forced to make to provide a positive means of ensuring leak tight integrity of the transportation cask prior to shipping sludge to T Plant.</td></tr>
<tr><td colspan="5">Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</td></tr>
<tr><td colspan="5">No critical risks identified in the month of December.</td></tr>
</table>

<table>
<tr><th></th><th>Unmitigated Risk Impacts</th><th colspan="2">Assessment
Month | Trend</th><th>Comments</th></tr>
<tr><td colspan="5">RL-0012/WBS-012</td></tr>
<tr><td colspan="5">High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</td></tr>
<tr><td colspan="5">FY2018 Risk Triggers (Risk could be realized in FY2018)</td></tr>
<tr><td>STP-018-O: STP Operational Upset or Spill - During 1st STSC</td><td>An operational upset or spill results in a work shutdown at K Basins, resulting in schedule delays.
Risk Handling Strategy: Control

Probability: Medium (26% to 74%)
Worst Case Impacts: $1.3 million, 96 days</td><td>  </td><td>  </td><td>Risk Trigger:
1) An operational upset or spill results in work shutdown at K Basin. This risk will commence in FY2018 and continue throughout project lifecycle until sludge is removed from 105KW Basin.

<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Conduct rigorous startup testing following system installation at the 105KW Basin and Annex.</td><td>10/11/17</td><td>0</td></tr><tr><td>Conduct testing and training at MASF and develop procedures that use the information and knowledge gained during the activity for use at the KW Basin.</td><td>Ongoing</td><td>N/A</td></tr></table>
Mitigation Assessment:
No major changes in the month of December.
Forecasted mitigation dates are consistent with overall STP critical path schedule. Training and procedure development will continue into FY2018. It will complete prior to completion of management self-assessment affidavits in December 2017.</td></tr>
<tr><td>STP-073-C: Processing Efficiency - Retrieval & Shipping, During 1st STSC</td><td>The realized processing efficiency associated with sludge retrieval and shipping operations does not match baseline plan.
Risk Handling Strategy: Accept

Probability: Low (10% to 25%)
Worst Case Impacts: $0K, 8 days</td><td>  </td><td>  </td><td>Risk Trigger:
1) Actual processing efficiency associated with sludge retrieval and shipping operations does not match baseline assumptions. This risk will commence in FY2018 beginning with operations campaign.

<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>None identified at this time.</td><td>N/A</td><td>N/A</td></tr></table>
Mitigation Assessment:
No major changes in the month of December.
Operations personnel were given training on the process system equipment and will continue to participate in training activities through production system installation at 100K. No foreseeable impacts in the near future, and no alternative course of actions needed at this time.</td></tr>
<tr><td>STP-103: K Basin Pre-Operational Acceptance Testing (KPAT) & ECRTS Startup</td><td>The ECRTS equipment does not operate as expected requiring increased engineering, startup, operations, and construction Firm Fixed Price contractor support; as well as equipment replacement, procurement, and retesting. Realization of this risk would also require additional training, procedure revision, and design modifications as a result of construction testing and/or Lines of Inquiry for Readiness Review resulting in cost impacts and schedule delays.
Risk Handling Strategy: Control

Probability: Medium (26% to 74%)
Worst Case Impacts: $4.5 million, 90 days</td><td>  </td><td>  </td><td>Risk Trigger:
1) The ECRTS equipment does not operate as expected.
2) Unexpected attrition of critical testing personnel.

<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Develop and refine procedures based upon feedback from testing and operations personnel.</td><td>3/15/17</td><td>25</td></tr><tr><td>Develop streamline strategy (work packages and procedures) to perform in-basin/annex integrated testing and troubleshooting.</td><td>3/15/17</td><td>10</td></tr><tr><td>Utilize Overtime to offset schedule impacts.</td><td>As Needed</td><td>N/A</td></tr><tr><td>Closely monitor employee satisfaction and consider employee incentive to retain key test personnel.</td><td>As Needed</td><td>N/A</td></tr></table>
Mitigation Assessment:
No major changes in the month of December.
Forecasted mitigation dates are consistent with overall STP critical path schedule.</td></tr>
</table>

	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0012/WBS-012				
STP-111-B: Contractor/ Subcontractor Performance - ECRTS Annex/In-Basin Equip. Installation	The General Conditions Contractor and their supporting subcontractors have historically performed poorly and will be challenged on this project by compliance with project and contract flow down requirements (e.g., quality, nuclear standards, site safety requirements, subcontract management to ensure contract requirements are met, NRTL compliance, suspect counterfeit, Buy-American contract clause, Project Controls requirements, development of Construction Acceptance Testing [CAT], timely processing of submittals compliance with all the subcontract flow down requirements) as well as deployment and maintenance of key staff that are essential to safe, cost effective and on-time project delivery. **Risk Handling Strategy:** Control **Probability:** Very Likely (> 90%) **Worst Case Impacts:** $792K, 96 days			**Risk Trigger:** Contractor delays due to inadequate staffing/mobilization. The contractor has responded to CH requests, hired an additional Field Work Supervisor and Project Engineer, and rearranged their Org Chart to increase efficiency of managing the project. **Mitigation action(s)** / **FC Date** / **%** Contractor delays due to inadequate staffing/mobilization. Will work with contractor to stabilize work resource planning. / Ongoing / NA **Recovery Action Assessment:** All discrete recovery actions have been completed, however the remaining impacts of this risk still qualify it as a key project risk and therefore it will continue to be reported on in the monthly stoplight report. This is a reoccurring risk relating to the performance of the General Contractor and their supporting subcontractors. The CHPRC project team continues to work with their subcontractors to ensure the contractors are thoroughly aware of their project responsibilities and have the opportunity to complete their project scope successfully. Mitigation actions are in place to reduce the probability of the risk occurrence and reduce the potential cost and schedule impact, and the risk will continue to be monitored. No additional mitigation actions identified at this time.
Unassigned Risks (Pending ownership of identified threats/opportunities)				
CHPRC proposed five risks that are outside of CHPRC's ability to manage and, as such, should be re-assigned to RL (STP-011D, STP-018, STP-073, STP-073-A, and STP-073-B). The proposal was not accepted by RL, stating, "…the opportunities and threats appear to be under the control of CHPRC to manage." CHPRC submitted letter CHPRC-1602146 R1 on August 30, 2016, in response to RL's rejection letter. If contract direction is given to accommodate the acceleration opportunities to the SRP project and the transfer of all sludge to T Plant is incorporated into FY2018, then CHPRC would re-assume ownership of these risks.				

PROJECT BASELINE PERFORMANCE
Current Month
($M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)
Total	6.9	8.5	7.3	1.6	22.5%	1.2	14.5%

Numbers are rounded to the nearest $0.1 million

CM Schedule Performance (+$1.6M/+22.5%)

Several factors are contributing to the current month positive schedule variance. The shipping of process equipment has been more complex than planned. This has resulted in realizing earned value in the current period, for budget planned in prior months (September 2016). In addition, work started early on the Fabricate Fill Tube/Float Assemblies. In support of retrieval of all sludge, by 2018, Annex & In-Basin equipment installation, along with construction acceptance testing, has been accelerated. In the current month, performance was recognized for work previously scheduled on the MPAT test report and equipment removal from MASF. In addition, development of classes and classroom training was scheduled to start in October 2016. The current month reflects work completed for these previously scheduled classes.

CM Cost Performance (+$1.2M/+14.5%)

Several factors are contributing to the current month positive cost variance. Efficiencies have been achieved by centralizing Program Management responsibilities to reduce overall resource requirements to the PBS. All required work scope is being accomplished with the reduced staff. The In-Basin Equipment Install Title III support account continues to under-run as field engineering corrections have been less than planned. This may change as the construction crews complete the integrated construction acceptance testing and KPAT. Costs or the fabrication of the Fill Tube/Float Assembly Vessels for STSC 14-28 were significantly lower than budgeted. An accrual for work scope completed in December 2016 was under-accrued and will be corrected in January 2017. An accrual for In Basin/Annex equipment installation acceptance test work scope completed in December 2016 was under-accrued and will be corrected in January 2017. Fewer resources were required to incorporate the ECRTS Design Redlines resulting from lessons learned at MPAT. Also, preparation of the KPAT Test Specifications has been less complex than assumed in the baseline. Labor continues to underrun in the ECRTS Testing account, as technicians and engineers are supporting other projects. Long-term, the ECRTS Testing scope should complete under budget, and the EAC reflects this current and projected underrun. The Cold Commissioning account is reflecting a positive cost variance, due to personnel supporting both MPAT test report completion and preparations for the upcoming KPAT test procedure. Charges are higher in KPAT account and lower in Cold Commissioning account. The same personnel are supporting both test efforts.

Contract-to-Date
($M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
Total	640.6	643.3	615.7	2.7	0.4%	27.6	4.3%	740.2	713.0	27.2

Numbers are rounded to the nearest $0.1 million

CTD Schedule Performance (+$2.7M/+0.4%)
The variance is within reporting thresholds.

CTD Cost Performance (+$27.6M/+4.3%)
The variance is within reporting thresholds.

Variance at Completion (+$27.2M/+3.7%)
The variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST
($M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2017 Projected Funding	FY2017 Spending Forecast	FY2017 Variance
Expense - Spending Forecast	36.6	32.4	4.2
Incremental Scope Pending Change Management	0.0	3.3	(3.3)
Expense - Subtotal	36.6	35.7	0.9
Line Item	57.8	49.4	8.5
Incremental Scope Pending Change Management	0.0	0.0	0.0
LI -Subtotal	57.8	49.4	8.5
RL-0012 – Total	**94.4**	**85.1**	**9.4**

Numbers are rounded to the nearest $0.1 million.

Funds/Variance Analysis

FY2017 projected funding for project breakdown structure (PBS) RL-0012 is $94.4 million.

Critical Path Schedule

The critical path flows through submersion testing of the Density Flowmeter/Instrument Spools at MASF, installation at 105K West Basin and eventual commissioning. Following a successful Operational Readiness Review, RL will provide Authorization to Commence Retrieval Operations in parallel with the DOE HQ review/approval of CD-4. Completing retrieval operations, including the filling of STSCs with sludge and transferring them to T Plant, to complete Tri-Party Agreement Milestone M-016-176, *Complete Sludge Removal from 105-KW Fuels Storage Basin*, is outside the current contract period in FY2019, however the Project is implementing acceleration strategies to complete sludge retrieval by September 30, 2018.

MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB Annual Update, implemented in September 2013, and subsequent approved Baseline Change Request (BCRs) define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is the Tri-Party Agreement milestones within the CHPRC contract period (September 30, 2018).

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-175	Begin Sludge Removal from 105KW Fuel Storage Basin.	9/30/2018		7/16/2018	The forecast date includes schedule margin from the project's risk analysis. Project schedule margin is 123 days. The current forecast date before schedule margin and allowance for CD-4 approval is 1/11/2018.
M-016-177	Complete installation of sludge transfer equipment in K West Reactor facilities	9/30/2017		3/01/2017	

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	RL Due Date
DOE-RL Issue SER for Integrated KW Basin DSA/TSR	2/13/17	2/28/17
DOE-RL SBRT Review of Integrated DSA/TSR	10/20/16 (A)	12/16/16 (A)
Informal RL Scenario Review of Emergency Planning Hazard Assessment (EPHA)	1/25/17	1/28/17
RL Concur on Integrated DSA/TSR Comment Resolution	1/09/17	1/23/17
RL Prepare Integrated DSA/TSR SER	1/23/17	2/04/17
RL Provide Comments of Integrated DSA/TSR in RCR	12/19/16 (A)	12/28/16
RL SRB Review of Integrated DSA/TSR	2/04/17	2/13/17
RL Review of OTRS	2/06/17	4/10/17
RL Approve/Comment Plan of Action (POA) – K-Basins	3/22/17	4/21/17
WAC HNF-EP-0063 RL Review/Approval of Request for Exception	2/21/17	2/28/17
RL Review and Approve MDSA and TSR Rev.12	11/30/16 (A)	2/28/17

Section C
Solid Waste Stabilization and Disposition (RL-0013)

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December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

During December reporting period, November 21, 2017, through December 25, 2017, Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. Overall, the project is delivering planned efficiencies, but continues to be impacted by emerging work and realized risks.

This month;

- Waste Encapsulation and Storage Facility (WESF) Stabilization and Ventilation Project (W-130) completed grouting of hot pipe trench, K3 duct trench and K3 duct. W-130 also completed an engineering analysis of how the cleanout of the grout lines with air affects the temporary ventilation system. Overall, grouting placement into all hot cells is 77 percent complete.
- In support of the Central Waste Complex (CWC) Temporary Authorization, W&FMP personnel drafted changes to the OSA A Closure Plan and distributed the plan for joint CHPRC/RL review. Updates to closure Plans for OSA B and the D-10 OSA were initiated following discussions with Ecology.
- Cesium and Strontium Capsule Project (W-135) prepared a draft Safety Design Strategy and major modification determination.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
17-EMS-WFMP-OB1-T1	Implement the requirement to provide a "full printed name" in CHPRC Waste & Fuels controlled Resource Conservation and Recovery Act of 1976 (RCRA) inspection work packages and procedures	• Review W&FMP inspection procedures, checklists, and work packages/PMs, which implement RCRA inspection criteria for direction to use full printed name. • Initiate modifications to necessary procedures, checklists, and work packages/PMs, which implement RCRA inspection criteria to include the full printed name.	5/12/17 9/28/17	15%
17-EMS-WFMP-OB2-T1	Implement 40 CFR 265 regulatory requirements identified by the Compliance Matrix for T Plant and Central Waste Complex at the project level.	• Review the applicable 40 CFR 265 requirements to verify the implementing mechanisms and methods and to identify compliance gaps. • Resolve identified gaps by initiating modifications to procedures into the PPS system.	5/31/17 9/30/17	88%
17-EMS-WFMP-OB3-T1	Ensure W&FMP procedures inspection forms, checklists, and work packages, which implement RCRA inspection requirements are capturing the RCRA inspection requirements and are appropriately located in the facility operating record.	• Review all inspection procedures, checklists, and work packages to identify, which are used to meet RCRA inspection requirements. • Initiate updates into PPS and/or JCS systems to ensure RCRA inspection requirements are met and documentation is appropriately placed into the facility operating record.	5/31/17 9/30/17	15%

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	3	
Total Recordable Injuries	0	5	
First Aid Cases	2	*21	• 12/13/16 - Employee missed last step and fell forward hitting cement with his hand and forearm. Employee was able to immediately return to normal work duties. (24264) • *12/13/16 – Employee strained right shoulder/back staging 5 gallon fuel cans. (24270) *1 First Aid case, PTS in support of RL-0013.
Near Misses	0	1	N/A

KEY ACCOMPLISHMENTS

13.01 Project Management

- Performed/Completed:
  - CHPRC/RL review of draft changes to OSA A Closure Plan.
  - Initiation of Closure Plans OSA B and D-10 OSA following meeting with Ecology.
  - CAFO Closure Execution: FS-1 Class 1' Permit Modification Request was signed by Ecology.

13.02 Capsule Storage & Disposition

- Performed/Completed:
  - Annual check of north pool cell door operation.
  - One-year fire door inspection.
  - Continuation of support in W-130 grouting efforts.
  - Asbestos characterization.
  - Confined space evaluations.
- Surveillances/ Preventive Maintenance (PMs):
  - 37 Preventive Maintenance work packages.

a. Waste Encapsulation and Storage Facility (WESF) Stabilization and Ventilation Project (W-130):

- Performed/Completed:
  - Continuation of grout placement into all hot cells. Grouting is 77 percent complete overall.
  - Grout lifts.
  - Engineering analysis/calculations to support/confirm impacts associated with cleanout of the grout lines with air on the temporary ventilation system.
  - Enhanced the temporary ventilation system to protect the system during a positive transient pressure event during cleanout of the grout lines with air.

- Installation of water detectors in the hot cell vent lines and ventilation confinement boxes on the hot cell cover block crevices.

13.03 Canister Storage Building (CSB)

- Performed/Completed:
  - Implementation of DOE-RL SER 16-NSD-0059 with controls for MCO H-176.
  - Removal of final roll on/roll off container from the laydown area clean-up campaign.
- Surveillances/PMs:
  - 29 PM packages.

13.06 Transuranic (TRU) Repackaging

- Performed/Completed:
  - Submission of M-091-47C completion letter to DOE.
  - M-091-52 preliminary evaluation of proposed Shielded Container Assembly.
  - Establishment of draft framework of the M-091 Alternatives Analysis and performed initial review.

13.07 Waste Receiving and Processing (WRAP)

- Performed/Completed:
  - Close out of MBA 293 for 2404-WB.
- Surveillances/PMs:
  - 129 Surveillances.
  - 18 PM packages.
- Shipments Received:
  - One waste drum and six Standard Waste Boxes (SWBs) from Plutonium Finishing Plant (PFP) to WRAP in three shipments.

13.08 T Plant

- Performed/Completed:
  - Annual chemical inventory.
- Surveillances/PMs:
  - 521 Surveillances.
  - 22 PM packages.

13.09 CWC and Low Level Burial Grounds (LLBG)

- Surveillances/PMs:
  - 358 Surveillances.
  - 16 PM packages.
- Shipments Received:
  - 27 waste drums from PFP to CWC in two shipments.
  - Six SWBs from Perma-Fix Northwest (PFNW) to CWC in two shipments.

13.12 Integrated Disposal Facility

- Performed/Completed:
  - Finalization of Rough Order of Magnitude (ROM) operational cost to receive and place 600+ cold commissioning canisters at IDF.
- CHPRC is working with DOE Office of River Protection (ORP) and Washington River Protection Solutions LLC (WRPS) for submittal of the IDF Performance Assessment and associated documents to the LFRG at the end of FY2017.

13.15 TRU Disposition

- Performed/Completed:
  - Submission of Upgrades to site Transuranic Waste Program required to meet the Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC) criteria Revision 8 Change Proposal to DOE.
  - Commencement impact assessments from new WIPP WAC requirements to TRU waste generators.

13.16 Off Site Spent Nuclear Fuel Disposition
- o Maintained coordination for offsite Spent Nuclear Fuel Disposition.

13.21 Mixed Waste Disposal Trenches (MWT)
- o Surveillances/Preventive Maintenance:
  - – 184 Surveillances.
- o Shipments Received:
  - – Five SWBs from PFNW to MWT in one shipment.

13.24 Management of Cesium and Strontium Capsules Project
- o Performed/Completed:
  - – Preparation of a draft Safety Design Strategy and major modification determination.

MAJOR ISSUES

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

Corrective Action:
Significant risk remains. TRU Disposition activities would prepare the contents of these containers in a configuration suitable for eventual disposal at the WIPP. This configuration would also mitigate/eliminate the risk and additional cost for long-term management of these containers.

Status:
Continuing to use the best demonstrated available technology to provide adequate configuration and minimize the potential for contamination spread during the long-term storage (i.e., protecting boxes with tarps or protective shoring, over packing drums, repacking containers, etc.). Shipping to PFNW for repackaging when weather and DOE authorizations permit.

Issues:
The Canister Storage Building (CSB) FF-01 license contains a maximum stack flow rate of 9,000 cubic feet per minute (CFM), while the monitoring system at start-up was verified to be in compliance with regulatory requirements at higher flow rates.

Corrective Action:
RL and Washington State Department of Health (WDOH) were notified of the situation. The path forward was to collect CSB stack flow data, then complete a statistical analysis of this data against a previously performed Pacific Northwest National Laboratory (PNNL) statistical analysis of other similar stacks at Hanford to justify the past flow rates at CSB of less than 9,000 CFM.

Status:
RL provided direction to proceed with PNNL statistical analysis of the CSB stack flow data as well as data from other similar stacks on July 29, 2015. PNNL supplied preliminary information on September 28, 2015, providing a basis for an expanded flow range. WDOH provided positive feedback on the PNNL presentation; but wanted one of six original tests to be re-performed at lower flow rates to validate the PNNL statistical analysis, which used test results from similar stacks for comparison. RL contractual approval was provided April 19, 2016. The CSB stack flow testing, desired by WDOH, was completed on August 15, 2016. A presentation to WDOH and Washington State Department of Ecology was completed on September 21, 2016. CSB Engineering issued a final report, CHPRC-03083, CSB Stack Qualification Testing and Comparative Analysis, on September 30, 2016. CHPRC/RL will submit a Notice of Construction (NOC) revision based on CHPRC-03083 to modify the license to reflect the wider

range of CSB stack flow rates. The target date for submitting the NOC revision is March 21, 2017. Once approved, CSB will then install higher flow capacity high-efficiency particulate air (HEPA) filters.

Issue:
Mission Support Alliance, LLC (MSA) Cross-Connection Control Program recently performed a Health Hazard Level Re-evaluation following the guidance listed in Washington Administrative Code (WAC) 246-290-490, and internal MSA Cross-Connection Control procedures. During the course of this re-evaluation, it was determined that the 225-B (WESF) Health Hazard Level needs adjustment from High to Severe to be in alignment with WAC 246-290-490 Section 4, requiring service connections to premises posing a severe health hazard to have cross-connection installed with either:

(A) Approved air gap installed for premises isolation; or
(B) Approved reduced-pressure back-flow prevention assembly (RPBA) or RPDA installed for premises isolation in combination with an in plant approved air gap; or
(C) Approved Hanford Site water sources modification with downstream controls at facilities.

Corrective Action:
The WAC requires corrective action to be accomplished "Within 90 days of the purveyor notifying the consumer ..." or, "In accordance with an alternate schedule acceptable to the purveyor." MSA intends to work with the affected facilities and DOE to develop corrective actions that minimize impacts to ongoing cleanup milestones.

Status:
Central Environmental has prepared and submitted a pre-existing condition notification to DOE. A meeting was held on April 28, 2016, with the MSA Water Purveyor to initiate discussions on a path forward. Additionally, at the request of DOE, CHPRC prepared and presented a summary of the facility changes to compliantly isolate both potable and raw water connections. Both an approved in-plant air gap and an approved RPBA are required to meet the elevated hazard. Seven locations within the facility would require modification. DOE provided direction that MSA will remedy the majority of the issue with a modification at the source by MSA versus modifications at each facility. Description and preliminary schedule for WESF potable water facility modifications required unless DOE approves an alternate (no action) approach transmitted on July 6, 2016 (CHPRC-1602928). To date, there has been no response from DOE.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

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

Increased Confidence
No Change
Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0013/WBS-013				
Explanation of major changes to the project monthly stoplight chart: No major changes to the monthly stoplight chart in the month of December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
WSD-W130-17: Changes in the final design are needed after the design is issued	Changes in the final design are needed after the design is issued. Changes are driven by unexpected conditions, additional reviews of the design media, or field conditions. Design changes result in cost impacts and schedule delays. **Risk Handling Strategy:** Control **Probability:** Low (10% to 25%) **Worst Case Impacts:** $512K, 64 days			**Risk Event:** Risk was realized when additional reviews of design media and K3N ventilation skid as-built conditions were analyzed during writing of test and operating procedures, as well as during stabilization activities in the canyon. 1) Changes in fire suppression system design are necessary to allow leak testing of the full system due to limitations in the existing skid design. 2) K3N skid requires modifications to ensure proper operation at WESF. 3) Hot cell penetration sealing requires more work than planned. 4) Communication between hot pipe trench in WESF and B Plant causes grout to flow into B Plant during trench grouting. 5) Extensive contamination and high dose rates were found at the hot cell cover blocks during grouting preparations, causing a change to the design to prevent grout leaking into the Canyon during grouting of the hot cells. **Risk recovery action(s)** | **Risk Date** | **FC Date** | **%** Seal seams at hot cell cover blocks and provide a controlled vent path for grouting of the hot cells | 10/17/16 | 2/10/17 | 80 **Recovery Action Assessment:** A controlled HEPA-ventilation vent path will be provided in the hot cell cover block seams prior to placement of the last lift of grout to prevent over-pressurizing the hot cells during grouting. Risk evaluations for a positive transient pressure event during grout conveyance line cleanout and implementation of mitigating actions, as well as the high dose field in the canyon, have caused the forecasted completion date to slip 2 months.
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 SWOC (excluding TRU Retrieval activities) and require additional resources to respond. **Risk Handling Strategy:** Accept **Probability:** Likely (75% to 90%) **Worst Case Impacts:** $5 million, 0 day			**Risk Event:** In November 2011, degraded containers were discovered in CWC. **Risk recovery action(s)** | **Risk Date** | **FC Date** | **%** Perform daily/weekly waste container surveillances to identify container abnormalities. | 11/01/11 | 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 **Recovery Action Assessment:** Project continued to perform container surveillances in the month of December to identify container and container cover abnormalities. The project will perform the overpack for Storage box 75DMA16F3, with a subsequent move into 2403WD. The work package is under development and work will be scheduled based on priorities. The remaining containers will continue to require surveillance and continue enhanced monitoring.

<table>
<tr><th rowspan="2">Risk Title</th><th rowspan="2">Unmitigated Risk Impacts</th><th colspan="2">Assessment</th><th rowspan="2">Comments</th></tr>
<tr><th>Month</th><th>Trend</th></tr>
<tr><td colspan="5">RL-0013/WBS-013</td></tr>
<tr><td>WSD-W130-22: Loss of contamination control due to invasive activities</td><td>There is a risk that during grout fill of the hot cells/duct that grout may leak from the cells/duct, through the wall and leak into the operating gallery or service gallery or truckport space. There is a risk that during operations, containment barriers are lost and the operating gallery, service gallery, filter pit area or truck port space is contaminated.

Risk Handling Strategy: Accept

Probability: Medium (26% to 74%)
Worst Case Impacts: $408K, 48 days</td><td>  </td><td>  </td><td>Risk Event:
During cleanout of the grout lines to C Cell, radioactive material collected in the temporary ventilation system, causing a high dose field in the canyon.

<table>
<tr><th>Risk recovery action(s)</th><th>Risk Date</th><th>FC Date</th><th>%</th></tr>
<tr><td>Reinforce ventilation ducting system in the canyon and provide a buffer volume for air exiting the hot cells during grouting to prevent over-pressurization and spread of contamination.</td><td rowspan="2">12/19/16</td><td>Complete</td><td>100</td></tr>
<tr><td>Develop and implement a recovery plan to address the high dose field in the canyon</td><td>01/31/17</td><td>25</td></tr>
</table>

Recovery Action Assessment:
On-going risk evaluations revealed a risk that during cleaning of the grout lines that the hot cells and ventilation ducting may experience a transient positive pressure event. Calculations were performed to estimate magnitude of the pressure event and to plan mitigation actions. The ventilation ducting was reinforced and a buffer volume was provided to accommodate a transient pressure spike via installation of a collapsed plastic bag at the end of the temporary ventilation line. A recovery plan is in development to mitigate the high dose field and modify the grouting sequence to eliminate cleanout of the hot cell fill lines.</td></tr>
<tr><td colspan="5">Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</td></tr>
<tr><td colspan="5">Lifecycle Risk Triggers (Risk could be realized at any point of the project)</td></tr>
<tr><td>WSD-097: Major Equipment Failure - T-Plant</td><td>T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts, and schedule delays.

Risk Handling Strategy: Control

Probability: Medium (26% to 74%)
Worst Case Impacts: $750K, 96 days</td><td>  </td><td>  </td><td>Risk Trigger Metric:
During planned facility operations activities a suspect system component is discovered that requires attention, or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC (September 30, 2018).

<table>
<tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr>
<tr><td>Identify and procure spare parts for T Plant Crane</td><td>Ongoing</td><td>N/A</td></tr>
<tr><td>Crane Bridge Drive Bearing Repairs</td><td>Complete</td><td>100</td></tr>
</table>

Mitigation Assessment:
The project has put into place mitigating strategies (i.e., aggressive S&M activities) to help reduce this risk. The project is also working toward identifying and procuring spare parts for the T Plant Crane to further reduce the risk. The crane is currently operational. The project has completed the crane bridge drive bearing repairs discovered during preventative maintenance.</td></tr>
</table>

<table>
<tr><th rowspan="2">Risk Title</th><th rowspan="2">Unmitigated Risk Impacts</th><th colspan="2">Assessment</th><th rowspan="2">Comments</th></tr>
<tr><th>Month</th><th>Trend</th></tr>
<tr><td colspan="5">RL-0013/WBS-013</td></tr>
<tr><td>WSD-019: MLLW & TRU Treatment Impacts</td><td>Mixed low-level waste (MLLW) and TRU treatment capacity/capability does not meet Hanford needs or treatment does not occur as scheduled, resulting in cost impacts.
Risk Handling Strategy: Accept

Probability: Medium (26% to 74%)
Worst Case Impacts: $2.5 million, 0 day</td><td>  </td><td>  </td><td>Risk Trigger Metric: Will continue throughout contract (September 30, 2018).
<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Establish multiple treatment contracts, or obtain additional capability, for the processing of MLLW and TRU with terms extending to the end of the current CHPRC contract with RL (i.e., September 30, 2018).</td><td>Ongoing</td><td>N/A</td></tr><tr><td>Continue to work with RL to fund the processing of TRU/M waste at PFNW at a rate in which keeps them viable (i.e., keeps the doors open).</td><td>Ongoing</td><td>N/A</td></tr><tr><td>Evaluate the benefit(s) associated with an increase to the PFNW Pu possession limit. Their current limit is 200 grams of total Pu. Increasing the limit may allow additional quantities of TRUM waste to be shipped to PFNW for processing. This evaluation will take place in conjunction with the M-091-52 engineering study.</td><td>9/30/2017</td><td>10</td></tr></table>
Mitigation Assessment:
1) MLLW: Two contracts in place with offsite commercial waste treatment which provides sufficient capability/capacity to meet current MLLW treatment needs through the end of the CHPRC contract term. However, one of the contracts was recently restricted due to the closure of a Perma-Fix treatment facility in Tennessee (M&EC). Additional capability will need to be obtained to meet regulatory requirements.

TRU/M: Only PFNW has current capability to process TRU/M waste. This is due solely to the practical limitations imposed by the need to ship the TRU/M waste via road-closure; therefore, additional commercial providers cannot be obtained.

Two shipments (TC155 & TC156) with a total volume of ~25m3 are scheduled to be shipped to PFNW during 2nd quarter FY2017 to support PFNW’s optimal processing levels through the end of the calendar year. Additionally, PFP has shipped TRU and LLW to PFNW during the first quarter of FY2017. These shipments should provide adequate waste volumes to support PFNW’s optimal processing levels for all of FY2017 and possibly FY2018.

2) RL’s action to authorize and/or fund this action.

If the TRU/M waste generated from the PRF Canyon floor cleanout (J-Pan waste) requires treatment, it would significantly impact the projects ability to have sufficient treatment capability/capability at PFNW for the processing of Legacy TRU/M waste to meet M-091-47C and -47D objectives for FY2017 and FY2018.</td></tr>
<tr><td colspan="5">High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</td></tr>
<tr><td colspan="5">Lifecycle Risk Triggers (Risk could be realized at any point of the project)</td></tr>
<tr><td>WSD-137: OPP: Planned Efficiencies</td><td>Funding profile for the contract period are achieved through efficiencies.
Risk Handling Strategy: Exploit

Probability: Likely (75% to 90%)
Worst Case Impacts: $32 million, 0 day</td><td>  </td><td>  </td><td>Risk Trigger Metric: Will continue throughout project lifecycle (September 30, 2018).
<table><tr><th>Opportunity action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Plan work activities and procurements to be as efficient as possible with minimal resources.</td><td>Ongoing</td><td>N/A</td></tr></table>
Opportunity Assessment:
The project has realized efficiencies of approximately $49 million to date. Future efficiencies are being offset due to discrete project overruns, increased regulatory scrutiny, maintenance lessons learned across CHPRC DOE Complex, and heightened compliance postures. Also note that the EAC currently contains work identified as changed scope in which contract changes would be issued.</td></tr>
</table>

<table>
<tr><th>Risk Title</th><th>Unmitigated Risk Impacts</th><th colspan="2">Assessment
Month | Trend</th><th>Comments</th></tr>
<tr><td colspan="5">RL-0013/WBS-013</td></tr>
<tr><td>WSD-140: As-Found-Unknown Conditions - T Plant</td><td>Unknowns, as found or emergent conditions impact the operability of the T Plant facility.

Risk Handling Strategy: Accept

Probability: Very Likely (>90%)
Worst Case Impacts: $1,040K, 0 days</td><td>  </td><td>  </td><td>Risk Trigger Metric: This risk has been triggered due to current condition of 221-T Dock #2.

<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Repairs to 221-T Dock #2 are needed in support of sludge receipt</td><td>04/30/17</td><td>0</td></tr><tr><td>A Notice of Change is being prepared to identify this as a RL risk</td><td>Complete</td><td>100</td></tr><tr><td>2716T Ramp & Stair Rebuild</td><td>03/31/17</td><td>10</td></tr></table>
Mitigation Assessment:
Deterioration of the steel decking and steel support structure for 221-T Dock #2 has required that the dock be taken out of service. A new loading dock is necessary as one of the Life Safety Code required emergency egress points and to support the receipt of sludge. This dock also provides storage areas for various gas bottles. In addition, the 2716T ramp and stairs needs rebuilt. This is the sole entrance and egress access from the tunnel excluding emergency exit and is priority over dock #2 work. A Notice of Change was drafted in an attempt to get a contractual agreement for this change. The Notice of Change submittal will be postponed while CHPRC discusses the change with RL. The risk is being captured for visibility and will remain as part of the key risks until this issue is resolved.</td></tr>
<tr><td colspan="5">FY2017 Risk Triggers (Risk could be realized in FY2017)</td></tr>
<tr><td>WSD-W130-18: Failure of WESF Hot Cell during Grouting</td><td>There is a risk that the capacity of the floor or walls of the hot cells cannot sustain the applied loads from grout and fails. In addition, a failure to the cover blocks and or the canyon floor result in cost impacts, and schedule delays.

Risk Handling Strategy: Control

Probability: Medium (26% to 74%)
Worst Case Impacts: $768K, 96 days</td><td>  </td><td>  </td><td>Risk Trigger Metric:
Initiation of hot cell grouting.

<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Fill hot cells in 3 foot lifts to minimize sudden stress by allowing partial curing between lifts, as well as early detection of hot cell floor failure.</td><td>2/10/17</td><td>0</td></tr></table>
Mitigation Assessment:
Structural evaluations and calculations have been completed and identified controls necessary during grouting (limit lifts of grout placement to three feet, compare actual grout volume placed to calculate estimated volume).
No alternative course of actions needed at this time. Risk evaluations for a positive transient pressure event during grout conveyance line cleanout and implementation of mitigating actions, as well as the high dose field in the canyon, have caused the forecasted completion date to slip 2 months.</td></tr>
<tr><td>WSD-W135-15: Utilization of 2003 Pre-Conceptual Design</td><td>A pre-conceptual design for the dry storage of the capsules was completed in July 2003. If this design cannot be utilized, it will be necessary to initiate and complete a new conceptual design including a new analysis of alternatives.

Risk Handling Strategy: Accept

Probability: Very Likely (>90%)
Worst Case Impacts: $5,100K, 0 days</td><td>  </td><td>  </td><td>Risk Trigger Metric: The 2003 pre-conceptual design for the dry storage of capsules cannot be utilized.

<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>None identified at this time.</td><td>N/A</td><td>N/A</td></tr></table>
Mitigation Assessment:
The 2003 pre-conceptual design is based on design criteria that is over 13 years old. Design criteria that impacts the ability to utilize the 2003 pre-conceptual design include: location of the Dry Storage Facility, duration of the storage period, Safety Basis Requirements and Environmental Permitting. Continuing to have discussions with RL can clarify impacts of the Safety Basis Requirements and Environmental permitting. The risk is being captured for visibility and will remain as part of the key risks until this issue is resolved.</td></tr>
</table>

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0013/WBS-013				
WSD-W135-16: Content and Approval of Critical Decision Packages	The content of the Critical Decision packages required by DOE O 413.3B are more extensive than anticipated and require an extensive RL review. **Risk Handling Strategy:** Accept **Probability:** Very Likely (>90%) **Worst Case Impacts:** $2,000K, 0 days			**Risk Trigger Metric:** The content and review/approval process for the Critical Decision Packages is impacted by DOE O 413.3B. **Mitigation action(s)** / **FC Date** / **%** Preparing strategy on how to meet the DOE O 413.3B requirements / On going / N/A **Mitigation Assessment:** No changes in the month of December. The pre-conceptual design of the project was based on DOE O 413.3A, the current version is DOE O 413.3B, change 2. New requirements will impact the content of the critical decision packages or impact the duration and extent of the DOE review. Working closely with RL on the tailoring strategy to meet the DOE O 413.3B requirements. The risk is being captured for visibility and will remain as part of the key risks until this issue is resolved.
WSD-W135-17: Modifications to WESF	The transfer of the capsules to a dry storage will require modifications to the WESF. **Risk Handling Strategy:** Accept **Probability:** Very Likely (>90%) **Worst Case Impacts:** $7,300K, 0 days			**Risk Trigger Metric:** Modification to the WESF facility are required for transfer of capsules to dry storage. **Mitigation action(s)** / **FC Date** / **%** None identified at this time. / N/A / N/A **Mitigation Assessment:** No changes in the month of December. The approach incorporated into the pre-conceptual design for the transfer of the capsules, required minimal modifications to the WESF. New or updated requirements will require more extensive modifications to the WESF. Before submittal of CD-1 CHPRC will review 30% design from subcontractor which will provide details of WESF modifications. The risk is being captured for visibility and will remain as part of the key risks until this issue is resolved.
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified in the month of December.				

PROJECT BASELINE PERFORMANCE
Current Month
($M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)
Total	8.2	6.5	6.7	(1.7)	-20.5%	(0.1)	-2.0%
Numbers are rounded to the nearest $0.1 million							

CM Schedule Performance (-1.7M/-20.5%)

The current month negative schedule variance is associated with 013.06.01.08 – RH/Large Box Repack (-$1.8 million) due to freezing temperatures and icy roads delaying PFNW return shipments of TC152 and TC153 and shipment of TC155 and TC156 to PFNW.

CM Cost Performance (-0.1M/-2.0%)

The current month cost variance is within threshold.

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

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
Total	1,113.0	1,114.0	1,044.1	1.1	0.1%	69.9	6.3%	1,341.8	1,287.6	54.2

Numbers are rounded to the nearest $0.1 million

CTD Schedule Performance (+1.1M/+0.1%)
The contract-to-date schedule variance is within threshold.

CTD Cost Performance (+$69.9M/+6.3%)
The contract-to-date favorable cost variance is due to the continued implementation of planned efficiencies.

Variance at Completion (+$54.2M/+4.0%)
The Variance at Completion is within threshold.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST
($M)

	FY2017		
WBS 013/RL-0013 Waste and Fuels Management Project	Projected Funding	Spending Forecast	Variance
Estimate at Complete	103.3	91.5	11.8
Incremental Scope Pending Change Management	0.0	11.4	(11.4)
RL-0013 – Total	103.3	102.9	0.4

Numbers are rounded to the nearest $0.1 million.

Funds/Variance Analysis

FY2017 projected funding for PBS RL-0013 is $103.3 million. The fiscal year spend forecast (FYSF) of $102.9 million includes scope awaiting authorization such as accelerated TRU Repackaging and Environmental Enhancement. Adjustments this month are due to the continuation of WESF Ventilation and Stabilization Project (W-130) into FY2017, increasing W-130 FYSF, and reducing WESF Base Operations by those resources dedicated to W-130. Other off-setting adjustments are made on the scope awaiting authorization, moving in to FY2018. W-130 continues to experience unanticipated conditions such as contamination levels on the canyon cover blocks and inclement weather resulting in further delays to the project finish.

Critical Path Schedule

WESF Ventilation & Stabilization Project, W-130, critical path showed a completion date at December month end for Performance Measure, PM-13-5-16, on January 6, 2017. Additional risk was identified for a contamination spread in the canyon if the hot cells experience a transient positive pressure event during grout conveyance system cleanout. During cleanout of the grout lines to C Cell, radioactive material collected in the temporary ventilation system, causing a high dose field in the canyon. A recovery plan is in development to mitigate the high dose field and modify the grouting sequence to eliminate cleanout of the hot cell fill lines. This issue has delayed the critical path to an expected finish at the end of February 2017.

MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB Annual Update, implemented in September 2013, and subsequent approved BCRs define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a one-year look ahead of commitments and Tri-Party Agreement enforceable milestones and non-enforceable target due dates.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
C-026-07K	Tritium Treatment Technology Developments to Ecology and EPA	3/31/17		3/31/17	On Schedule
M-091-03K	Submit Revision of TRUM Waste and MLLW PMP to Ecology	6/30/17		6/30/17	On Schedule
M-092-05	Determine Disposition Path and Establish Cs/Sr Interim Milestones.	6/30/17		6/30/17	On Schedule
M-091-52	Submit change request with target dates for new/modified capabilities to process TRUM waste.	9/30/17		9/30/17	On Schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
CONTRACT			
J.12/C.2.2, C.2.3	PBS-11, Plutonium Finishing Plant Closure Project PBS-13, Solid and Liquid Waste Treatment and Disposal	Offsite Transportation of Radioactive Material: RL provides equipment and government drivers to transport TRU materials outbound/inbound between the Hanford Site and PFNW locations. RL is the authorized shipper and acts as signatory on the shipping papers, and ensures DOE Manual 460.2-1 is complied with. RL arranges for Commercial Motor Vehicle Safety Alliance (CVSA) level VI vehicle inspections and verifies that the government drivers meet the applicable Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383).	Ongoing

Contract Section	Project	GFS/I	Status
		RL also inspects the load securement to ensure compliance with DOT regulations and/or TSD requirements.	
J.12/C.2.3.6	PBS-13, Transuranic Waste Certification	WIPP provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the CBFO.	No WIPP shipments are planned within the Contract period of performance.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	RL Due Date
RL Review and Approve Master Documented Safety Analysis (MDSA) and Technical Safety Requirement (TSR) Rev. 12	11/29/16	02/26/17

Section D
Soil and Groundwater Remediation Project (RL-0030)

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

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

M. A. Wright
Vice President for
Project Technical
Services

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Pump and Treat (P&T) Operations continued making progress on the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) remedial process documentation for the River Corridor and Central Plateau. Groundwater treatment and well drilling (including development) completed in the current month includes the following:

Treatment Facility	Million Gallons Treated		Chrome (kg)		Carbon Tet (kg)		Nitrate as N (kg)		Tech-99 (pCi)		Uranium (kg)	
	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD
DX P&T	33.3	95.8	2.9	10.1								
HX P&T	24.4	71.3	2.1	6.5								
KR-4 P&T	11.3	36.3	0.1	0.5								
KW P&T	0.0	0.0	0.0	0.0								
KX P&T	36.9	104.5	2.1	5.9								
200 West P&T	93.5	212.3	8.0	19.5	187	439	5978	15880	$.15x10^{12}$	$.37x10^{12}$	1.3	2.6
Combined	**196.3**	**520.2**	**15.2**	**42.4**	**187**	**439**	**5978**	**15880**	**$.15x10^{12}$**	**$.37x10^{12}$**	**1.3**	**2.6**
FY2017 KPG	--	**2200**	--	**160**	--	**1700**	--	**80000**	--	**N/A**	--	**45**

Well Drilling by Area	FY2017 Planned	Current Month	FY2017 Cumulative
100-KR-4	5	-	1
100-HR-3	6	-	-
200-UP-1	10	-	3
200-ZP-1	5	-	-
M-24 Milestone	5	-	-
300 Area	67	-	-
200-DV-1	5	-	-
Total Wells	**103**	-	**4**
Site Wide Boreholes	**30**	-	-

EMS Objectives and Target Status

Objective	Target	Actions	Due Date	Status
17-EMS-SGWR-OB1 Monitor and confirm low carbon tetrachloride emissions at the 200 West P&T Facility	T1 – Evaluate treated off gas analytical results from compliance sampling and process sampling each quarter.	Monitor and confirm low carbon tetrachloride emissions at the 200 West P&T Facility.	9/30/17	25%

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	NA
Total Recordable Injuries	0	1	NA
First Aid Cases	5	*48	• 12/4/2016 – While unloading a pump from a sample van, the pump got caught and pinched the employee's left thumb between the pump and sample van wall. The event occurred at the end of the day. The employee was taken to HPMC the next morning. (24251) • 12/12/2016 – Employee slipped and fell while trying to remove snow from a fluidized bed reactor tank. The individual was taken to HPMC for evaluation. (24261) • 12/12/2016 – Employee slipped and fell on ice/snow while walking between buildings. The individual was taken to HPMC for evaluation. (24262) • 12/21/2016 – Employee slipped and fell on ice/snow after exiting their vehicle. The individual was taken to HPMC for evaluation. (24275) • 12/21/2016 - Employee slipped and fell while applying ice melt to the sidewalk. The individual was taken to HPMC for evaluation. (24279) *9 FA cases, PTS in support of RL-0030.
Near-Misses	0	1	NA

KEY ACCOMPLISHMENTS

RL-0030 Accomplishments
RL-0030.O1 RL 30 Operations

River Corridor

100-BC-5 Operable Unit

- Transmitted the Draft A Remedial Investigation/Feasibility Study (RI/FS) and Draft A Proposed Plan to RL on December 6, 2016. RL subsequently transmitted the documents to the regulators on December 13, 2016, completing Tri-Party Agreement Milestone M-015-79.

100-KR-4 Operable Unit

- Continued collection, analysis, and review of sampling results for the KW Rebound Study.
- Issued Tri-Party Agreement change notice for 100-HR-3 and 100-KR-4 Operable Units Waste Management Plan on December 19, 2016. This change notice added the wells to be drilled in FY2017.

100-HR-3 Operable Unit

- Issued the Tri-Party Agreement change notice for 100-HR-3 and 100-KR-4 Operable Units Waste Management Plan on December 19, 2016. This change notice added the wells to be drilled in FY2017.

100-NR-2 Operable Unit

- Completed respirometry sampling of the 100-N bioventing system.
- Initiated work on the cultural resource review (CRR) for the re-injection of the permeable reactive barrier.

300-FF-5 Operable Unit

- Issued the Rev 0 300-FF-5 Operable Unit (OU) Remedy Implementation Sampling and Analysis Plan (SAP) Addendum 1 for Stage B Uranium Sequestration on December 14, 2016.
- Mobilized the construction contractor for the installation of the roads, pads and laydown areas in support of the Stage B Uranium Sequestration.

Central Plateau

200-UP-1 Operable Unit

- Two well-drilling campaigns are currently underway for FY2017. The first includes three uranium plume wells, of which, one has been completed, and two are in process. The second includes three SE chromium characterization wells, of which, two have been drilled, and the third has not yet started.
- Provided updates to the Tri-Party Agreement change notice to extend Tri-Party Agreement Milestone M-016-193 one year to September 30, 2018, to RL. A corresponding Tri-Party Agreement change package for the 200-UP-1 remedial design/remedial action work plan (RD/RAWP) was also updated and provided to RL.
- Provided the Draft A Rev 2 200-UP-1 drilling SAP to incorporate the additional out year wells, such that all 24 wells associated with Tri-Party Agreement Milestone M-016-193 are included. This SAP was subsequently provided to EPA for review.

200-BP-5/200-PO-1 Operable Unit

- Issued the Rev 0 Action Memorandum for 200-BP-5 Operable Unit Groundwater Extraction, which was transmitted by RL to the regulators on December 14, 2016.
- Continued resolution of Ecology comments on the 200-BP-5 groundwater monitoring SAP. Held two comment resolution meetings with Ecology in December.

200-SW-2 Operable Unit

- Submitted the Rev 2 revised green islands report to RL on December 14, 2016; this report documents the basis for removing several green islands as dangerous waste management units.

200-EA-1 Operable Unit

- Provided all the waste site scoping summaries to RL for review on December 22, 2016.
- Continue to meet with Ecology to review and determine path forward on the waste sites scoping summaries.
- Finalized the approach for data evaluation and 2-dimensional calculation process that will be used in the RI/FS work plan.

200-DV-1 Operable Unit

- Briefed RL on the uranium reactive gas sequestration treatability test proposed changes to the SAP and field test plan on December 19, 2016. A Tri-Party Agreement change notice is being prepared to adjust the original proposed injection/monitoring well network based upon current conditions.
- Submitted two addenda to the 200-DV-1 OU Characterization SAP to RL for review. One addendum describes the analyses to be performed on soil samples for evaluation of the monitored natural attenuation alternative in the feasibility study. The second addendum describes the additional shallow soil sampling and analyses required to support the baseline risk assessment.
- Continued laboratory analyses on the soil core samples to support the monitor natural attenuation alternative in the feasibility study.

200-ZP-1 Operable Unit

- Drafted a Tri-Party Agreement change notice to update the 200-ZP-1 waste management plan. This change notice addresses the location and identification of the consolidated groundwater solid waste complex at the 6265A Building in the Central Plateau. Provided change notice to RL for review on December 21, 2016.

200-BC-1 and 200-WA-1 Operable Units

- Incorporated EPA comments on the Working Draft Rev 0 RI/FS Work Plan for the 200-BC-1 and 200-WA-1 Operable Units and submitted the document for clearance.

Groundwater P&T Facilities
200 West P&T

- Operated the 200 West P&T at an average of 2,025 gpm.
- Continued operational acceptance test for the new 200-BP-5 and 200-DV-1 wells and transfer system. Testing has been suspended until the cross site transfer line is thawed.
- Completed stainless steel conversions of facility extraction wells.

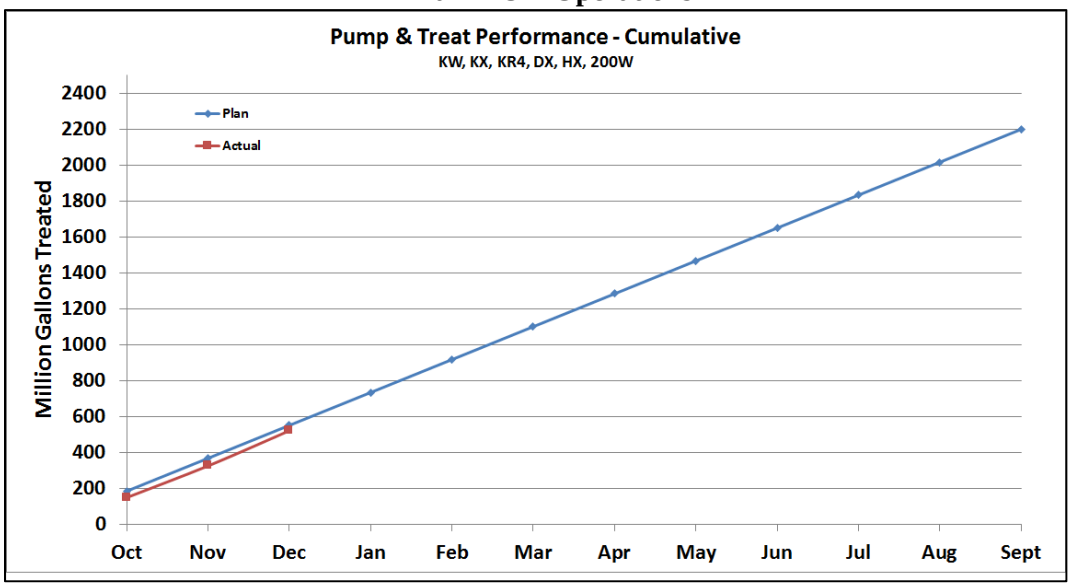
100 Area P&Ts

- Operated the DX P&T at 746 gpm, near the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 254 gpm, below the facility capacity of 330 gpm.
- The KW P&T remains turned off to perform rebound study.
- Operated the KX P&T at 828 gpm, below the facility capacity of 900 gpm.
- Operated the HX P&T at maximum extraction well capacity. Monthly average at 546 gpm.

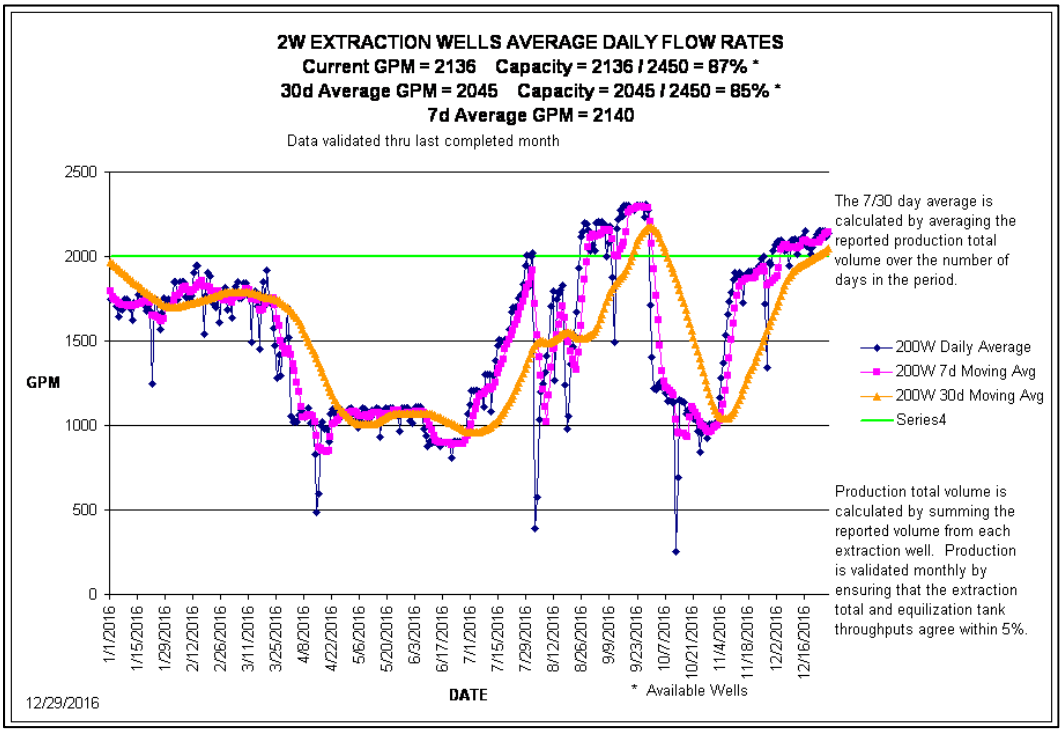
PTS
Engineering Services

- Evaluated a heating, ventilation and air conditioning modification planned by the 200 West P&T for the impact to the equipment nationally recognized testing laboratory listing.

FY2017 P&T Operations



200 West P&T



MAJOR ISSUES

Issue:
Experiencing regulatory agency delays in the approval of decision documents, including:

- Ecology suspended review of the 200-BP-5 RI/200-PO-1 RI Addendum.
- Ecology approval of the 200-IS-1 Tri-Party Agreement change package C-013-01, which affects the 200-IS-1 RI/FS Work Plan (DOE/RL-2010-114) scope definition.

Corrective Action:
Maintain visibility on these delays to senior management. RL/CHPRC to continue working with the regulatory agencies to facilitate completion of these documents. Submit notice of change letters to RL as contract activities are impacted.

Status:
Delays in completion of the decision documents are reported weekly to RL management and monthly to RL, EPA, and Ecology senior management. Specific document status includes:

- 200-BP-5/200-PO-1: Ecology suspended review of the 200-BP-5 RI report and the 200-PO-1 RI report addendum on October 23, 2015 (15-NWP-189). Completion of this review is contingent on RL providing "adequate details" on how the modeling approach evolved from the Tank Closure & Waste Management Environmental Impact Statement (TC&WM EIS) modeling approach with a list of specific items to be provided. This issue has been elevated to RL senior management for resolution.

  Received Ecology letter (16-NWP-220) dated December 28, 2016, notifying RL that Ecology is accepting the use of the Central Plateau model for the 200-BP-5 and 200-PO-1 OUs. Ecology requested that RL provide them with detailed technical information on the Central Plateau Model with comparisons to the TC&WM EIS groundwater model. The project will work with RL in January 2017 to develop a strategy for responding to Ecology's letter.

- 200-IS-1: Ecology has stopped review of change package C-13-01 due to disagreement regarding treatment, storage and disposal (TSD) determinations and associated criteria.

  On October 20, 2016, RL provided the updated Change Package C-13-01 and four other change packages, to better align the waste sites within the 200-IS-1 OU and several other OUs, to Ecology for review/approval. This topic is planned to be discussed during the January 4, 2017, Senior Executive Council meeting. The dispute resolution period has been extended to March 16, 2017.

Issue:
Based on groundwater samples taken during drilling of the first set of three wells, the 200-UP-1 southeast chromium plume extends further to the southeast than previously mapped, and will likely require additional characterization wells (beyond the six wells planned) to define the southern plume boundary. This additional characterization will impact completion of Tri-Party Agreement Milestone M-016-193 to complete the remedial design investigation of the southeast chromium plume by September 30, 2017.

Corrective Action:
Two corrective actions have been identified:

1. Implement actions to define the southeast chromium plume. The two southern-most characterization wells drilled to date will be prioritized and resampled to confirm chromium concentrations. Six existing groundwater monitoring wells to the south of the plume will be sampled to help establish

extent of the plume and locate additional characterization wells. Cultural reviews for six potential well locations will be prepared to help define the southern extent of the plume. The results from these additional samples will be used to define the need for additional characterization wells.

2. Meet with EPA and adjust the due date for Tri-Party Agreement Milestone M-016-193.

Status:
Corrective Action #1: Complete.
Corrective Action #2: Open. A meeting will be scheduled by RL in January with EPA to adjust the due date for Tri-Party Agreement Milestone M-016-193 based on the recent information.

Issue:
The significant snow accumulations have delayed archeological field surveys, which will then delay completion of the following CRRs:

- 200-ZP-1 injection wells delayed since December 14, 2016,
- 100-HR-3 wells/conveyance lines delayed since December 14, 2016, and
- 200-UP-1 monitoring well delayed since December 20, 2016.

Corrective Action:
Identified a path forward with MSA to prepare the CRR for the 200-ZP-1 injection wells without the field survey. Because the field survey was not performed, additional archeological monitoring will be required during implementation. According to MSA, this approach is not possible for the remaining CRRs and as a result, they will be delayed until the archeological field surveys are able to be completed.

Status:
For 200-ZP-1, the draft CRR is expected to be submitted to RL for review in early January. Preparation of the remaining CRRs is delayed until the archeological field surveys can be completed.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

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

Increased Confidence

No Change

Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0030/WBS-030				
Explanation of major changes to the project monthly stoplight chart: No major changes to the risk stoplight chart in the month of December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
OPPORTUNITY: SGW-007A: Sampling Requirement Reduction	Reduction in field sampling (locations, frequency, or total number of samples collected) has the opportunity to reduce long-term groundwater monitoring cost. **Risk Handling Strategy:** Exploit **Probability:** Very Likely (>90%) **Worst Case Impacts:** $1 million, 0 day			**Opportunity Event:** The *Optimization Plan to Revise the Groundwater Sampling Plan* is final and provides the roadmap to revise the groundwater monitoring SAPs over the next two years. **Opportunity action(s)** / **FC Date** / **%** Obtain Agency approval of the revised SAPs. / tbd / 86 Note: 30 of the planned 35 SAP revisions have been completed (86%). **Opportunity Assessment:** All 10 CERCLA groundwater monitoring SAPs have been revised and transmitted to RL and the regulators. Eight of the SAPs are approved and implemented. Two CERCLA SAPs (200-BP-5 and 200-PO-1) are impacted by the Central Plateau modeling issue. Use of the Central Plateau model was approved by Ecology on December 28, 2016, which will help facilitate completion of these SAPs. The forecast completion date is uncertain at this time. All 25 RCRA monitoring plans have been reviewed and of these, 13 plans required no changes. The remaining 12 monitoring plans were revised and transmitted to Ecology for review. Comments have been received from Ecology and nine monitoring plans have been revised and implemented. The remaining three monitoring plans are in final comment incorporation and expected to complete in January or February. No alternative course of actions are needed at this time.
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
No critical risks identified in the month of December.				
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)				
No high risks identified in the month of December.				
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified in the month of December.				

PROJECT BASELINE PERFORMANCE
Current Month
($M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)
Total	10.8	9.3	8.4	-1.5	-14.1%	0.9	9.3%

Numbers are rounded to the nearest $0.1 million.

CM Schedule Performance (-$1.5M/-14.1%)

The current period negative schedule variance is due to the delay of the 100-NR-2 Barrier maintenance and expansion activities, which were scheduled to start in FY2016 but were delayed due to funding limitations and pending resolution of cultural clearance items. Some cultural clearance and other planning activities are forecast to complete in FY2017, with field work initiating in FY2018. This is offset in part by an early start on 300-FF-5 field activities to insure the project can meet the FY2017 key performance goal to initiate injections. The installation of roads and pads, sample collection system design, and procurement of long lead electro resistivity tomography items were initiated in December.

CM Cost Performance (+$0.9M/+9.3%)

The positive cost variance resulted from the following:

- Efficiencies in the GW Monitoring and Performance Assessment account resulted from the competitive rebid of the geophysical logging subcontract with the realization of a subsequent reduction in contract costs. Additionally, the closure of the WSCF Lab and the subsequent transition to offsite laboratories has allowed the project has experience significantly lower analytical laboratory costs.
- Low flow rates and lower than expected concentrations at the 200-W P&T facility have resulted in lower than planned chemical costs. Some personnel (ops supervisor, ops specialist, and 2 pipe fitters) are currently assigned to PFP and their arrival/return has been delayed.

Contract-to-Date ($M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
Total	1,312.5	1,298.6	1,266.6	-14.0	-1.1%	31.9	2.5%	1,566.2	1,496.3	69.8

Numbers are rounded to the nearest $0.1 million.

CTD Schedule Performance (-$14.0M/-1.1%)
The variance is within reporting thresholds.

CTD Cost Performance (+$31.9M/+2.5%)
The variance is within reporting thresholds.

Variance at Completion (+$69.8M/+4.5%)
The variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST ($M)

	FY2017		
RL-0030 Soil and Groundwater Remediation	Projected Funding	Spending Forecast	Variance
Spending Forecast	130.7	106.5	24.2
Incremental Scope Pending Change Management	0.0	24.1	(24.1)
RL-0030 –Total	130.7	130.6	0.1

Numbers are rounded to the nearest $0.1 million

Funds/Variance Analysis

FY2017 initial budget guidance received from RL reflects expected funding of $130.7 million for RL-0030 project. The fiscal-year spending forecast (FYSF) of $130.6 million includes actions anticipated to achieve funding targets.

Critical Path Schedule
Critical path analysis can be provided upon request.

MILESTONE STATUS

Tri-Party Agreement milestones represent significant achievements in project execution. Enforceable Tri-Party Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key activities. The PMB Annual Update, implemented in September 2013, and subsequent approved baseline change requests (BCR) define CHPRC planning with respect to Tri-Party Agreement milestones. A Tentative Agreement for Tri-Party Agreement milestone series M-015, M-016, M-037, M-085 and M-094 was signed on October 26, 2015, and the final approval package was signed on May 25, 2016. The following table is a one-year look ahead of PBS RL-0030 Tri-Party Agreement enforceable milestones, non-enforceable target due dates and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
Completed Milestones					
M-015-79	Submit RI/FS Report/PP for 100-BC-1/2/5 OUs for GW & Soil	12/15/16	12/13/16		Complete
Milestones in Dispute					
M-015-112	Submit Draft B, 200-IS-1 Operable Unit Pipeline System Waste Sites RFI/CMS/RI/FS Work Plan to Ecology	2/28/14		TBD	Dispute resolution extended to March 16, 2017.
Milestones on Schedule or at Risk					
M-024-58J	Initiate Discussions of Well Commitments	6/1/17		6/1/17	On schedule
M-024-68-T01	Conclude Discussions of Well Commitments	8/1/17		8/1/17	On schedule
M-015-92A	Submit RFI/CMS & RI/FS Work Plan for 200-EA-1 OU to Ecology	9/30/17		9/6/17	On schedule
M-016-193	Complete the remedial design investigation of the SE chromium plume, including the installation of new wells and evaluation of the GW monitoring data and install monitoring wells needed for remedy performance monitoring as defined in the UP-1 RD/RA WP.	9/30/17		9/12/18	At risk, schedule extension discussion underway. Draft Tri-Party Agreement change control form provided to RL that provides justification to extend Tri-Party Agreement Milestone M-016-193 by one year to September 30, 2018.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	RL Due Date
RL Transmit Draft A 100-BC-5 RI/FS Report to Regulators for Review	12/6/16 (A)	12/13/16 (A)
RL Transmit Draft A 100-BC-5 PP to Regulators for Review	12/6/16 (A)	12/13/16 (A)
RL and Regulator Review of Draft Rev 0 100-NR-2 RI Report	11/17/16 (A)	2/14/17
RL Review of Decisional Draft 100-HR-3 RD/RAWP	3/22/17	4/20/17

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

R. M. Geimer
Vice President for
K Basin Operations and
Plateau Remediation
(KBO&PR)

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The project completed all of the RL-40 annual waste site and building surveillances. Shop fabrication for the REDOX roof repairs continued. The Hazard Review Board assessed the work package for removal of the REDOX roof ballast, and comment disposition is in process.

EMS Objectives and Target Status

None currently identified.

TARGET ZERO PERFORMANCE

	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	1	7	• 12/28/2016 - After performing assigned task at the north end of the Redox Facility, the employee was walking to his vehicle to leave the site. During this time, the employee slipped and fell on ice. He then left the site to notify his manager and safety rep. The employee was prejob and told of icy conditions. (24284)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0040 Accomplishments

- Operations/Maintenance:
  - Completed all RL-40 annual waste site and facility surveillances.
  - Completed staging tents, equipment, and waste boxes for the B Plant Pre-filter change out.
  - Completed PUREX Annual Surveillance.
  - Drafted work packages to separate lead paint contaminated legacy power poles from existing ERDF roll-off to sacrificial roll-off.
- Continued Progress on Canyon Stabilization Documents:
  - Completed facility walkdown and obtained RL signature for the 275EA Facility Status Change Form.
  - Dispositioned several REDOX SAP questions and determined those items requiring field verification.
  - REDOX Engineering Evaluation/Cost Analysis for public comment began on December 12, 2016.

- REDOX Roof:
  - Continued removal of yard waste to clear travel pathways.
  - Completed roofing steel structure material fabrication and scheduled delivery for early January.
  - Convened Hazard Review Board and commenced comment disposition for outstanding items.
  - Supported the design review of the 202S REDOX Roof recovery.
  - Performed Hazard Review Board (HRB) for roof removal activities – Tracking actions to completion.
  - Engineering issued roof loading plan to support placement of load hopper directly on REDOX roof – Plan currently under review.
  - Completed removal of the 120V power line at the North side of REDOX.

MAJOR ISSUES

None currently identified.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

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

Increased Confidence
No Change
Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0040/WBS-040				
Explanation of major changes to the project monthly stoplight chart: No major changes to the monthly stoplight chart in the month of December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
No realized risks for the month of December.				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
No critical risks identified in the month of December.				
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)				
Lifecycle Risk Triggers (Risk could be realized at any point of the project)				
D4-064: Aging Building Systems/ Components	Problems with aging building systems/ components (e.g., roofing/structures, etc.) result in inoperability or requires unscheduled maintenance/outages, resulting in cost impacts. **Risk Handling Strategy:** Accept **Probability:** Likely (75% to 90%) **Worst Case Impacts:** $2 million, 0 day			**Risk Trigger Metric:** During routine surveillance activities, unforeseen events cause systems to be compromised. This is a lifecycle risk and will continue through the CHPRC (September 30, 2018). **Mitigation action(s)** / **FC Date** / **%** None identified at this time. / N/A / N/A **Mitigation Assessment:** During monthly routine surveillance activities, it was identified that this risk was triggered based on several events with the PUREX Stack Sample System (i.e., bearing sheaves, belt replacement, damper repairs, heat trace failure, and sample line damaged). A pre-conceptual design has been provided to RL with an estimate for a like replacement of the entire PUREX stack sample system. CHPRC was provided a NTE to complete a detailed design package for the system and to start demolition and installation activities; however, it is expected the NTE amount will be expended early on during construction. The detailed design contract for the replacement system was initiated by the contractor in early December, and projected to finish in April 2017.
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified in the month of December.				

PROJECT BASELINE PERFORMANCE

Current Month

($M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)
Total	1.7	1.5	1.7	(0.2)	-11.2%	(0.1)	-7.5%

Numbers are rounded to the nearest $0.1 million

CM Schedule Performance: (-$0.2M/-11.2%)
The schedule variance is within the reporting threshold.

CM Cost Performance: (-$0.1M/-7.5%)
The cost variance is within the reporting threshold.

Contract-To-Date

($M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
Total	429.9	425.7	394.9	(4.2)	-1.0%	30.8	7.2%	473.9	447.9	26.0

Numbers are rounded to the nearest $0.1 million

Cost to date (CTD) Schedule Performance: (-$4.2M/-1.0%)

The schedule variance is within reporting thresholds.

CTD Cost Performance: (+$30.8M/+7.2%)
The favorable cost variance is due to prior year activity including:

- The majority of the CTD Cost Variance is from legacy work dating back to the American Recovery and Reinvestment Act (ARRA) time period.
- The remaining CTD favorable cost variance in base-funded work is due to efficiencies for Surveillance and Maintenance and D4 activities as a result of utilization of existing site equipment and fewer resources and Program Management utilizing fewer resources.

Variance at Completion (+$26.0M/+5.5%)

The favorable Variance at Completion is due to under runs in the Waste Identification Form (WIF) Development, Cold and Dark, and Demolish 212N, 212P, and 212R Projects during the ARRA Project. Efficiencies were gained by combining these activities into the D4 activities, thus reducing overall resource requirements.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST ($M)

	FY2017		
WBS 040/RL-0040 Nuclear Facility D&D	Projected Funding	Spending Forecast	Variance
Spending Forecast	36.1	22.2	13.9
Incremental Scope Pending Change Management	0.0	13.9	(13.9)
RL-0040 – Total	36.1	36.1	0

Numbers are rounded to the nearest $0.1 million.

Funds/Variance Analysis
Fiscal year (FY) 2017 projected funding for PBS RL-0040 is $36.1 million. The incremental scope pending includes remaining scope for Redox roof replacement, silo cleanout, sample gallery cleanout, PUREX stack sampling repair, PUREX AMs and RAWPS, DQO for PUREX Tunnels, and maintenance for B Plant and Redox.

Critical Path Schedule
Critical path analysis can be provided upon request.

MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB Annual Update, implemented in September 2013, and subsequent approved baseline change requests (BCR) define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a one-year look ahead of commitments and Tri-Party Agreement enforceable milestones and non-enforceable target due dates.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-250b	Submit to Ecology a three-year rolling prioritized schedule to implement waste site removal actions	3/31/2017		3/31/2017	On Schedule
M0-85-80A	Submit to Ecology secondary document, a DQO report to access structural integrity of PUREX storage tunnels 1 and 2.	9/30/2017		9/30/2017	On Schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	RL Due Date
RL Review of 242BBL RAWP	10/10/16 (A)	02/07/17
RL Review of 202S Demo Prep / D&D / Annex Action Memo	11/21/16 (A)	02/10/17
RL Sign on Facility Status Change Form for 275EA	11/30/16 (A)	12/01/16 (A)
RL Review of 221B Demo Prep & Stabilization of Legacy Vent System Action Memo	02/23/17	03/23/17
RL Review of 202S Demo Prep / D&D / Annex SAP	02/21/17	03/06/17
RL Review of 202A Demo Prep / Annex / Vent Mods Action Memo	03/06/17	04/03/17

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

R. M. Geimer
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C. J. Simiele
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Vice President for
Project Technical
Services (PTS)

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Support of Truthful Cost or Pricing Data deliverables for change order definitization of River Corridor Closure Contract (RCCC) scope continued in December. In addition, the project continued the following progress: 100K waste site remediation, 105-K West Fuel Storage Basin deactivation and demolition long range planning, 618-10 Burial Ground and 316-4 Waste Site remediation, 300-296 design for the 324 Building structural modifications and Mockup, and awarded contracts for the purchase and installation of mobile offices and infrastructure in the 300 Area and at the Mockup.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
17-EMS-KBOPR-OB1-T1	Increase compliance at KBOPR Project.	Develop compliance matrices for 100K CERCLA documents.	9/30/17	50%
17-EMS-KBOPR-OB2-T1	Universal Waste and Recycling Compliance and Spill Prevention.	Monitor and evaluate universal waste.	9/30/17	24%

TARGET ZERO PERFORMANCE

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	2	10	12/7/2016 – Employee experienced contusion of the left arm/elbow from overexertion during field activities, was transferred to HPMC for examination, and released without restrictions. (24259) 12/13/2016 – Employee performing fieldwork experienced a small laceration to the left middle finger while pulling posting materials from a box, was transferred to HPMC for evaluation, a whole body count was completed with a negative result, and was released without restrictions. (24282)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

RL-0041 Accomplishments

- 100K AB Waste Site Area Remediation:
  - Sampling and closure documentation development continues for the 18 chemical waste sites excavated near the head house in the AB Waste Site Area. A Remediation Site Verification Package for waste sites 126-KE-2, 100-K-14 & 50 and 1607-K2 is currently scheduled to be provided to EPA for approval in early February. A Verification Sample Instruction (VSI) is

being prepared for waste sites 100-K-25, 27, 35, 79, 98, & 101; and 120-KE-1, 2, 3, 4, 5, 6 & 9. The current schedule is to provide the VSI to EPA for approval in mid-March.

-
- 100K AF Waste Site Area Remediation:
  - Excavation of the 100-K-103 waste site continues and is 80 percent complete. Current completion date has slipped due to weather delays to February 13, 2017.

- 105-K West Fuel Storage Basin Deactivation
  - The draft long-range plan (LRP) for the deactivation and demolition of the K West Fuel Storage Basin (includes work breakdown structure, a preliminary schedule, and relative order of magnitude basis of estimate) was completed and presented to the RL Federal Project Director for funding consideration. RL has since authorized the purchase of a gamma spectrometer (gamma camera), which will be used for basin debris characterization. CHPRC cost estimating is reviewing the basis of estimate and plan to complete their review January 31, 2016. When complete and the comments have been resolved, the LRP will be uploaded to the CHPRC LRP file (TPA-M-16-178 and TPA-M-16-181).

- Remaining Closure Operations (RCO):
  - Resource Conservation and Recovery Act of 1976 (RCRA) Closure – CHPRC is resolving Ecology's comments on draft white paper, *1324-N Impoundment and 1324-NA Percolation Pond Groundwater Evaluation*, addressing total organics and sulfates for these dangerous waste management units. CHPRC has prepared a draft white paper for dangerous waste management units 1301N and 1325N and has provided the draft to RL for review.
  - Revegetation – Work started, but has since been delayed approximately two weeks because of snow cover and frozen ground. The project manager will conduct a walk-down to determine when work can restart this week. Shrub planting remains for areas 100N-CTA and 100-N-83; and ripping, re-contouring, re-seeding and shrub planting remains for area 100D.

- Surveillance & Maintenance:
  - Radiation area remedial action (RARA) Manager has added the quarterly and annual surveillances to Central Plateau Surveillance and Maintenance (CPS&M) procedures and the surveillances have been scheduled as routine activities.

- 618-10 Burial Ground:
  - 74 of 80 VPU Low Level Waste retrievals complete.
  - 53 of 80 VPU fixatives applied.
  - Steel VPU Mockup activities continued with planning, preparations, and procurement of essential equipment for VPU remediation.
  - 113 drums retrieved and characterized; 2,186 of the anticipated 2,254 contract to date (CTD).
  - 66 drums processed; 1,854 CTD.
  - 40 drums shipped to Perma-Fix Northwest (PFNW) for offsite processing.

- 316-4 Waste Site:
  - Crews completed construction of haul roads and established stockpile areas for overburden removal.
  - Completed the Project Startup Review (PSR) and associated activities.
  - Excavation began on November 29, 2016; 12,716 tons excavated.
  - Completed planning, staffing, and design for 316-4 remediation.

- 600-63 Waste Site:
  - Initiated planning and design activities.

324 Building Min Safe:
  - NCO training for opening/closing crane cell doors and operating in-cell cranes.
  - Replaced motor on EP-973 fan.

- 300-296 Soil Remediation Project:
  - During the monthly Integrated Project Team (IPT) on December 13, 2016, attended by representatives of RL, CHPRC, and the Defense Nuclear Facilities Safety Board (DNFSB) Field Office, the project team presented an enhancement to the planned approach to provide structural support by means of jet grouting, for the 324 Building during soil removal. The project then issued a Request for Information (RFI) to gain industry feedback for the planned jet grouting approach, and the responses are expected the week of January 16.
  - The annual update of the 324 Building safety basis (including incorporation of the soil spill accident comparison to waste spill) has been reviewed and is in final preparation for submittal to RL.
  - The major modification determination to the safety basis for the facility changes leading to the 300-296 soil remediation within the 324 Building has been transmitted to RL.
  - The soil-based waste spill accident calculation is released and a preliminary hazard and accident analysis is ongoing to support the soil removal addendum to be submitted next summer in accordance with the project plan.
  - The procurement of Master Slave Manipulators (MSMs) was initiated in accordance with the project plan. Manipulators intended for placement into the mockup are being fabricated and the projected delivery is currently early April 2017.
  - Four system procurement Requests for Information / Interest (RFI) were issued to gather information that will be used to refine the procurement plan and project schedule: the Transfer Mechanism System, the Remote Excavator Arm System, the Lights and Camera System, and the Floor Saw System.
  - A member of the DNFSB technical staff, David Cleaves, visited the Mock-up Facility on December 6, 2016, accompanied by Rudy Guercia / Sandy Trine (RL) and Brian Vance / Mike Johnson (CHPRC). A tour of the Mockup Facility was also conducted with representatives of the CHPRC procurement team to promote a better understanding of the project in support of upcoming procurement activities.
  - The bulk welding of the floor saw test frame is nearing completion, and power was applied to the custom saw controller test article confirming basic rotational functionality.
  - A remote radiological survey was completed in the air lock. The information has been evaluated to support the design and fabrication of shielding blocks that will be used during the airlock cleanout to reduce radiation levels for workers.
  - Design activities for the breathing air piping and electrical systems remains on track to support the installation and startup of the breathing air compressor in late February 2017. The initial entry into the airlock will be performed using powered air purifying respirator (PAPR) or self-contained breathing apparatus (SCBA).
  - Nuclear Chemical Operator training has been impacted by weather, however the project is systematically continuing training and qualifications and is expected to complete on track in February 2017.
  - Radiation Control Technicians (RCT) cycle training has been impacted by weather and WESF not releasing five RCTs for transfer to the 300-296 project as planned. The project is diligently progressing with training, and it will not impact the first airlock entry planned for March.

- Environmental Restoration Disposal Facility (ERDF):
  - Receipt of 28,990 tons by CHPRC fiscal year to date (FYTD).
  - Support of 618-10 special packaging authorization shipment.

MAJOR ISSUES

None currently identified.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

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

Increased Confidence
No Change
Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0041/WBS-041				
Explanation of major changes to the project monthly stoplight chart: No major changes to the monthly stoplight chart in the month of December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
RCC-316-4-09: 316-4 Discovery of Unexpected Waste	Discovery of unexpected waste/contamination, waste/contamination quantities above what is assumed, waste/contamination that is above and beyond COCs and/or waste profile, and/or waste/contamination is found in the assumed clean area of the design. Resulting in greater than planned RAD controls resulting in cost and schedule impacts. **Risk Handling Strategy:** Accept **Probability:** Very Low (<10%) **Worst Case Impacts:** $240K, 48 day			**Risk Event:** On Tuesday, November 29, 2016, CHPRC discovered debris (wood, metal, etc.) in the 316-4 overburden removal and then on Wednesday, November 30, 2016, radiological contaminated soil and contaminated debris (plastic and piping) that was buried in the top six feet of overburden at the 316-4 waste site. **Recovery Action Assessment:** CHPRC has realized cost and schedule impacts, resulting from this change in conditions. The impacts cannot be quantified until the extent of conditions and corrective actions are determined. CHPRC has and continues to perform all actions that may mitigate impacts; however, CHPRC reserves its right to an equitable adjustment. CHPRC plans to capture any scope and cost changes due to this discovery in the final TCoPD for the corresponding change proposal (CP 041 304 1600).
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
RCC-300-296-03: Mockup testing and qualification of remote equipment / process identifies major modification requirements.	Issues such as equipment interferences, equipment reliability, etc. arise during mockup or component testing, resulting in negative cost or schedule impacts during future production work. There is the potential for more frequent equipment repairs/full equipment change-outs than planned, which could result in cost and schedule impacts. **Risk Handling Strategy:** Control **Probability:** Low (10% to 25%) **Worst Case Impacts:** $86K, 80 days			**Risk Trigger Metric:** Risk could be triggered through the conduct of component testing or testing/training performed at the mockup that produced inadequate or unexpected test results. **Mitigation Assessment:** The Mockup is used primarily for training personnel for installation, removal, and operation of soil remediation equipment in the 324 Building. Remotely operated equipment (e.g. floor saw and REAs) could experience higher failure rates and/or performance issues from lack of thorough demonstration testing. By December month end, the project issued four of four planned Requests for Information / Interest (RFIs): the Remote Excavation Arm System, the Transfer Mechanism System, Lights and Cameras System, and the Floor Saw System. The project has received vendor comments on all four RFIs and is currently reviewing the information. This data supports revising / accelerating procurements for key systems to be tested at the Mockup for risk mitigation.

Risk recovery action(s)	Risk Date	FC Date	%
Secure event, bound area of contamination, and critique event	11/29/16	Complete	100
Initial survey of heavy equipment and truck surveys		Complete	100
Send backfill stockpile to ERDF		02/24/17	0
Update Change Proposal to align with change in planning assumptions		03/31/17	0

Mitigation action(s)	FC Date	%
Conduct Concrete Floor Saw Test (cut rate, embedment cutting) and determine P.O.P.	04/13/17	0
Perform Construction Acceptance Test at Mockup Facility	10/31/17	0

<table>
<tr>
<td>RCC-300-296-11: Current REC cell seismic analysis is inadequate</td>
<td>Regulatory agencies require different seismic analysis criteria than the UBC 1961 methodology that was originally used, resulting in additional design and more significant structural alterations to 324 Building, which would negatively impact project cost and schedule.
Risk Handling Strategy: Control

Probability: Low (10% to 25%)
Worst Case Impacts: $288K, 48 days</td>
<td>  </td>
<td>  </td>
<td>Risk Trigger Metric:
This risk would be triggered at the same time it is realized with regulatory agencies requiring different seismic analysis criteria than what was used in the original estimates.

<table>
<tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr>
<tr><td>Engage DNFSB early concerning seismic design criteria</td><td>Ongoing</td><td>N/A</td></tr>
</table>

Mitigation Assessment:
The original design of the 324 Building was based on the 1961 Uniform Building Code (UBC). Facility structural modifications have been analyzed using the UBC 1961 methodology (Section 7.8, KUR-1782F-CALC-C001, 324 BUILDING REC STRUCTURAL STABILITY EVALUATION) as the most appropriate and cost effective approach given the overall intent to remediate the building following soil removal.
On November 16, 2016, a presentation was provided to the Hanford Site DNFSB Field Office and Technical Representatives as an update on the state of the project since the last formal communication in mid-2015. The discussion centered on the progression of the design and project plan and a specific discussion of the planned submission of safety documentation. A recurring update process, on a bi-monthly basis, was also proposed and accepted by the DNFSB representatives. The first update is planned for February 2017. This early engagement with the DNFSB will minimize the probability that changes to the seismic code of record will be required.</td>
</tr>
<tr><td colspan="5">High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</td></tr>
<tr><td colspan="5">Lifecycle Risk Triggers (Risk could be realized at any point of the project)</td></tr>
<tr>
<td>RCC-618-10-07: Contamination Event at 618-10 Waste Site</td>
<td>During fieldwork activities, a contamination event occurs that requires corrective actions, resulting in schedule and cost impacts.

Risk Handling Strategy: Accept

Probability: Low (10% to 25%)
Worst Case Impacts: $1,288K, 64 days</td>
<td>  </td>
<td>  </td>
<td>Risk Trigger Metric:
Heavy rainfall or high winds could indicate that a contamination event is about to occur. Biological spread of contamination is also possible.

<table>
<tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr>
<tr><td>Post-Transition due diligence perimeter surveys completed.</td><td>Complete</td><td>100</td></tr>
<tr><td>Enhanced radiological controls implemented on project.</td><td>Ongoing</td><td>N/A</td></tr>
</table>

Mitigation Assessment:
No changes in the month of December.
Much of the 618-10 work is performed in hazardous and radioactive environments. By its nature, the work can be dangerous. Although CHPRC procedures, safety programs, and training programs are designed to minimize the potential loss of control of hazardous/radioactive substances, such an occurrence could be deemed to be significant enough to warrant corrective actions outside the baseline (i.e. a prolonged work shutdown).</td>
</tr>
<tr>
<td>RCC-618-10-09: Discovery of Unexpected Waste</td>
<td>Discovery of unexpected waste/contamination, waste/contamination quantities above what is assumed, waste/contamination that is above and beyond COCs or waste profile, or waste/contamination is found in the assumed clean area of the design. Resulting in greater than planned RAD controls resulting in cost and schedule impacts.

Risk Handling Strategy: Accept

Probability: Very Low (<10%)
Worst Case Impacts: $640K, 64 days</td>
<td>  </td>
<td>  </td>
<td>Risk Trigger Metric:
Risk has been triggered by discovery of more drums than planned.
Air/radiation monitoring surveys could indicate unexpected contamination found during excavation activities.

<table>
<tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr>
<tr><td>Closely managing waste inventories and discoveries and making adjustments as required.</td><td>Ongoing</td><td>N/A</td></tr>
</table>

Mitigation Assessment:
No changes in the month of December.
The estimate for the remediation of the 618-10 waste site included an assumed amount of additional drums still to be remediated. The project has identified unexpected additional drums that were not planned or estimated. The project will continue to closely monitor and manage waste inventories and any new discoveries.</td>
</tr>
<tr><td colspan="5">Unassigned Risks (Pending ownership of identified risks/opportunities)</td></tr>
<tr><td colspan="5">No unassigned risks identified in the month of December.</td></tr>
</table>

PROJECT BASELINE PERFORMANCE
Current Month
($M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)
Total	9.4	7.9	10.1	(1.5)	-16.3%	(2.2)	-28.3%

Numbers are rounded to the nearest $0.1 million

CM Schedule Performance (-$1.5M/-16.3%)

The unfavorable schedule variance is partially due to completing out year baseline work scope ahead of schedule in prior months for 100K Waste Site Area AB (-$218K). The variance also reflects delays associated with the 300-296 design scope and documents, including design for modifications at the Mockup, design/fabrication of the 324 Airlock Rail System, facility structural design and safety analysis reports. Delays are due to multiple factors including resources assigned to higher priority tasks, change in procurement and structural design strategy, and inefficiencies due to newly acquired staff who are unfamiliar with PRC procedures and standard practices (-$419K). Remaining Closure Operations experienced delays placing the re-vegetation contract and starting work package development for the removal of MO-226 (-$234K). The remainder of the variance is due to miscellaneous scope (-$124K). Due to the discovery of contaminated soil and material, delays at the 316-4 Waste Site also contributed to the variance (-$487K).

CM Cost Performance (-$2.2M/-28.3%)

The unfavorable cost variance is partially due to higher costs for the remediation contractor at 100K Waste Site AF. A portion of the costs were for unplanned standby time due to ERDF can availability (-$384K). The 300-296 Project experienced a negative variance associated with material costs for personal protective equipment (PPE) to be used for training on 324 Airlock/Cell Cleanout activities. Investigation is in progress as the suits were expected to be provided at no cost since excessed by PFP. 300-296 also experienced a negative cost variance resulting from strategy changes in procurement and structural design (baseline activities no longer reflect the project path forward (-$466K). The revised strategies will improve the overall project completion date. A BCR is planned for February to update the PMB with the new procurement and design strategy. The purchase of four excavators for the 618-10 VPU retrieval/loadout activities contributed to the current month cost variance (-$1.7M). CHPRC assumed that the previous contractor would procure the excavators prior to contract transition, and they would be provided to CHPRC as Government Furnished Equipment. The previous contractor did not procure the excavators as assumed.

Contract-to-Date ($M)

WBS 041/ RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
Total	372.4	379.1	344.0	6.7	1.8%	35.1	9.3%	536.9	489.6	47.3

Numbers are rounded to the nearest $0.1 million

CTD Schedule Performance (+$6.7M/+1.8%)

The schedule variance is within reporting thresholds.

CTD Cost Performance (+$35.1M/+9.3%)

The favorable cost variance is primarily due to completing Confirmatory Sampling No Action (CSNA) waste sites early and under cost. In addition, less demolition was required for the KE Sedimentation Basin and there were underruns in G&A and Direct Distributable costs. This was partially offset by the cost overruns in prior years for the Utilities Project. Low waste volumes at ERDF have created efficiencies in labor and materials, which also contributes to the favorable cost variance.

Variance at Completion (+$47.3M/+8.8%)

The Variance at Completion is primarily due to implementation of planned efficiencies.

Contract Performance Report Formats are provided in Appendix A.

FUNDS vs. SPEND FORECAST ($M)

	FY2017		
WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Projected Funding	Spending Forecast	Variance
Spending Forecast	139.4	100.4	39.0
Incremental Scope Pending Change Management	0	31.2	(31.2)
RL-0041 - Total	139.4	131.6	7.8

Numbers are rounded to the nearest $0.1 million.

Funds/Variance Analysis:

Fiscal year (FY) 2017 projected funding for PBS-0041 is $139.4 million.

Critical Path Schedule

Critical Path Analysis can be provided upon request.

MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB Annual Update, implemented in September 2013, and subsequent approved baseline change requests (BCR) define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a one-year look ahead of commitments and Tri-Party Agreement enforceable milestones and non-enforceable target due dates.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-00A	Complete all response actions for 100 Areas Except GW in M-016-00 and 100 K addressed in M-016-00C	3/31/2017		1/03/2017	Ahead of Schedule
M-016-164	Complete 100-N Interim Response Actions & Close 100-N Ancillary Facilities Area of Contamination	3/31/2017		1/03/2017	Ahead of Schedule

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

None currently identified.

Section G
Fast Flux Test Facility Closure
(RL-0042)

R. M. Geimer
Vice President for
K Basin Operations and
Plateau Remediation
(KBO&PR)

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

EMS OBJECTIVES AND TARGET STATUS

None currently identified.

TARGET ZERO PERFORMANCE

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

KEY ACCOMPLISHMENTS

RL-0042 Accomplishments

- Continued functional review/comment incorporation on the engineering change request (ECR) and subcontractor scope of work (SOW) for replacement of the P-16 pump from a surface driven line shaft turbine with a submersible motor pump.
- Received the procured P-16 replacement pump/motor unit.
- Started development of an ECR to change the wiring connections to the Q-38 and Q-43 heaters in tanks T-58 and T-87 in order to meet code requirements.
- Completed a temporary power hookup of the Q-38 heater for T-58 to keep water from freezing while waiting for the ECR to be completed and new/different parts to be ordered for permanent installation.
- Completed the draft ECR to replace the FFTF contactor to resolve maintenance issues with the 481 Building motor control centers.
- Continued developing an ECR for subcontractor installation of the new restroom trailer being procured for the 400 Area.

MAJOR ISSUES

None currently identified.

RISK MANAGEMENT STATUS

No key risks currently identified.

PROJECT BASELINE PERFORMANCE
Current Month
($M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)
Total	0.2	0.2	0.2	(0.0)	-3.5%	-0.1	-41.2%
Numbers are rounded to the nearest $0.1M							

CM Schedule Performance: (-$0.0M/-3.5%)
The schedule variance is within reporting thresholds.

CM Cost Performance: (-$0.1M/-41.2%)
The cost variance is within reporting thresholds.

Contract-to-Date
($M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
Total	22.6	22.6	18.5	(0.0)	-0.1%	4.1	18.2%	26.5	23.5	3.0
Numbers are rounded to the nearest $0.1 million										

CTD Schedule Performance (-$0.0M/-0.1%)
The schedule variance is within reporting thresholds.

CTD Cost Performance (+$4.1M/+18.2%)
The cost variance reflects efficient use of resources to support deactivation activities.

Variance at Completion (+$3.0M/+11.3%)
The Variance at Completion is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FUNDS VS. SPEND FORECAST ($M)

	FY2017		
RL-0042 FFTF Closure	**Projected Funding**	**Spending Forecast**	**Variance**
Spending Forecast	3.9	2.2	1.7
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0042 – Total	3.9	2.2	1.7

Numbers are rounded to the nearest $0.1 million

Funds Analysis
Fiscal year (FY) 2017 projected funding for PBS RL-0042 is $3.9 million.

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

MILESTONE STATUS

None currently identified.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS/DECISIONS

None currently identified.

Appendix A
Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

ch2m SM

December 2016
CHPRC-2016-12, Rev. 1
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) 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788	b. PHASE	b. TO (YYYYMMDD) 2016 / 12 / 25
	c. TYPE CPAF / d. SHARE RATIO	c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18	

5. CONTRACT DATA

a. QUANTITY	b. NEGOTIATED COST	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK	d. TARGET PROFIT/FEE	e. TARGET PRICE	f. ESTIMATED PRICE	g. CONTRACT CEILING	h. ESTIMATED CONTRACT CEILING	i. DATE OF OTB/OTS (YYYYMMDD)
1	5,581,041	153,612	241,230	5,822,271	5,822,607	5,822,271	5,822,607	

6. ESTIMATED COST AT COMPLETION

	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)
a. BEST CASE	5,512,556		
b. WORST CASE	5,628,106		
c. MOST LIKELY	5,581,377	5,734,653	153,276

7. AUTHORIZED CONTRACTOR REPRESENTATIVE

a. NAME (Last, First, Middle Initial): Dickerson, Kala K

b. TITLE: Prime Contract Compliance Manager

c. SIGNATURE

d. DATE SIGNED (YYYYMMDD)

8. PERFORMANCE DATA

Control Account.PBS / ITEM (1)	CURRENT PERIOD BUDGETED COST WORK SCHEDULED (2)	CURRENT PERIOD BUDGETED COST WORK PERFORMED (3)	CURRENT PERIOD ACTUAL COST WORK PERFORMED (4)	CURRENT PERIOD VARIANCE SCHEDULE (5)	CURRENT PERIOD VARIANCE COST (6)	CUMULATIVE TO DATE BUDGETED COST WORK SCHEDULED (7)	CUMULATIVE TO DATE BUDGETED COST WORK PERFORMED (8)	CUMULATIVE TO DATE ACTUAL COST WORK PERFORMED (9)	CUMULATIVE TO DATE VARIANCE SCHEDULE (10)	CUMULATIVE TO DATE VARIANCE COST (11)	REPROGRAMMING ADJUSTMENTS COST VARIANCE (12a)	REPROGRAMMING ADJUSTMENTS SCHEDULE VARIANCE (12b)	REPROGRAMMING ADJUSTMENTS BUDGET (13)	AT COMPLETION BUDGETED (14)	AT COMPLETION ESTIMATED (15)	AT COMPLETION VARIANCE (16)
RL-0011 Nuclear Mat Stab & Disp PFP	2,567	1,063	9,406	-1,504	-8,344	975,847	920,040	971,725	-55,807	-51,685	0	0	0	980,328	1,054,631	-74,303
RL-0012 SNF Stabilization & Disp	6,928	8,487	7,256	1,558	1,230	640,570	643,258	615,684	2,688	27,574	0	0	0	740,046	712,849	27,196
RL-0013 Solid Waste Stab & Disp	8,215	6,527	6,654	-1,688	-127	1,112,939	1,114,042	1,044,139	1,103	69,902	0	0	0	1,341,140	1,286,937	54,203
RL-0030 Soil &Water Rem-Grndwtr/Vadose	10,807	9,278	8,412	-1,529	866	1,312,534	1,298,568	1,266,629	-13,966	31,938	0	0	0	1,565,252	1,495,406	69,846
RL-0040 Nuc Fac D&D - Remainder Hanfrd	1,730	1,536	1,651	-194	-115	429,888	425,669	394,892	-4,218	30,777	0	0	0	472,334	446,330	26,004
RL-0041 Nuc Fac D&D - RC Closure Proj	9,424	7,891	10,128	-1,533	-2,237	372,445	379,121	344,021	6,676	35,100	0	0	0	526,184	478,881	47,304
RL-0042 Nuc Fac D&D - FFTF Proj	168	162	229	-6	-67	22,625	22,611	18,501	-15	4,109	0	0	0	26,455	23,474	2,981
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														14,048	14,048	0
e. SUBTOTAL	39,839	34,944	43,738	-4,895	-8,794	4,866,847	4,803,308	4,655,592	-63,540	147,716	0	0	0	5,665,788	5,512,556	153,232
f. MANAGEMENT RESERVE														68,821		
g. TOTAL	39,839	34,944	43,738	-4,895	-8,794	4,866,847	4,803,308	4,655,592	-63,540	147,716	0	0	0	5,734,609		

9. RECONCILIATION TO CONTRACT BUDGET BASELINE

a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE									-63,540	147,716				5,734,609	5,512,556	222,053

** In regards to RL-0041, CHPRC has implemented the River Corridor Closure Contract (RCCC) transitioned scope into the Performance Measurement Baseline (PMB) for Earned Value Management (EVM) reporting purposes. When the change orders (CO #304, #305, #306) are definitized, BCRs will be processed to align the PMB with the definitized values.*

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)* 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788		b. PHASE	b. TO *(YYYYMMDD)* 2016 / 12 / 25
	c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO: ; X ; YES *(YYYYMMDD)* 2009 / 09 / 18	

5. PERFORMANCE DATA

WBS.Resp Org Group	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE					BUDGETED	ESTIMATED	VARIANCE
ITEM	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	COST VARIANCE	SCHEDULE VARIANCE	BUDGET			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12a)	(12b)	(13)	(14)	(15)	(16)
34 - Env Program & Strategic Plng	873	816	679	-57	138	66,892	66,679	62,053	-214	4,626	0	0	0	82,843	80,745	2,098
35 - Business Services	0	0	0	0	0	472,524	472,524	448,542	0	23,982	0	0	0	472,524	448,542	23,982
36 - Prime Contract & Proj Integr	141	141	124	0	17	5,489	5,489	2,989	0	2,500	0	0	0	8,414	5,865	2,550
3B - PFP Closure Project	2,567	1,063	9,395	-1,504	-8,332	888,588	832,781	892,322	-55,807	-59,541	0	0	0	893,069	975,097	-82,028
3C - Waste & Fuels Management Project	8,732	6,999	7,253	-1,733	-255	1,010,056	1,011,064	940,571	1,008	70,493	0	0	0	1,252,543	1,195,717	56,826
3D - Soil & Groundwater Remediation	9,886	8,414	7,691	-1,472	723	1,145,905	1,132,152	1,098,630	-13,753	33,522	0	0	0	1,381,624	1,307,701	73,922
3G - K Basin Oper & Plateau Remediation Project	11,607	12,210	11,783	604	427	1,254,957	1,261,175	1,189,657	6,218	71,518	0	0	0	1,470,119	1,396,187	73,932
3H - 618-10 and ERDF	6,034	5,300	6,813	-733	-1,512	22,436	21,444	20,827	-992	617	0	0	0	90,603	88,654	1,949
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														14,048	14,048	0
e. SUBTOTAL *(Performance Measurement Baseline)*	39,839	34,944	43,738	-4,895	-8,794	4,866,847	4,803,308	4,655,592	-63,540	147,716	0	0	0	5,665,788	5,512,556	153,232
f. MANAGEMENT RESERVE														68,821		
g. TOTAL	39,839	34,944	43,738	-4,895	-8,794	4,866,847	4,803,308	4,655,592	-63,540	147,716	0	0	0	5,734,609		

** In regards to RL-0041, CHPRC has implemented the River Corridor Closure Contract (RCCC) transitioned scope into the Performance Measurement Baseline (PMB) for Earned Value Management (EVM) reporting purposes. When the change orders (CO #304, #305, #306) are definitized, BCRs will be processed to align the PMB with the definitized values.*

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE			DOLLARS IN THOUSANDS	Form Approved OMB No. 0704-0188
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA	2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:	3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009		4. REPORT PERIOD a. FROM: 2016/11/21 b. TO: 2016/12/25

5. CONTRACT DATA

a. ORIGINAL NEGOTIATED COST	b. NEGOTIATED CONTRACT CHANGE	c. CURRENT NEGOTIATED COST (A + B)	d. ESTIMATED COST AUTH UNPRICED WORK	e. CONTRACT BUDGET BASE (C + D)	f. TOTAL ALLOCATED BUDGET	g. DIFFERENCE (E - F)
4,312,366	$1,268,675	$5,581,041	$153,612	$5,734,653	$5,734,609	$44

h. CONTRACT START DATE	i. DEFINITIZATION DATE	j. PLANNED COMPL DATE	k. CONT COMPLETION DATE	l. EST COMPLETION DATE
6/19/2008	6/19/2008	9/30/2018	9/30/2018	9/30/2018

6. PERFORMANCE DATA

BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)

ITEM	BCWS CUM TO DATE	BCWS FOR REPORT PERIOD	SIX MONTH FORECAST +1 Jan-17	+2 Feb-17	+3 Mar-17	+4 Apr-17	+5 May-17	+6 Jun-17	FY09-13	FY14	FY15	FY16	FY17	FY18	UNDISTRIB BUDGET	TOTAL BUDGET
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
a. PM BASELINE																
(BEGIN OF PERIOD)	**4,827,008**	**39,008**	**35,276**	**37,910**	**42,917**	**36,839**	**36,244**	**42,247**	**3,391,477**	**391,653**	**471,323**	**504,826**	**447,632**	**438,598**	**6,285**	**5,651,794**
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																
BCR-011-17-001R0 - Incorporate CO #313, Initiate Characterization/Sampling Analysis of 236-Z and 242-Z Facilities													**350**			**350**
BCR-011C-17-003R0 - PFP CAP 2 Demolition Equipment MR Draw													**477**			**477**
BCR-012C-17-007R0 - CRTS Procurement MR Draw													**1,527**	**300**		**1,827**
BCR-030-17-006R0 - Incorporate CO #316, GW Engineering Reports & Monitoring Plans for DWMUs													**1,008**			**1,008**
BCR-030-17-007R0 - Incorporate CO #312 Biomobilization and Biointrusion Evaluation Plan													**350**			**350**
BCR-030-17-008R0 - RL-030 TPA Milestone Schedule Coding Revisions													**0**			**0**
BCR-041-17-007R0 - Incorporate CO #305, Infrastructure Upgrades and Trailer Purchases													**2,219**			**2,219**
BCR-PRC-17-009R0 - Detailed planning for T Plant Readiness Activities to Support K Basin Sludge Retrieval													**(2,549)**	**2,549**		**0**
BCR-041C-17-008R0 - PBS RL-041 Undistributed Budget Adjustments December 2016															**0**	**0**
BCR-PRC-17-011R0 - Undistributed Budget Adjustments December 2016															**7,763**	**7,763**
BCRA-PRC-17-010R0 - HPIC Updates December 2016													**0**			**0**
BCRA-PRC-17-012R0 - HPIC Updates per Communication CH1611-10													**0**			**0**
c. PM BASELINE (END OF PERIOD)	**4,866,847**	**39,839**	**36,304**	**38,984**	**43,875**	**37,771**	**36,563**	**42,306**	**3,391,477**	**391,653**	**471,323**	**504,826**	**451,014**	**441,447**	**14,049**	**5,665,788**
7. MANAGEMENT RESERVE																**68,821**
8. TOTAL																**5,734,609**

** In regards to RL-0041, CHPRC has implemented the River Corridor Closure Contract (RCCC) transitioned scope into the Performance Measurement Baseline (PMB) for Earned Value Management (EVM) reporting purposes. When the change orders (CO #304, #305, #306) are definitized, BCRs will be processed to align the PMB with the definitized values.*

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)* 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788		b. PHASE	b. TO *(YYYYMMDD)* 2016 / 12 / 25
	c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO [ ] 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)* SIX MONTH FORECAST BY MONTH *(Enter names of months)* +1 JAN 2017 (4)	+2 FEB 2017 (5)	+3 MAR 2017 (6)	+4 APR 2017 (7)	+5 MAY 2017 (8)	+6 JUN 2017 (9)	ENTER SPECIFIED PERIODS REMAIN FY17 (10)	FY18 (11)	FY19-LC (12)	AT COMPLETION (15)
300 - Office of the President	6	670	5	6	6	6	6	6	17	63	0	783
303 - Internal Audit	4	433	5	5	5	5	5	5	15	60	0	537
304 - General Counsel	5	406	5	5	5	5	5	5	15	60	0	510
31 - Communications	9	943	9	9	9	9	9	9	27	108	0	1132
32 - Safety Health Security & Quality	52	6693	64	65	65	65	65	65	192	785	0	8058
34 - Env Program & Strategic Plng	39	4451	44	45	45	46	44	45	130	602	0	5452
35 - Business Services	62	7114	73	75	75	75	75	75	223	772	0	8558
36 - Prime Contract & Proj Integr	62	4471	68	70	71	70	70	70	205	701	0	5795
38 - Project Technical Services	30	5289	64	67	67	67	67	67	197	426	0	6311
3B - PFP Closure Project	352	46494	356	372	389	350	252	157	370	129	0	48868
3C - Waste & Fuels Management Project	372	46964	393	331	327	338	335	335	976	4199	694	54893
3D - Soil & Groundwater Remediation	297	33559	263	277	289	286	292	285	829	3460	768	40307
3G - K Basin Oper & Plateau Remediation Pro	364	44466	402	366	364	360	345	352	1036	3801	212	51704
3H - 618-10 and ERDF	58	224	176	171	165	162	156	160	401	274	0	1890
g. TOTAL DIRECT	1712	202177	1926	1864	1881	1845	1726	1636	4631	15441	1674	234800

** In regards to RL-0041, CHPRC has implemented the River Corridor Closure Contract (RCCC) transitioned scope into the Performance Measurement Baseline (PMB) for Earned Value Management (EVM) reporting purposes. When the change orders (CO #304, #305, #306) are definitized, BCRs will be processed to align the PMB with the definitized values.*

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

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME CH2M HILL Plateau Remediation Company	**a. NAME** Plateau Remediation Contract		**a. NAME** Plateau Remediation Contract	**a. FROM (YYYY/MM/DD)** **2016/11/21**
b. LOCATION (Address and ZIP Code) Richland, WA 99354	**b. NUMBER** DE-AC06-08RL14788		**b. PHASE** Base	**b. TO (YYYY/MM/DD)** **2016/12/25**
	c. TYPE CPAF	**d. SHARE RATIO**	**c. EVMS ACCEPTANCE** **2009/09/18** **NO YES X**	

	BCWS	BCWP	ACWP	SV in $	SV in %	CV in $	CV %	SPI	CPI
Current:	39,839	34,944	43,738	(4,895)	-12.3%	(8,794)	-25.2%	0.88	0.80
Cumulative:	4,866,847	4,803,308	4,655,592	(63,540)	-1.3%	147,716	3.1%	0.99	1.03
	BAC	**EAC**	**VAC in $**	**VAC in %**	**TCPI**				
At Complete:	5,665,788	5,512,556	153,232	2.7%	1.01				

Explanation of Variance/Description of Problem:

Current Period Schedule Variance: The current month negative schedule variance is primarily due to PBS RL-0013 shipments shut down due to freezing temperatures and icy roads delaying Perma-Fix Northwest (PFNW) return shipments of TC152 and TC153 and shipment of TC155 and TC156 to PFNW. This is partially offset by PBS RL-0012 accelerating the field schedule by working overtime in order to achieve sludge retrievals by 2018.

Current Period Cost Variance: The current month negative cost variance is primarily due to PBS RL-0011 delay in completion of the PFP Project to achieve slab on grade. The delay is causing a needed extension of Min Safe and Maintenance resources without BCWS to support the remaining D&D work scope until the facility becomes ready for demolition. In addition; asbestos abatement, E4 duct removal, and process vacuum removal are all requiring more time and additional resource quantities to complete work as a result of confined spaces and the activities are more complex than originally assumed. Also contributing to the current month negative cost variance is PBS RL-0041 unplanned equipment purchases. The variance is partially offset due to PBS RL-0012 efficiencies achieved by centralizing Program Management responsibilities to reduce overall resource requirements to the PBS.

Cumulative Schedule Variance: The variance is within reporting thresholds.

Cumulative Cost Variance: The variance is within reporting thresholds.

Impact:

Current Period Schedule: The lifecycle EAC has been updated. No significant impact overall.
Current Period Cost: PBS RL-0011 unexpected impacts (additional E4 and process vacuum set-up, asbestos interferences) has impacted the ability to finish the project within the planned budget.

Cumulative Schedule: N/A

Cumulative Cost: N/A

Corrective Action:

Current Period Schedule: No Corrective actions, the EAC has been adjusted accordingly.

Current Period Cost: PBS RL-0011 previous plans to grout 234-5Z drain lines have been modified to allow for epoxy to be utilized instead. Epoxy will improve the cost and schedule variance as materials are cheaper and fewer resources will be required. Epoxy will help lock down contamination in the drain lines and make for easier removal during pre-demo and demo phases. The project also plans to hire 20 additional insulators to help accelerate asbestos abatement. The additional resources will temporarily assist the current asbestos crews with large sections of abatement.

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 contract scope within budget and is currently projecting a Variance at Completion of $153.2 million with $68.8 million of Management Reserve (MR) for a total positive variance of $222 million. For December, the project was 12.3 percent behind schedule and 25.2 percent over planned cost. Contract to Date (CTD), the project was 1.3 percent behind schedule and 3.1 percent under planned cost.

There were four significant BCRs in the period that impacted the PMB; BCR-012C-17-007R0 – *ECRTS Procurement MR Draw*; BCR-030-17-006R0 – *Incorporate CO #316, GW Engineering Reports & Monitoring Plans for DWMUs*; BCR-041-17-007R0 – *Incorporate CO #305, Infrastructure Upgrades and Trailer Purchases*, and BCR-PRC-17-011R0 – *Undistributed Budget Adjustments December 2016*.

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

Variance in Performance BAC and EAC: The variance at complete (VAC) between the BAC and EAC this month is a + $153.2 million, +2.7% and is within reporting thresholds.

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

Format 1 and 3 Contract Data: **Contract Price Adjustments**

CPs - In Process		
	Total Authorized Unpriced Work	$153,612
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	Grand Total Adjustments	$153,612

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

Undistributed Budget Activity

BCR Number	Title	PBS	Fiscal Year	UB
BCR-041C-17-008R0	*PBS RL-041 Undistributed Budget Adjustments December 2016*	RL-0041	2017 - 2018	$0K
BCR-PRC-17-011R0	*Undistributed Budget Adjustments December 2016*	RL-0011 RL-0013 RL-0030 RL-0040 RL-0041	2017-2018	$7,763K

The Undistributed Budget increased by $7,763K.

Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
BCR-011C-17-003R0	*PFP CAP 2 Demolition Equipment MR Draw*	RL-0011	2017 - 2018	$-477K
BCR-012C-17-007R0	*ECRTS Procurement MR Draw*	RL-0012	2017 - 2018	$-1,827K

Overall, there was a decrease in Management Reserve (MR) of $2,304K during December.

Fee Activity

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2017 - 2018	N/A

Overall, there was no change to Fee during December.

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

Prepared by:	Date:	Approved by:	Date:
Project Control Staff	1/23/2017		

** In regards to RL-0041, CHPRC has implemented the River Corridor Closure Contract (RCCC) transitioned scope into the Performance Measurement Baseline (PMB) for Earned Value Management (EVM) reporting purposes. When the change orders (CO #304, #305, #306) are definitized, BCRs will be processed to align the PMB with the definitized values.*

Appendix B
Project Services and Support
(WBS 000)

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

M. A. Wright
Vice President for
Project Technical
Services

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

D. A. Millikin
Director of
Communications

R. M. Millikin
Vice President for
Prime Contract and
Project Integration

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

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROGRAM SUMMARY

Project Services and Support functional activities continue to provide support and technical services to all CH2M HILL Plateau Remediation Company (CHPRC) projects as well as central management of cross-cutting services.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
17-EMS-ADMIN-OB1-T1	Reduce energy intensity.	Increase facility occupancy rates to greater than 83 percent by compressing occupancy and vacating underutilized facilities. Vacated/unoccupied facilities declared unusable and designated inactive placed in Care Taker system.	9/30/17	0%
17-EMS-ADMIN-OB2-T1	Maximize the acquisition and use of environmentally preferable products in the conduct of operations.	Establish/utilize green catalogs to maximum extent for products beyond office supply purchases on the web site.	10/9/17	0%
17-EMS-PTS-OB1-T1	Universal Waste, Recycling Compliance, Spill Prevention, and Satellite Accumulation Area Inspections.	Monitor and evaluate universal waste, other recycling, and satellite accumulation areas for compliance with CHPRC procedures and WAC 173-303 regulations.	9/30/17	24%
17-EMS-PTS-OB2-T1	Monthly Chemical Management Inspection.	Ensure chemical products are accurately tracked, maintained, and excessed/disposed. Perform quarterly assessment on chemical inventory locations.	9/30/17	24%

TARGET ZERO PERFORMANCE

	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	3	7	• 12/06/16 – Employee grabbed a chair and swung it into an open area and felt a twinge in back (24257) • 12/12/16 – Employee slipped and fell on icy sidewalk, resulting in scrapes to wrist. (24263) • 12/26/16 – Employee was carrying poster board into the Federal Building when the wind caught the board, causing employee to fall in rocks, resulting in small cuts and a bruise to hip. (24285)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Safety, Health, Security, and Quality (SHS&Q)

- There were three first aid cases during the month of December in the functional groups.
  - o Occupational Safety and Industrial Hygiene (OS&IH) accomplishments:
    - Updated CHPRC Asbestos Awareness Training course material.
    - Developed and disseminated two Special Safety Bulletins communicating respiratory protection equipment requirements.
  - o Radiological Control accomplishments:
    - Updated Solid Waste Processing (SWP) characterization, dosimetry, and workplace air monitoring technical evaluation.
    - Held Quarterly RadCon Leadership meeting.
  - o Nuclear Operations Support & Compliance accomplishments:
    - Correspondence sent to Department Of Energy Richland Operations Office (RL):
      - Letter, CHPRC-1605130, dated December 7, 2016, *Transmittal of PRC-SRP-00011, Revision 0, Major Modification Determination for 300-296 Soil Removal Project.*
    - Correspondence received from RL:
      - Email, 1605819, dated December 21, 2016, *1605819 – Notice to Proceed with Changed Work Management of the Hanford Sitewide Transportation Safety Document.*
    - Other:
      - Prepared *Documentation of Triennial Review of the Hazards Survey Field Remediation, D4, Mission Completion (Formerly HazSurvey Volume 1 Rev. 2), CHPRC-02936, Revision 0, and the Hazards Survey Emergency Restoration Disposal Facility, Formerly Haz Survey Volume 2, Rev. 2, CHPRC-03047, Revision 0.*

- Completed HNF-39004, *IP2-1800-TL Tiedown on a 10-ft Trailer, HO-64-05716*, Revision 2.
- Completed CHPRC-03146, *Internal Load Securement Plan for Strongbacks within 18000TL Shipping Containers*, Revision 0.
- Transitioned 242-Z to its Documented Safety Analysis (DSA) Demolition phase.
- Completed implementation of RL Safety Evaluation Report, 16-NSD-0059_RL, for Canister Storage Building Multi-Canister Overpack H-176 Leak Rate Evaluation of Safety of the Situation (ESS), dated December 14, 2016.
- Transitioned Nuclear Safety Policy for 324 Building and Project 300-296.
- Issued Revision 16 of the Criticality Safety Control Map, CHPRC-01781.

o Contractor Assurance Regulatory Reporting (CARR) accomplishments:
  - 181 Condition Reports (CRs) were screened:
    - No significant issues identified.
    - One adverse issues identified.
    - 77 Track until Fixed issues identified.
    - 42 Trend Only items identified.
    - 60 Opportunity for Improvement (OFI) items identified.
    - One Screened Out.
  - 171 CRs administratively closed.
  - 228 CRs actions administratively closed.
  - Provided full time support to PFP Issues Management and Occurrence Reporting activities.
  - Transmitted one new Occurrence Reporting and Processing System (ORPS) report associated with PFP: EM-RL—CPRC-PFP-2016-0015, *Important To Safety Equipment Exposed To Below Freezing Temperatures.*
  - Submitted one final ORPS report for PFP: EM-RL—CPRC-PFP-2016-0014, *Worker Fractured Right Foot As a Result of Rolling Ankle.*
  - Provided support and coordination for the Bi-Monthly conference call with the Defense Nuclear Facilities Safety Board (DNFSB) to discuss the PFP demolition planning/readiness.
  - Provided support for the upcoming DNFSB review of aging electrical infrastructure at Hanford.
  - 19 documents were provided in response to DNFSB requests for information.
  - Provided support to DOE HQ in the revision of DOE O 232.2, *Occurrence Reporting and Processing Operations Information*.
  - One external Just-In-Time Report was submitted to OPEXShare in December 2016: SSB_11-17-16 Rev 1, *Inadequately Secured Partition Wall Collapsed*.

o Performance Oversight, Assessment, and Quality Assurance accomplishments:
  - Attended the Energy Facility Contractors Group (EFCOG)/DOE Contractor Assurance Working Group to develop DOE complex wide best practice for assessing maturity of Contractor Assurance Systems.
  - Issued upgrade letter for support of Air Operated Valve repair for K-Basin Annex.
  - Commenced analysis/evaluation of lessons learned from PFP readiness assessment.
  - Supported DOE/RL Surveillance on Quality Improvement and Procurement.
  - Supported DOE/RL Surveillance on QA Program and Training.
  - Completed in-field activities and initiated report writing for the 10 CFR 835, Subpart H, "Records," surveillance scheduled for November through December.
  - Provided specific mentoring and feedback to assessors and responsible managers that conducted management assessments.
  - Provided support for the DOE-RL Audit AU-17-ESQ-CHPRC-003, *Quality Improvement/Procurement.*

- Continued to work on periodic review and update of QA-298, *Nonconformance Report of Items* procedure.
- Surveillance SHS&Q-2017-SURV-16456, PRC-PRO-QA-599, *Quality Assurance Program*, NQA-1, Requirement 15 and Requirement 16, field work in progress.
- Worked resolution to issues identified in A-16-ESQ-CHPRC-003, *RL Assessment of CHPRC Training and Qualification of Quality Assurance/Quality Control Personnel*.

o Fire Protection accomplishments:
- The 242-Z Facility Fire System Deactivation Plan was prepared and approved.
- Deactivation analysis is in progress for the 234-5 facility at PFP.
- The following Technical Safety Requirement (TSR) activities were completed:
  - Waste Receiving and Processing (WRAP) facility :
    - W1-16-07210A, WRAP 1 Year Key Assumption Assessment Report, was completed on December 19, 2016.
    - Four Opportunities for Improvement (OFI) were identified. All four are minor recommended changes to operating documents.
  - PFP:
    - SR 5.12.4.2 – Monthly Inspection of sprinkler deactivation or deviation areas.
    - SR 5.18.4.2 – Monthly inspection of facility and exterior for compliance with fire protection combustible controls.
    - SR 5.19.4.3 – Monthly inspection of facility for energized power cords, energized battery chargers and spontaneous ignition source material.
    - SAC 5.20.2 – Bi-weekly inspection of front side ventilation zone 1 areas – performed by the facility Fire Safety Officer.
- Facility Hazards Analysis (FHA):
  - The 105KW FHA, HNF-SD-SNF-FHA-001 Rev 3, was approved in December. Technical editing is in progress due to WORD version incompatibilities that corrupted the final file.
  - The Plutonium Uranium Extraction (PUREX) FHA, CP-41822, is under review by the Hanford Fire Marshal; comments have been received and resolution is in progress.
  - The B Plant FHA, CP-41843, completed internal review in December and will be transmitted to the Hanford Fire Marshal in January.
  - The U Plant FHA is under development.
  - The 402 Building FHA is under development.
  - Working on a revision to the 324 Building FHA to incorporate the 300-296 Project.
  - Revision to the 618-10 FHA is underway.
  - Preparation of an Integrated Disposal Facility FHA has been initiated.
- 23 Facility Fire Protection Assessments are complete for calendar year 2016.
- Planning has been initiated for revision to WHC-SD-GN-TI-20004 Rev 0, *A method for estimating ground areas contamination by a postulated fire in a facility containing radioactive material.*
- Offers have been accepted by two Oklahoma State University (OSU) Fire Protection Engineering program students for Associate Fire Protection Engineer (FPE) positions. Expected start dates are April/May 2017 and June/July 2017.
- Staff assignments continue to adjust as Project priorities change.

- SHS&Q Focus Areas:
  - **Issue:** Beryllium program assessment findings from Department of Energy (DOE-HQ), Office of Safety, Health and Security Independent Oversight Inspection report.
  - **Status:** Revision 3 was signed off by T. L. Vaughn. Implementation continues.
  - **Action:** Beryllium facility assessments and characterization on schedule. Beryllium facility assessments have been completed on 1,448 CHPRC facilities.
  - **Issue:** Accident & Injury Reduction.
  - **Status:** Continue investigating recordable, days away, restricted, or transferred, and first aid injuries to determine cause, prevention, reduction, to prevent recurrence.
  - **Action:** CHPRC is conducting the root cause analysis for the recent Waste and Fuels -Mission Support Alliance (MSA) teamster vehicle incident. Anticipate completion in January.
  - **Issue:** PFP support.
  - **Status:** Supporting PFP with dedicated OS&IH personnel and Radiological Control personnel, from the SHS&Q Central group for oversight of high-risk work activities.
  - **Action:** Providing senior supervisory watch for Plutonium Reclamation Facility (PRF) demolition activities based upon specific hazard activities in coordination with PFP management.
  - **Issue:** Fire Protection program improvements.
  - **Status:** CHPRC Fire Protection personnel are actively interfacing with Hanford Fire Department (HFD) and RL regarding Fire Protection program improvements related to fire hazard analyses.
  - **Action:** Continued interface with MSA regarding CHPRC fire system maintenance back log items. Next followup meeting with MSA on the Joint Fire System Maintenance Workshop actions is scheduled for January 16, 2017.

Environmental Program and Strategic Planning (EP&SP)
Environmental Protection

- **Compliance Status**
  - CHPRC filed a Notice of Appeal to the Pollution Control Hearing Board of the State of Washington in response to a Resource Conservation and Recovery Act of 1976 (RCRA) Notice of Penalty and associated Administrative Order issued by State of Washington, Department of Ecology (Ecology) for alleged violations of waste designation and record keeping requirements at T Plant. Settlement discussions with Ecology have been held on October 19, 2016 (Hanford Site visit and tour of the T Plant facility), on November 8, 2016 (Ecology briefing to CHPRC on the alleged violations), and on December 6, 2016 (CHPRC briefing to Ecology on its position with respect to the alleged violations). Settlement discussions are anticipated to continue in January 2017.

Meetings with RL and Ecology continued supporting renewal of the Hanford Facility RCRA Permit. Current issues under discussion and review are security and dangerous waste management units. On December 27, 2016, RL issued a contract change order to shift responsibilities to CHPRC for project management and coordination of the RCRA permit renewal activities. The detailed scope and cost to support the contract change will be developed and submitted to RL in early 2017.

Environmental Management System (EMS)

- **Objectives and Target Status**
  - Targets and Objectives for FY2017 are approved.

Environmental Compliance & Quality Assurance (ECQA)

- **Operating Record Retrieval Application**
  - Issued PRC-GD-EP-53936, *Operating Record Metadata Implementation Guide*. This document provides guidance to affected Projects in determining and applying the appropriate metadata when processing operating record documents for storage as electronic records.
- **Assessment Program**
  - A surveillance assessing corrective actions associated with FY2016 Ecology RCRA inspection findings was conducted by EC&QA from November 8-17, 2016. The surveillance report, issued December 1, 2016, identified no findings and one OFI.
  - A surveillance to assess asbestos compliance during Deactivation, Decommission, Decontamination, and Demolition activities was conducted by EC&QA from October 24-28, 2016. The surveillance report, issued December 6, 2016, identified no findings and one OFI.
  - A surveillance assessing the process for preparing and certifying the Air Operating Permit annual report was conducted by EC&QA from December 5-21, 2016. The surveillance report, issued December 21, 2016, identified no findings and three OFIs.

Business Services

- **Acquisition Planning:**
  - Met with representatives of Prime Contract & Project Integration to discuss the acquisition strategy for acquiring the services of a contractor to revise the Project Controls System Description. Developed a draft Statement of Work, identified potential sources, and assisted in the development of evaluation criteria.
  - Facilitated the planning for the renewal of a software maintenance agreement that supports RCCC transitioned work scope. Provided a draft Statement of Work to technical staff and instructions for developing the requisition.
  - Met with representatives from PFP to develop the acquisition plan for the installation of three mobile offices. The mobile offices will be used by PFP as the entry and egress from 234-5Z. PFP will use these trailers so the interior of the building has no obstructions that keep CHPRC from the remaining work. An acquisition strategy was developed to ensure the trailers were ready for use in January 2017. Potential sources were identified to provide trailers and perform installation services.
  - Met with PFP representatives on specialized dust suppression equipment. Identified potential sources, provided instruction on performing a special equipment request, ensured the RL project oversight personnel were briefed on the procurement action, and coordinated the activity with Mission Support Alliance to ensure proper jurisdiction was identified for the procurement effort.
  - Evaluated the local market pricing of leased land for the purposes of supporting the cost/price analysis of the 300-296 mock-up facility lease. The analysis included evaluating alternatives to the current mock-up facility location. Obtained review and concurrence of draft lease documents from RL real estate specialist.
  - Facilitated a conference call with a DOE strategic sourcing supplier to develop a procurement approach for acquiring fixative on a long-term/sustained basis. The particular product has been identified as an on-going need in support of PFP demolition activities. Discussions are on-going and expected to complete in January 2017.
  - Developed the acquisition plan for the 100K Area waste site remediation solicitation. The competitive solicitation was issued in early December with an anticipated award of mid-January. Sources were determined from responses received from an expression of interest issued in September 2016.

- Supported development/review of the draft acquisition plan for installing injection wells at 200-ZP-1. The work involves pumping groundwater from selected well locations; treating the water to remove carbon tetrachloride, chloroform, and trichloroethylene from the groundwater of the 200 West Area using air stripping and granular activated carbon; and re-injecting the treated water into the aquifer through injection wells.

- **Facilities & Property Management (F&PM):**
  - FY2016 Physical Property Inventory has been completed. Balanced Score Card was submitted December 13, 2016 to MSA. F&PM completed locating 99.79 percent of 3,317 items through December 2016. All DOE targets were either met or exceeded. Four items remained to reconcile.
  - Move planning for RL and CHPRC between Federal Building and 2420 Stevens continues. CHPRC Procurement team moved in December. Turnaround offices and LR/HR planned to move in January 2017. President Office and General Council to move in February 2017. Working balance of move sequencing and final master schedule. Painting/carpeting underway in 2420.
  - Efforts to remove and replace Mobile Office (MO) 029 at Waste Encapsulation and Storage Facility (WESF) continue. Target completion date of February 28, 2017.
  - Adding a shower trailer to support Soil and Groundwater Remediation Project (S&GRP) Drilling and Sampling Operations at Waste Sampling and Characterization Facility continues. Alternate location established due to water lines running beneath original placement location.
  - A newer single wide office trailer is being planned in the 400 Area in support of potable water operations. Existing insufficient trailer removed from site in November making room for planned replacement. Working with MSA on required placement permits.
  - A single wide restroom trailer is being planned for addition to the 300 Area in support of the 324 Building project. Working with project to establish required permits.
  - Work continued in December to restore potable water connections to MO061 and MO245 in the 300 Area. Plant Forces to perform work, currently discussing options using regulated guzzler truck vs backhoe/hand dig. Portable toilets are the temporary solution.
  - Began work with Engineering to resolve 300 area above ground utilities issue.
- **Finance:**
  - December month end completed with no Hanford related cost suspensions.
  - Resubmitted Revision 9 of the Disclosure Statement based on observations noted in the Cohn Reznick Disclosure Statement Audit report.
- **Human Resources (HR):**
  - Due to critical demand for skilled planner/scheduler employees, HR worked closely with the Project Technical Services organization to develop and implement two new Nonexempt Technician level Planner/Scheduler roles for purposes of providing entry level positions and expanding this job family. This entry level progression will provide growth and development opportunities while meeting these resource needs.
  - HR submitted the required CHPRC deliverable to RL for our Position to Market Notification. This submittal included our proposed annual merit budget and proposed Salary Structure update for Calendar Year (CY) 2017 in accordance with contract guidance.
  - HR Equal Employment Opportunity (EEO) Specialist supported a RL Sponsored training session led by the Office of Federal Contract Compliance Programs (OFCCP). This training, attended by approximately 50 CHPRC managers and employees, educated participants about the OFCCP, compliance requirements and strategies for an EEO compliant company.

- **Labor Relations (LR):**
  - Hanford Atomic Metal Trades Council (HAMTC) filed a General Council grievance in regards to decontamination and decommissioning (D&D) activities at PFP in 2014. This grievance was scheduled for arbitration in 2015, and the parties have since worked to resolve the issue outside arbitration. On December 6, 2016, CHPRC received the official withdrawal of this grievance along with nine other grievance associated with this subject that had been held in abeyance.
  - Grievances PRC-015-051 and PRC-016-014 continue dealing with purchasing items (i.e. pipe spools) from offsite vendors have been requested to proceed to arbitration, although the union put a hold on selecting the panel until they can further review.
  - Arbitration scheduled for October 11, 2016, was postponed by mutual agreement in an effort to allow parties additional time to reach settlement in regards to Grievance PRC-015-011 in which the Union is claiming miss-assignment of work in regard to respirator maintenance. Parties are in discussions to try and reach a settlement.
  - No additional grievances have been requested to proceed to arbitration by the Union; however, CHPRC has received additional Requests for Information on two grievances so that the Union can determine if they will move these to arbitration
- **Procurement:**
  - Awarded/amended 103 contracts with a total value of $7.48 million. Additionally, awarded 132 new material Purchase Orders (PO) valued at $709,212 to support ongoing project objectives.
  - At the end of the first 99 months of the CHPRC project, procurement volume has been significant; $2.73 billion in contract activity has been recorded with approximately 54.21 percent, or $1.34 billion, in awards to small businesses. This includes 7,571 contract releases, 22,018 POs, and 262,583 P-Card transactions.
  - Contract 61690 was awarded to Peters and Keatts Equipment, Inc. on November 22, 2016. This is a firm fixed price contract for "Komatsu PC490LC-10 Ec. W/ESCO Quick Coupler (former WCH E046964A00)," valued at $418,828.
  - Contract 44438, Release 53 was awarded to DGR-Grant Construction, Inc. on December 12, 2016. This is a firm fixed price contract for the "Project 300-296 Infrastructure 324 Site and Mock-up Facility" work scope valued at $436,000.
  - Contract 36883, Release 33 was awarded to Ojeda Business Ventures on November 21, 2016. This is a firm fixed price contract for the "300-FF5 Stage 1" work scope valued at $145,000.
  - Contract 36883, Release 34 was awarded to Ojeda Business Ventures on December 12, 2016. This is a time and material contract valued at $400,000.00 (ROM) for the CHPRC Relocation to the Federal Building Modifications. The award was issued at a limited notice to proceed of $50,000.
  - Contract 61951 was awarded to Pactec Incorporated on December 14, 2016. This is a firm fixed price contract valued at $192,154.10 for "IP-1 Lift Bags and Lift Fixture."
  - Contract 62006 was awarded to Company Wrench LTD on December 21, 2016. This is a firm fixed price contract valued at $392,180.00, for "Telescoping Dust Suppression Machine."
  - Contract 61777 was awarded to Pac-Mobile on December 7, 2016. This is a firm fixed price contract valued for $745,400 for 300-296 Project Office and Restroom Trailers.
  - Contract 61837 was awarded to Kurion, Inc. on December 1, 2016. This is a time and material contract valued at $141,289 for "Purex Stack Sampling System Detailed Design."

Prime Contract and Project Integration (PC&PI)

- **Prime Contract Compliance (PCC):**
  - In December, PCC received and processed eight contract modifications (549, 560-565, 567) from RL.
  - The Correspondence Review Team received and determined the distribution for 74 incoming letters/documents. The PCC Manager reviewed 27 outgoing correspondence packages.
  - Issued CHPRC-1605762, *Notification of Differing Site Condition at the 316-4 Waste Site.*

Integrated Services

- **Estimating & Program Support**
  - Completed and published an update to PRC-MP-CMT-52887, *Change Proposal Management Plan,* addressing opportunities for improvement (OFI) identified by PC&PI-2016-MA-16746, *Estimating System and Process Evaluation*, and closed the corresponding actions in the Condition Reporting and Resolution System (CRRS). PC&PI-2016-MA-16746 was performed to validate the continued compliance of CHPRC's Estimating System with its' DOE certification. The OFIs identified and addressed by this revision included:
    - The relationship between the Estimating System and the Risk Management system should be expanded.
    - Improve the documentation of the use of the graded approach in estimating.
    - Improve feedback from the Change Order definitization process.
    - Assure execution of not to exceed (NTE) scope has full cost account charge number (CACN) structure established consistent with definitized scope to better enable improved Truthful Cost or Pricing Data (TCoPD) reviews and reconciliation of cost proposals with definitized Change Orders.
    - Improve the documentation of the application of Government Accountability Office (GAO) twelve steps of estimating.
    - Improve schedule development for Change Proposals so that detailed schedules consistent with execution strategy are available to support estimate development.
    - Incorporate the current Prime Contract and Project Integration organization roles and responsibilities.
  - In addition, revisions to PRC-PRO-PC-40072, Cost Estimating Procedure, and PRC-GD-PC-40434, Estimating Guide, addressing the same OFIs were drafted and routed for final review and comment. Once completed, these revisions will enable closure of the remaining CRRS items resulting from PC&PI-2016-MA-16746.
  - Three Change Proposals/Request for Equitable Adjustments (CPs/REAs) were submitted to RL in December 2016:
    - CP 013 315 1633 - *Debris Cleanup in the Vicinity of Waste Encapsulation and Storage Facility (WESF), Canister Storage Building (CSB), and Solid Waste Operations Complex (SWOC)*, submitted on December 5, 2016.
    - CP 013 PRC 1635 - *Upgrades to Site Transuranic (TRU) Waste Program Required to Meet the Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC),* submitted on December 1, 2016.
    - CP 030 316 1637 - *Groundwater Engineering Reports and Groundwater Monitoring Plans for Dangerous Waste Management Units (DWMUs)*, submitted on December 7, 2016.
  - Seven CPs/REAs have been submitted FY2017 to-date, six on or ahead of schedule with one CP/REA submitted late.
  - Continued development of one CP/REA:
    - CP 013 PRC 1634 - *Temporary Storage of the WESF Concrete Cores.*
  - Initiated development of seven CPs/REAs:

  - CP 013 308 1629 - *Management of the Cesium and Strontium Capsules Capital Asset Project Deductive Proposal.*
  - CP 013 314 1638 - *Outside Storage Area Closure Plan Revisions.*
  - CP 041 319 1640 - *Garnet Filter Media Removal.*
  - CP 041 320 1642 - *Sand Filter Media Removal Design.*
  - CP 040 321 1645 - *Resource Conservation and Recovery Act (RCRA) Revision 9 Management and Coordination.*
  - CP 013 322 1639 - *Integrated Disposal Facility Revised Operational Requirements.*
  - CP 040 RFP 1641 - *Miscellaneous RL-0040 Work.*
- Supported RL's request for information (RFI) on CPs/REAs :
  - REA 013 1591 - *SWOC Permit Modification Request.*
  - CP 041 304 1594 - *Initiate Transition of River Corridor Contract (RCC) Scope Activities into the Plateau Remediation Contract (PRC) - 300-296 Design Review and Gap Analysis.*
  - CP 041 305 1616 - *300-296 Waste Site Design Change, Initiate Procurements, Initiate Testing, and Initiate Removal of Debris.*
- Supported four TCoPD updates for CPs/REAs :
  - CP 030 294 1570 - *100-KR-4 Remedial Investigation/Feasibility Study (RI FS) Decisional Rewrite.*
  - CP 041 304 1593 - *Initiate Transition of RCC Scope Activities into the PRC - 324 Complex.*
  - CP 013 310 1624 - *SWOC Hazards Mitigation Activities.*
  - CP 040 311 1625 - *Emergency Response for Facility/Waste Site Environmental, Safety, Health, and Quality (ESH&Q) or Remediation.*

- **Interface Management:**
  - Interfaces (Technical, Administrative and Regulatory):
    - Continue to support communications between WRPS at 222-S and CHPRC at REDOX. USQ reviews of adjacent contractor work packages are ongoing. Current project activities include the REDOX roof upgrade.
    - Toured 222-S and REDOX area with MSA and WRPS to become familiar with aging utility poles and discuss contractor ownership of structures, utilities, and roads in the area.
    - Participated in MSA Radio Fire Alarm Reporter replacement project integration meetings and project planning reviews. Currently providing the MSA project team with facility points of contact for planning and facility access. Also, awaiting schedule and scope details from the MSA project team to determine facility impacts.
    - Facilitated communications between PFP and the MSA warehouse. Issues range from misplaced orders, to Acquisition Verification Service priorities. Interface Management will continue to maintain communications and track issues upon request from the Project.
    - Provided the Other Hanford Contractors with notification of the new PRC scope to provide the administrative update responsibilities for the Hanford Sitewide Transportation Safety Plan, DOE/RL-2001-36. This was previously managed directly by DOE-RL.
  - Annual Forecast of Services:
    - Continued flow of communication/requests for MSA resources, as required by emerging project needs.
  - Inter-Contractor Issue Resolution:
    - Continued communications between MSA Biological Controls and CHPRC representatives regarding tumbleweed and tree line removal southwest of CWC. Drafted an intercontractor work order; resolution pending agreement by all parties on the roles and responsibilities related to disposition of the tumbleweeds and the tree line.

- Increased communications with MSA related to site snow removal; increased snow fall created many questions related to roles and responsibilities. Drafted an intercontractor work order for increased coverage of CHPRC facilities in the 300 Area. As questions arise, Interface Management will continue to clarify company responsibilities, any jurisdictional issues and/or project roles.
- In negotiation with the MSA Crane & Rigging service organization to establish a traceable and verifiable time charging practice. Goal is to support accurate charging to the open Charge Account Control Numbers.
- Provided support to the 105KW Annex team to facilitate path forward with MSA Fire Systems Maintenance on corrective maintenance actions for the newly operational Radio Fire Alarm Reporter system.

o Controlling and Service Agreements:
- CHPRC and MSA will not pursue a revision of the Administrative Interface Agreement for the use of MSA Borrow Pit 9. MSA will revise the document for receipt of material from BNI, only. CHPRC's use of Pit 9 will be managed as the other borrow pits are onsite, using the service catalog.
- Sent MOA-HPMC-CHPRC-2013, Revision 1, Memorandum of Agreement (MOA) for the Performance of Services between HPM Corporation (HPMC) Occupational Medical Services and CHPRC, out for final signatures.
- Sent letter to MSA cancelling PRC-AIA-MSC-02430, *Administrative Interface Agreement PRC-AIA-MSC-02430, between CH2M HILL Plateau Remediation Company and Mission Support Alliance, LLC, for use and occupation of Building 4707,*
- Sent letter to MSA cancelling PRC-AIA-MSC-03622, *Administrative Interface Agreement PRC-AIA-MSC-03622, between CH2M HILL Plateau Remediation Company and Mission Support Alliance, LLC, for use and occupation of Building 275W,*

o J.3 Table Maintenance:
- Awaiting J.3 Table contract modifications for the Effluent Treatment Facility and RCCC scope transitions and other miscellaneous changes.
- PRC received a contract modification that re-assigned Resource Conservation and Recovery Act (RCRA) Part B permit administration and coordination from MSA to PRC. Once the scope is fully defined, a J.3 #25 Environmental Regulatory Management modification will be processed through MSA to RL.

o J.13 and J.14 Tables Maintenance:
- Continue tracking new assignments related to the RCCC transition that will be captured in the next J.13/J.14 table review and other contract related actions.
- Assembled review package for the update of the J.14 table in response to newly assigned Waste Sites per Contract Modification 461 and Change Order 296.

o Internal Operations:
- The final CRRS action resulting from the Interface Management work site assessment of Statements of Work (SOWs) for services provided to CHPRC by MSA was closed in early December.
- Working several documents revisions/cancellations related to the RCCC scope transfer to CHPRC. Involved parties include City of Richland, Pacific Northwest National Laboratory, and MSA.
- Supported development of an MSA Usage Based Service statement of work to obtain MSA Snow Removal services for the 324 and 300-296 facilities in the 300 Area.
- Investigating a potential change of a 5 mobile trailers at the Environmental Restoration and Disposal Facility from General Purpose Facilities to Project Specific Facilities due to the

existing work control and configuration control processes in place. Existing project processes do not align with the delegations given to MSA for general maintenance activities.

- **Information Management:**
  - Processed 17,878 Electronic Records into the Integrated Document Management System (IDMS).
  - Work with MSA is continuing to improve network connectivity and speed in 300 Area for Soil Remediation Project and 600 Area for 618-10 Project. A subcontract has been issued for electrical services, and work will begin as soon as weather allows.
  - Supported initial internal data validation and tests of DOE Earned Value Cost and Schedule Analysis (EVCSA) tool.

Project Integration

- During December, Project Integration facilitated and supported the processing of 12 BCRs.
- Provided support to the data call for the Plutonium Finishing Plant (PFP) Project Peer Review of Capital Asset Projects (CAPs) RL-0011.C1, PFP Decontamination and Dismantlement Project and RL-0011.C2, PFP Demolition Project.
- Integration of the CHPRC Project Controls System Description and the Earned Value Management Interpretation Handbook (EVMSIH) was initiated in December 2016. The integration will result in the development of the new CHPRC Earned Value Management System Description (EVMSD) and will demonstrate CHPRC's compliance with the EIA-748 32 Guideline earned value requirements. The new EVMSD will also include a feature that distinguishes compliance requirements between capital and non-capital scope.
- Obtained a copy of the Earned Value Cost and Schedule Analysis (EVCSA) tool from the DOE-HQ Office of Project Management Oversight and Assessments (PM-30) and began validation of Deltek Cobra and Primavera P6 flat files. The EVCSA performs automated data traces as outlined in the Earned Value Management Systems Test Protocols.

Program Integration

- **000 Project EVM Support:**
  - Met with Control Account Managers to review November data and update FY2017 fiscal year spend forecast (FYSF). Performed month end analysis of 000 control accounts and variance analysis reporting.
  - Developed presentation of time records recorded to Code of Account AH50 that did not have associated ELM records to determine causes/bases.
  - Met with Project Integration organization to review MSA Quantity Based Estimate Tool and potential updates to enhance ease of use
- **Risk Management and Reporting:**
  - Received Review Comment Record (RCR) from RL regarding the FY2017 risk analysis. Informal meeting set up with RL in early January to discuss comment resolution.
  - Developed risk impact cross-walk for RL-0011 for potential drawdowns of management reserve.
  - Provided support to the data call for the PFP Project Peer Review of CAP, RL-0011.C1 & RL-0011.C2
  - Conducted risk meetings to support change proposals in development.
  - Issued the CHPRC November Monthly Performance Report to RL.
  - Supported development of the CHPRC November Monthly Highlights to the Nuclear Business Group.
  - Issued FY2017 Quarterly Required Maintenance Report to MSA.
  - Finalized PM-00-1-17 critical self-assessment completion criteria and data call report.
  - Prepared Internal Project Team packets for November.

  - Provided PCPI input into Contractor Assurance System (CAS) Report.
- **Strategic Management:**
  - Updated CHPRC FY2017 Execution Year Priority list per December Field Execution Schedule projected completion dates and incorporated in DOE Integrated Priority List (IPL) ranking. The execution year priority list will be updated monthly and posted on CHPRC internal website.
  - Continued development of a multi-year CHPRC IPL to incorporate near term and long-term priorities for CHPRC. On-going activities include ranking long range plan scope and emerging priorities with the release of the DOE 2020 vision.
  - A joint kick-off between Business and Environmental Strategic Planning was held in December; the goal is to align both project and regulatory key strategic initiatives to support successful project completions.
  - Presentation was given to the GSO on CHPRC staffing alignment for FY2017 and FY2018 as ERDF, 618-10/11 projects end, and include PFP ramps down. Included analysis of impacts for key long range projects.
  - Held monthly Productivity Tracking Log meeting with the projects. Discussed company level metrics and Projects briefed their metrics of productivity delays and efficiencies.
  - Reviewed Productivity Tracking Log SharePoint site and Productivity Tracking Standard (PRC-STD-PM-53101) with DOE-RL in support of Corrective Action 2014-2322 finalization
  - Incorporated Productivity Tracking metrics in CAS Summary Report
  - Provided input to key project initiatives, including the cesium/strontium dry storage project and the alpha caisson retrieval project.
  - Continued support of ERDF radionuclide disposals and modifications to Waste Management Information System inventory tracking with RL, ERDF Operations Management, and Risk & Modeling Integration. These discussions were in support of the issuance of the annual surveillance and maintenance review required by the ERDF Performance Assessment.

PTS

- Engineering Services
  - Completed work site assessment (WSA) PTS-2017-WSA-17038, “Perform Assessment for Systems STP-72.5 and STP-72.6, Compare drawings with field conditions and design specifications.” The work site assessment was a follow up to an Independent Assessment (KBOPR-2016-IA-16813). No findings or opportunities for improvement were reported.
  - Revised PRC-STD-EN-52773, *Third Party Inspections*. The revision is to clarify the requirements on which pressure vessels (based on pressure, size, temperature, and function) would require Third Party Inspections.
  - Assisted the Hanford Site Electrical Safety Program (HSESP) site-wide committee to develop an implementation plan for the new DOE-0359 Revision 3 site-wide procedure.
  - Provided procurement requirements for flame resistant and arc rated clothing for the Occupational Safety & Industrial Hygiene organization.
  - Revised PRC-PRO-EN-24208, *High-Efficiency Particle Air (HEPA) Filter Degradation Process*. Increased focus to Service Life Evaluation and reviews, pressure loss, and testing data.
  - Verification and validation for Solidworks finite element analysis software. Successful completion will allow improved simulation results to support designs that may have a safety basis impact.
  - Identified portable electrical generators that would meet nationally recognized testing lab (NRTL) electrical safety requirements for Soil & Groundwater Remediation Project.

- Provided authority having jurisdiction (AHJ) approval for the non-NRTL acceptance of a Geotech submersible pump and controller for Soil & Groundwater Remediation Project.
- Completed flow and heat transfer modelling for outdoor Continuous Air Monitor enclosures for Plutonium Finishing Plant. The enclosures include an interior heater and fan assembly to ensure it stays above freezing during the winter.
- Processed a National Environmental Policy Administration (NFPA) 70 AHJ approval package for ten non-NRTL certified Nilfisk portable vacuums with variable speed control.
- Supported 618-10 Engineering staff to define requirements for control of engineering documentation when working under River Corridor Closure Contract (RCCC) and Plateau Remediation Contract (PRC) engineering procedures.

- Training and Procedures
  - Commenced beta test phase 2 of new Courseware Management System (CMS).
  - Collaborated with other contractors on a path forward for sitewide Occurrence Reporting & Processing System (ORPS) training.
  - Completed major rescheduling effort of classes missed due to recent site closure.
  - Represented CHPRC at Training Energy Facility Contractors Group (EFCOG) Working Group meeting held in Albuquerque, New Mexico.
- Operations Program
  - Conduct of Operations (ConOps)/Work Control/Conduct of Work
    - Provided program guidance on aligning the Automated Job Hazard Analysis (AJHA) reviews with the procedures and periodic review dates to create efficiencies.
    - Participated trial testing for Job Control System (JCS) 7.0 release.
    - Conducted Repetitive Use Work Document (RUWD) workshop. Group reached consensus on formatting of a template for RUWDs.
    - Continued work on General Hazard Analysis (GHA)/Craft Specific Hazards Analysis (CHA) development/review.
    - Updated PRC-PRO-MN-19718, Eberline AMS-4 Continuous Air Monitor Calibration.
    - Attended Fire Systems Maintenance meeting to discuss status of improvement initiatives.
  - Emergency Preparedness (EP)
    - Conducted interviews FY2017 Annual EP Program Assessment
    - Conducting Triennial Corrective Action Plan review.
    - Building Emergency Director and Incident Command Post communications training.
    - Supporting meeting transition plan between federal building and 2420 to include Facility Emergency Response Organization personnel.
- Project Delivery
  - Federal Building Upgrades
    - Contractor issued limited not to exceed contract for Federal Building upgrades, work commenced.
  - Radio Fire Alarm Reporter (RFAR) and Fire Alarm Control Panel (FACP) upgrades
    - Awaiting on direction from RL prior to proceeding for RFAR/FACP upgrades. Current projection for start is early March 2017.

Communications

- Communications supported RL in the development of EM newsletter articles regarding the 618-10 Burial Ground and PFP demolition.
- Communications supported RL in conducting interviews that will generate articles in the media, including:
  - Uranium Sequestration in the 300 Area. This article is scheduled to run in the Tri-City Herald on Thursday, January 5, 2017.

  - REDOX EE/CA Public Comment Period – CHPRC developed a response to questions on EE/CA process for the comment period that ends January 20, 2017. The article ran in the Tri-City Herald on January 1, 2017.
- Communications supported RL in the development of several social media posts, including:
  - 324 Building Disposition Project.
  - Time lapse video of the first few days of PRF Demolition.
  - Fiscal Year 2017 Quarter 1 Review.
  - Hanford Giving, employees highlighted for community giving.
  - Coordination of waste shipment with the 618-10 Burial Ground Project.

PROJECT BASELINE PERFORMANCE
Current Month
($M)

WBS 000 Project Services and Support	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance ($)	Schedule Variance (%)	Cost Variance ($)	Cost Variance (%)
Office of the President	0.1	0.1	0.1	0.0	0.0%	0.0	16.5%
Internal Audit	0.1	0.1	0.1	0.0	0.0%	0.0	41.7%
General Counsel	0.1	0.1	0.1	0.0	0.0%	0.0	21.6%
Communications	0.1	0.1	0.1	0.0	0.0%	0.0	-16.8%
Safety, Health, Security and Quality	1.2	1.2	0.9	0.0	0.0%	0.3	24.4%
Environmental Program and Strategic Planning	0.4	0.4	0.2	0.0	0.0%	0.2	52.6%
Business Services	1.9	1.9	1.5	0.0	0.0%	0.4	19.4%
Prime Contract and Project Integration	2.0	2.0	1.7	0.0	0.0%	0.2	10.6%
Project Technical Services	0.6	0.6	0.5	0.0	-0.2%	0.1	13.3%
Indirect WBS 000 Total	**6.6**	**6.6**	**5.3**	**0.0**	**0.0%**	**1.3**	**19.2%**

Numbers are rounded to the nearest $0.1 million.

Indirect WBS 000

CM Schedule Performance: (+$0.0M/+0.0%)
The variance is within reporting thresholds.

CM Cost Performance: (+$1.3M/+19.2%)
The variance is within reporting thresholds.

Fiscal Year-to-Date (FYTD)
($M)

WBS 000 Project Services and Support	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)
Office of the President	0.4	0.4	0.3	0.0	0.0%	0.1	15.8%	1.8
Internal Audit	0.3	0.3	0.2	0.0	0.0%	0.1	37.4%	1.2
General Counsel	0.3	0.3	0.3	0.0	0.0%	0.0	13.6%	1.5
Communications	0.2	0.2	0.3	0.0	0.0%	(0.1)	-24.5%	1.1
Safety, Health, Security and Quality	3.4	3.4	2.8	0.0	0.0%	0.6	16.5%	15.6
Environmental Program and Strategic Planning	1.2	1.2	0.9	0.0	0.0%	0.3	21.3%	5.5
Business Services	5.2	5.2	4.7	0.0	0.0%	0.6	11.0%	24.1
Prime Contract and Project Integration	5.3	5.3	4.8	0.0	0.0%	0.5	9.0%	24.5
Project Technical Services	1.6	1.7	1.6	0.0	0.9%	0.0	0.9%	7.5
Indirect WBS 000 Total	**18.0**	**18.0**	**16.0**	**0.0**	**0.1%**	**2.0**	**11.3%**	**82.9**

Numbers are rounded to the nearest $0.1 million.

Indirect WBS 000
FYTD Schedule Performance: (+$0.0M/+0.1%)
The variance is within reporting thresholds.

FYTD Cost Performance: (+$2.0M/+11.3%)
The variance is within reporting thresholds.

FY2017 G&A Analysis
($M)

WBS 000 Project Services and Support	FY 2017 FYTD BCWS	FYTD Actual	FYTD Variance (O)/U		FY2017 BCWS	FY2017 Forecast	FY2017 Variance (O)/U
General & Administrative (G&A)	**18.0**	**16.0**	**2.0**		**82.9**	**82.2**	**0.7**
Office of the President	0.4	0.3	0.1		1.8	2.0	(0.1)
Internal Audit	0.3	0.2	0.1		1.2	1.1	0.1
General Counsel	0.3	0.3	0.0		1.5	1.5	0.0
Communications	0.2	0.3	(0.1)		1.1	1.4	(0.3)
Safety, Health, Security and Quality	3.4	2.8	0.6		15.6	14.5	1.1
Env. Program & Strategic Planning	1.2	0.9	0.3		5.5	4.5	0.9
Business Services	5.2	4.7	0.6		24.1	25.2	(1.1)
Prime Contract and Project Integration	5.3	4.8	0.5		24.5	23.9	0.6
Project Technical Services	1.6	1.6	0.0		7.5	8.1	(0.6)

	FY2017	
G&A Distribution	**(19.5)**	**(94.3)**
G&A Liquidation (Over)/Under	**(3.5)**	**(12.1)**

Liquidation Analysis
For December, application of the G&A rate has over-liquidated total to date G&A cost by $3.5 million. The FY2017 year end projected over-liquidation of $12.1 million reflected in the fiscal year spend forecast reflects a projected decrease in G&A costs as well as an increase to the G&A base.

Consistent with CHPRC prospective Cost Accounting Disclosure Statement, under liquidations would be distributed to users at a minimum, when the combined projected year end under liquidation is equal to or greater than $4 million. Over liquidations would be distributed to users at a minimum, when the combined projected year end over liquidation is equal to or greater than $6 million. Variances may be liquidated to users at lower thresholds if variances are determined to be significant to cost control. All remaining variances will be distributed at fiscal year end.

MAJOR ISSUES

None currently identified.

RISK MANAGEMENT STATUS

No key risks currently identified.

MILESTONE STATUS

None currently identified.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

Appendix C
Capital Asset Projects
RL-0011_C1, RL-0011_C2, and RL-0012_C1_1

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

Appendix C
Capital Asset Project
RL-0011_C1 - PFP D&D
(Removal of 174 Gloveboxes from 234-5Z)

T. E. Bratvold
Vice President for
PFP Closure Project

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Progress continued to work toward CD-4 closure as teams continued to prep glovebox/hoods for extraction during demolition. It is expected that final preparations will be complete on March 7, 2017. At that time, gloveboxes will be staged until demolition of 234-5Z commences and completion of Capital Assets Project discrete scope will be completed. The total number of gloveboxes removed to date is at 94 percent complete.

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

Key Metrics	*Current Month Plan*	*Current Month Actuals*	*Cumulative Plan*	*Cumulative Actuals*
Glovebox/Hood Removed	-	-	174	164
COMPLETE KPP Rooms/Areas Ready for Demo	-	-	60	60 rooms/areas

KEY ACCOMPLISHMENTS

RL-0011_C1 Accomplishments

- Work remaining on this capital asset project is removal of the gloveboxes from the 234-5Z facility. All work associated with glovebox process equipment removal has been completed. Final preparations to support the physical removal of the remaining gloveboxes will be completed by March 7, 2017. As the project nears the ready for demolition milestone for the 234-5Z building (approximately March 2017), more gloveboxes will begin to be removed from the facility.
- Initiated activities in preparation of removal of Gloveboxes HA-7A, HC-18M, and HC-7C.

MAJOR ISSUES

None currently identified.

CORRECTIVE ACTION LOG

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

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

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

Increased Confidence
No Change
Decreased Confidence

Risk Title Risk Owner	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0011/WBS-011.05.01.01.06 (CAP.1)				
Explanation of major changes to the project monthly stoplight chart: No major changes to the monthly stoplight chart in the month of December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
No realized risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in the month of December.				
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
FY2017 Risk Triggers (Risk could be realized in FY2017)				
PFP-DEMO-21: Glove Box/Equipment Removal/Demolition Material Handling Event	A material handling event (e.g., dropped piece of process equipment) occurs during the Plutonium Finishing Plant (PFP) demolition, resulting in cost impacts and schedule delays. **Risk Handling Strategy:** Accept **Probability:** Low (10% to 25%) **Worst Case Impacts:** $150K, 30 days	●	⟷	**Risk Trigger:** During pre-demolition/demolition activities in FY2017. **Mitigation action(s)** / **FC Date** / **%** None identified at this time. / N/A / N/A **Mitigation Assessment: Mitigation Assessment:** No change in the month of December. The mitigation strategies have been put in place; as a result, the risk strategy is to accept with no further mitigation actions identified at this time. PFP will continue to adhere to the CHPRC ISMS program/ hoisting and rigging program to include detailed analyses of potential hazards and identification of preventive measures to implement prior to starting the work. At this time, no alternative course of actions needed.
High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)				
No high threat value risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in the month of December.				
Unassigned Risks (Pending ownership of identified risks/opportunities)				
No unassigned risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in the month of December.				

CRITICAL PATH SCHEDULE

The PFP Critical Path Schedule is a resource-driven float path in which the critical path starts Asbestos abatement throughout 234-5Z, which leads to final Cold & Dark activities. This transitions 234-5Z to be ready for demolition. Demolition of 234-5Z will occur in the following sequence: 234-5ZA, Frontside, A-Labs, Backside Rooms/Plutonium Process Support Laboratories (PPSL), Remote Mechanical A (RMA) Process Lines, Remote Mechanical C (RMC) Process Lines, and the RADTU & Basement areas. Once the 234-5Z and 291-Z facilities have been demolished, the Tri-Party Agreement Milestone – M-083-00A - *PFP Facility Transition and Selection Disposition Activities* will have been met.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	* Due Date	**Forecast Date	Status/ Comment
CAP.1	Removal of 174 gloveboxes from 234-5Z	11/30/17	11/9/17	Progress continued to work toward CD-4 closure as teams continued to prep glovebox/hoods for extraction during demolition. It is expected that final preparations for removal will be complete on March 7, 2017. At that time gloveboxes will be staged until demolition of 234-5Z commences and completion of CAP.1 discrete scope will be completed. There was a 29-day loss for the month of December. This is as a result of lack of RCT resources, identification of need for removal of additional asbestos, unusual inclement weather, and realignment of the remaining activities in the FES to reach ready for demolition status in the 234-5Z facility. As the PFP Project continues to make progress on the behind schedule critical path work scope being performed, it is expected efficiencies will be recognized, evaluated, and as appropriate implemented to help recover some of the schedule delays. The total number of gloveboxes removed to date is at 94 percent complete.

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Nothing to report at this time.

DOE ACTIONS / DECISIONS

Nothing to report at this time.

RL-0011_C1
Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 1 - WORK BREAKDOWN STRUCTURE

FORM APPROVED
OMB No. 0704-0188

DOLLARS IN: Thousands of $

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
a. NAME: CH2M HILL Plateau Remediation Company	a. NAME: Plateau Remediation Contract	a. NAME: MPB - RL_0011_C1 - PFP D&D (ARRA/Base)	a. FROM (YYYYMMDD): 2016 / 11 / 21
b. LOCATION (Address and ZIP Code): Richland, WA	b. NUMBER: RL14788	b. PHASE	b. TO (YYYYMMDD): 2016 / 12 / 25
	c. TYPE: CPAF; d. SHARE RATIO	c. EVMS ACCEPTANCE: NO X YES (YYYYMMDD) 2009 / 09 / 18	

5. CONTRACT DATA

a. QUANTITY	b. NEGOTIATED COST	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK	d. TARGET PROFIT/FEE	e. TARGET PRICE	f. ESTIMATED PRICE	g. CONTRACT CEILING	h. ESTIMATED CONTRACT CEILING	i. DATE OF OTB/OTS (YYYYMMDD)
1	317,545	0	9,878	327,423	344,687	327,423	344,687	

6. ESTIMATED COST AT COMPLETION

	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)
a. BEST CASE	332,416		
b. WORST CASE	335,249		
c. MOST LIKELY	334,809	317,545	-17,264

7. AUTHORIZED CONTRACTOR REPRESENTATIVE

a. NAME (Last, First, Middle Initial): Dickerson, Kala K

b. TITLE: Prime Contract Compliance Manager

c. SIGNATURE

d. DATE SIGNED (YYYYMMDD)

8. PERFORMANCE DATA

CAPN.PBS / Control Account.PARS 2 WBS (2) / ITEM (1)	CURRENT PERIOD: BUDGETED COST WORK SCHEDULED (2)	CURRENT PERIOD: BUDGETED COST WORK PERFORMED (3)	CURRENT PERIOD: ACTUAL COST WORK PERFORMED (4)	CURRENT PERIOD: VARIANCE SCHEDULE (5)	CURRENT PERIOD: VARIANCE COST (6)	CUMULATIVE TO DATE: BUDGETED COST WORK SCHEDULED (7)	CUMULATIVE TO DATE: BUDGETED COST WORK PERFORMED (8)	CUMULATIVE TO DATE: ACTUAL COST WORK PERFORMED (9)	CUMULATIVE TO DATE: VARIANCE SCHEDULE (10)	CUMULATIVE TO DATE: VARIANCE COST (11)	REPROGRAMMING ADJUSTMENTS: COST VARIANCE (12a)	REPROGRAMMING ADJUSTMENTS: SCHEDULE VARIANCE (12b)	REPROGRAMMING ADJUSTMENTS: BUDGET (13)	AT COMPLETION: BUDGETED (14)	AT COMPLETION: ESTIMATED (15)	AT COMPLETION: VARIANCE (16)
RL-0011 Nuclear Mat Stab & Disp PFP																
RL_0011_C1.02 Maintain Safe & Compliant PFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RL_0011_C1.05 Disposition PFP Facility	0	6	22	6	-16	235,514	234,583	259,137	-931	-24,554	0	0	0	235,514	259,629	-24,114
RL_0011_C1.06 Project Management & Support	0	0	0	0	0	11,990	11,990	12,477	0	-487	0	0	0	11,990	12,477	-487
RL_0011_C1.90 Usage Based Services Distributions -PBS RL-11	0	0	0	0	0	7,221	7,221	7,731	0	-510	0	0	0	7,221	7,731	-510
RL_0011_C1.98 Ramp-up and transition	0	0	0	0	0	19,399	19,399	19,253	0	147	0	0	0	19,399	19,253	147
RL_0011_C1.99 PBS RL-11 UBS, G-n-A, Direct Distrib	0	0	0	0	0	41,028	41,028	33,328	0	7,700	0	0	0	41,028	33,328	7,700
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET														0	0	0
e. SUBTOTAL	0	6	22	6	-16	315,152	314,221	331,925	-931	-17,704	0	0	0	315,152	332,416	-17,264
f. MANAGEMENT RESERVE														2,393		
g. TOTAL	0	6	22	6	-16	315,152	314,221	331,925	-931	-17,704	0	0	0	317,545		

9. RECONCILIATION TO CONTRACT BUDGET BASELINE

a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE									-931	-17,704				317,545	332,416	-14,871

CLASSIFICATION (When Filled In)

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 2 - ORGANIZATIONAL CATEGORIES

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

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract		a. NAME MPB - RL_0011_C1 - PFP D&D (ARRA/Base)	a. FROM *(YYYYMMDD)* 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788		b. PHASE	b. TO *(YYYYMMDD)* 2016 / 12 / 25
	c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO:	YES: X *(YYYYMMDD)* 2009 / 09 / 18

5. PERFORMANCE DATA

WBS.Resp Org Group	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE							
ITEM	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	COST VARIANCE	SCHEDULE VARIANCE	BUDGET	BUDGETED	ESTIMATED	VARIANCE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12a)	(12b)	(13)	(14)	(15)	(16)
35 - Business Services	0	0	0	0	0	60,427	60,427	52,580	0	7,847	0	0	0	60,427	52,580	7,847
3B - PFP Closure Project	0	6	22	6	-16	254,725	253,794	279,344	-931	-25,551	0	0	0	254,725	279,836	-25,111
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET														0	0	0
e. SUBTOTAL *(Performance Measurement Baseline)*	0	6	22	6	-16	315,152	314,221	331,925	-931	-17,704	0	0	0	315,152	332,416	-17,264
f. MANAGEMENT RESERVE														2,393		
g. TOTAL	0	6	22	6	-16	315,152	314,221	331,925	-931	-17,704	0	0	0	317,545		

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT

FORMAT 3 - BASELINE

DOLLARS IN THOUSANDS

Form Approved

OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	RL_0011_C1 - PFP D&D (ARRA/Base)	4. REPORT PERIOD	
CH2M HILL Plateau Remediation Company	a. NAME: Plateau Remediation Contract	a. NAME:	Plateau Remediation Contract	a. FROM:	2016/11/21
b. LOCATION:	b. NUMBER: RL14788	b. PHASE		b. TO:	2016/12/25
Richland, WA	c. TYPE: CPAF	c. EVMS ACCEPTANCE			
	d. SHARE RATIO:	NO	YES X 9/18/2009		

5. CONTRACT DATA

a. ORIGINAL NEGOTIATED COST	b. NEGOTIATED CONTRACT CHANGE	c. CURRENT NEGOTIATED COST (A + B)	d. ESTIMATED COST AUTH UNPRICED WORK	e. CONTRACT BUDGET BASE (C + D)	f. TOTAL ALLOCATED BUDGET	g. DIFFERENCE (E - F)
330,987	$0	$330,987	$0	$330,987	$317,545	$13,442

h. CONTRACT START DATE	i. DEFINITIZATION DATE	j. PLANNED COMPL DATE	k. CONT COMPLETION DATE	l. EST COMPLETION DATE
6/19/2008	6/19/2008	9/30/2018	9/30/2018	9/30/2018

6. PERFORMANCE DATA

BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)

ITEM	BCWS CUM TO DATE	BCWS FOR REPORT PERIOD	SIX MONTH FORECAST +1 Jan-17	+2 Feb-17	+3 Mar-17	+4 Apr-17	+5 May-17	+6 Jun-17	FY09-13	FY14	FY15	FY16	FY17	FY18	UNDISTRIB BUDGET	TOTAL BUDGET
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
a. PM BASELINE																
(BEGIN OF PERIOD)	**315,152**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**302,288**	**4,109**	**7,749**	**890**	**116**	**0**	**0**	**315,152**
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																
None during the reporting period											**0**	**0**	**0**	**0**	**0**	**0**
c. PM BASELINE (END OF PERIOD)	**315,152**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**302,288**	**4,109**	**7,749**	**890**	**116**	**0**	**0**	**315,152**
7. MANAGEMENT RESERVE																**2,393**
8. TOTAL																**317,545**

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract		a. NAME MPB - RL_0011_C1 - PFP D&D (ARRA/Base)	a. FROM *(YYYYMMDD)* 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788		b. PHASE	b. TO *(YYYYMMDD)* 2016 / 12 / 25
	c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE [ ] NO [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)* — SIX MONTH FORECAST BY MONTH *(Enter names of months)* +1 JAN 2017 (4)	+2 FEB 2017 (5)	+3 MAR 2017 (6)	+4 APR 2017 (7)	+5 MAY 2017 (8)	+6 JUN 2017 (9)	ENTER SPECIFIED PERIODS REMAIN FY17 (10)	FY18 (11)	FY19-LC (12)	ATCOMPLETE (13)	AT COMPLETION (15)
35 - Business Services	0	17	0	0	0	0	0	0	0	0	0	0	17
3B - PFP Closure Project	2	15407	9	12	8	0	0	1	7	0	0	0	15444
g. TOTAL DIRECT	2	15423	9	12	8	0	0	1	7	0	0	0	15460

CLASSIFICATION (When Filled In)

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM		4. REPORT PERIOD
a. NAME	a. NAME		a. NAME		a. FROM (YYYYMMDD)
CH2M HILL Plateau Remediation Company	Plateau Remediation Contract		MPB - RL_0011_C1 - PFP D&D (ARRA/Base)		
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE		2016/11/21
Richland, WA	RL14788				b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO	c. EVMS ACCEPTANCE		
	CPAF		No X Yes	(YYYYMMDD) 2009 / 09 / 18	2016/12/25

Direct Projects

5. Evaluation	Budget	Earned	Actuals	SV in $	SV in %	CV in $	CV in %	SPI	CPI
Current:	0	6	22	6	-	-16	-265%	-	0.27
Cumulative:	315,152	314,221	331,925	-931	-0.3%	-17,704	-5.6%	1.00	0.95
	BAC	EAC	VAC in $	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:	315,152	332,416	-17,264	-5.5%	-	1.90			

Explanation of Variance/Description of Problem:
Current Period:
Schedule Variance: Within Threshold

Cost Variance: The current month negative cost variance is a result of additional engineering resources required to prepare for removal of gloveboxes HA-7A, HC-7C and HC-18M gloveboxes from the 234-5Z facility.

Cumulative To Date:
Schedule Variance: Within Threshold
Cost Variance: Within Threshold

Impact:
Schedule Impact: The RL-011.C1 project baseline completion date is December 16, 2016. The current schedule now reflects a completion date of December 9, 2017, resulting in a loss of 29 calendar days since December, 2016. This is as a result of impacts from snow days and realignment of team members diverting them to support higher critical path work on ready for demolition activities in 234-5Z and 291-Z.

The current RL-11 performance schedule indicates that the PFP project will achieve slab-on-grade by August 29, 2017. The project lost 29 days since December, 2016. This is as a result of impacts from snow days and realignment of team members diverting them to support higher critical path work on ready for demolition activities in 234-5Z and 291-Z. Efficiencies were identified in readying the 234-5Z facility for demolition wherein NDA and characterization data supports leaving more piping and ducting in place for demolition. In addition, efficiencies were recognized in 236-Z (PRF) wherein work was performed on filter boxes in parallel with the gallery gloveboxes allowing acceleration of the start of 236-Z demolition. This is turn accelerated when additional field team resources were reallocated from 236-Z to 234-5Z to get the facility ready for demolition. This is partially offset by delay in readying the 234-5Z facility for demolition as a result of lack of RCT resources. 234-5Z contains the gloveboxes requiring removal to meet the end state of the KPP and TPA milestone. The project expects to increase progress in the 234-5Z facility as all resources have been reassigned to complete the demo preparations in this facility. The PFP Project is currently on track to meet the re-negotiated TPA milestone M-083-00A due date of 9/30/17 for achieving slab-on-grade.

Cost Impact: The historical negative cost variance of ~$17.7M and 5.6%, and CPI of .95 reflect impacts of the safety pauses, stop works, contamination events, and increased complexity of the HA-9A/HC-9B size reduction efforts. This variance is not considered recoverable. The cost variance is partially offset by recognized efficiencies in cleaning up the RMA/RMC control rooms after completion of the size reduction efforts of the 9A/9B gloveboxes. The EAC increased by $49K the month of December which is insignificant.

Cost variance is not considered recoverable. As efficiencies continue to be recognized, the EAC will be adjusted. It is not expected that the cost variance will be recovered as there is only a small amount of scope remaining to complete the KPP.

Corrective Action:
No Corrective Actions Required

Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):
1. Schedule Margin Analysis: There is no schedule margin associated with the RL-011.C1 capital asset account.
2. IMS Data dictionary Changes: None in the month of December.
3. Forecast Schedule with No Baseline: None in the month of December.
4. UB Balance: None in the month of December.
5. Negative ACWP: None in the month of December.
6. EAC Analysis: Best Case = $332,367; Most Likely = $334,760; Worst Case = $335,233
7. Negative CV > VAC: Scope to perform size reduction efforts on the high gram glovebox removal efforts was estimated to be completed in a much shorter time frame with much fewer resources than originally planned causing the large Cost Variance. The EAC is reflective of the current approach to perform the remaining work scope.
8. MR Transactions: None in the month of December.
9. Freeze Period Changes: None in the month of December.
10. Retroactive Changes: None in the month of December.
11. EVT Changes: None in the month of December.

Prepared by: **Date:** **Approved by:** **Date:**

Appendix C
Capital Asset Project
RL-0011_C2 - Demolition of PFP Facilities

T. E. Bratvold
Vice President for
PFP Closure Project

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Progress continued to work toward CD-4 closure as teams continued to ready the Plutonium Finishing Plant (PFP) facilities for demolition. Demolition on the Plutonium Reclamation Facility (PRF) facility began on November 8, 2016. Completion of all demolition activities will occur in August 2017.

The following are key metrics associated with this CAP.

Key Metrics	*Current Month Plan*	*Current Month Actuals*	*Cumulative Plan*	*Cumulative Actuals*
Complete Cold and Dark/Demo Ready activities for 234-5Z	-	-	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	-
Complete Cold and Dark/Demo Ready activities for PFP Ancillary Facilities	-	-	15	3
Complete Demolition of 234-5Z	-	-	1	-
Complete Demolition of 236-Z	-	-	1	-
Complete Demolition of 242-Z	-	-	1	-
Complete Demolition of 291-Z	-	-	1	-
Complete Demolition of PFP Ancillary Facilities	-		15	3
Turnover Facility to Long Term Surveillance & Maintenance	-	-	-	-

KEY ACCOMPLISHMENTS

RL-0011_C2 Accomplishments

- Continued demolition activities on 236-Z Facility
- Completed demolition of the sixth floor, fifth floor, and South Canyon Airlock on 236-Z.

MAJOR ISSUES

On October 24, 2016, a stop work was issued at PFP on the use of Mine Safety Appliance, OptimAir TL powered air purifying respirators (PAPRs). The stop work was the result of the discovery of paint inside the blower housing (past the filter). Upon further investigation, it was discovered that with the Mine Safety Appliance (MSA) OptimAir TL PAPR in configuration of using the chemical-OV cartridges in conjunction with the "bumper guard," there was no seal between the filter and the blower, allowing air to bypass the filter.

Corrective Action:

- All in service MSA OptimAir TL PAPRs at PFP were removed from service.
- An intrusive survey of the internals of several PAPRs were conducted.
- New PAPRs were put into service.
- Initiated an investigation of the affected time period in which this configuration was utilized.

Status:

- Developing a list of affected employees.
- Collecting air sample data for the time period in which this configuration was worn.
- PFP continues to collect air sample data associated with the use of the bumper guard in conjunction with the Chemical-OV cartridge.
- Completed list of employees that were issued chemical-OV cartridges during the time period in which bumper guards were used at PFP.
- Continue to collect survey/air sample data from effected time period.

CORRECTIVE ACTION LOG

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

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

- Increased Confidence
- No Change
- Decreased Confidence

Risk Title Risk Owner	Unmitigated Risk Impacts	Assessment Month	Assessment Trend	Comments
RL-0011/WBS-011.05.C3 (CAP.2)				
Explanation of major changes to the project monthly stoplight chart: No major changes to the monthly stoplight chart in the month of December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
PFP-DEMO-23: Demolition Equipment Reliability and Modification	Ineffective demolition equipment attachments or mechanical failures impact the demolition of PFP. Equipment modification, leasing, or replacement will be required resulting in cost impacts **Risk Handling Strategy:** Accept **Probability:** Medium (26% to 74%) **Worst Case Impacts:** $1 million, 66 day			**Risk Event:** This risk was realized when additional demolition equipment (telescoping fogger) was identified to be needed to mitigate the spread of contamination during demolition efforts. Excessive water pudding has caused issues in the drain systems and allowed water to enter into PFP facilities raising the risk of losing contamination control. The fogger has the potential to become contaminated so leasing is not an option and no other projects have one to loan. Purchase telescoping fogger — Risk Date: 11/30/2016 — FC Date: Complete — %: 100 Implement BCR to utilize MR for Procurement — Risk Date: 11/30/2016 — FC Date: Complete — %: 100 Receipt of telescoping fogger — Risk Date: 11/30/2016 — FC Date: 03/09/17 — %: 0 **Recovery Action Assessment:** Due to the conditions listed above, this risk has been realized and additional equipment is required. The project will procure a telescoping fogger to mitigate the spread of contamination during demolition. The purchase of this equipment was completed by utilizing management reserve and implementing a BCR in the month of December. Receipt of the fogger is projected in March 2017.
PFP-DEMO-05: Inclement Weather	Inclement weather, including moderate winds, low or high temperatures and thunderstorms will impact the demolition of PFP. **Risk Handling Strategy:** Accept **Probability:** Medium (26% to 74%) **Worst Case Impacts:** $0K, 32 days *Cost increase will result in cost per day impacts from crews, and hotel load.			**Risk Event:** This risk was realized during the month of December due to winter weather limiting demolition activities and causing site closures/early releases. Obtain weather conditions for the area and adjust daily work scope/schedule accordingly — Risk Date: 12/14/2016 — FC Date: Ongoing — %: N/A **Recovery Action Assessment:** Winter weather continues to impact PFP demolition activities. During the month of December the Hanford site was released early on 12/14 and then had site closures on 12/15 and 12/20. The PFP project was also impacted due to increased snow removal, frozen water lines, and weather/temperature restrictions on demolition activities. The PFP project will continue to adjust daily work scope to plan for projected weather forecasts.
Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
FY2017 Risk Triggers (Risk could be realized in FY2017)				
PFP-DEMO-21: Glovebox/Equipment Removal/Demolition Material Handling Event	A material handling event (e.g., dropped piece of process equipment) occurs during the PFP demolition resulting in cost impacts and schedule delays. **Risk Handling Strategy:** Accept **Probability:** Low (10% to 25%) **Worst Case Impacts:** $150K, 30 days			**Risk Trigger:** During pre-demolition/demolition activities in FY2017. None identified at this time. — FC Date: N/A — %: N/A **Mitigation Assessment:** No changes in the month of December. The mitigation strategies have been put in place; as a result, the risk strategy is to accept with no further mitigation actions identified at this time. PFP will continue to adhere to the CHPRC ISMS program/ hoisting and rigging program to include detailed analyses of potential hazards and identification of preventive measures to implement prior to starting the work. At this time, no alternative course of actions needed.

<table>
<tr><th>Risk Title
Risk Owner</th><th>Unmitigated Risk Impacts</th><th colspan="2">Assessment
Month | Trend</th><th>Comments</th></tr>
<tr><td colspan="5">RL-0011/WBS-011.05.C3 (CAP.2)</td></tr>
<tr><td>PFP-DEMO-07: Removal/Extraction of Equipment Takes Longer Than Planned</td><td>Controlled demolition of equipment, gloveboxes, and portions of the crosscutting process support systems (i.e. ventilation) result in cost impacts, and schedule delays.
Risk Handling Strategy: Control

Probability: Likely (75% to 90%)
Worst Case Impacts: $1.5 million, 60 days</td><td>  </td><td>  </td><td>Risk Trigger: During pre-demolition/demolition activities in FY2017. Dates tracked in the FES.

<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Identify and pre-rig equipment with lifting slings.</td><td>03/07/17</td><td>50</td></tr><tr><td>Initiate discussions early in the demo planning of the equipment being left in place for removal during demolish.</td><td>Ongoing</td><td>N/A</td></tr><tr><td>Apply fixative to internals of equipment intended to be removed during demolition to contain contamination.</td><td>Ongoing</td><td>N/A</td></tr></table>
Mitigation Assessment:
No changes in the month of December.
The forecasted completion date for pre-rigging equipment with lifting slings would be performed as a pre-demolition activity and therefore was updated to align with FES date for 234-5Z ready for demo.
Additionally an effort will soon be taken to develop a removal path for several of the gloveboxes for Criticality Incredibility. If the opportunity presents itself additional gloveboxes currently slated for removal during demolition (e.g. HC-227S, HC227T) will be removed during pre-demolition as risk mitigation strategy. At this time, no alternative course of actions needed.</td></tr>
<tr><td colspan="5">High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</td></tr>
<tr><td colspan="5">No high threat value risks identified in the month of December.</td></tr>
<tr><td colspan="5">Unassigned Risks (Pending ownership of identified risks/opportunities)</td></tr>
<tr><td colspan="5">To ensure success of the project ownership needs to be established to further identify and address potential impacts to project cost and schedule. There are cases when risks are identified but are outside the control and management of the contractor. However, CHPRC risk management process identifies all risks that could impact overall project success.</td></tr>
<tr><td>PFP-DEMO-18: Level of Readiness Effort</td><td colspan="4">PFP Demolition activities and hazard categorization provide for a Readiness Assessment (RA); however, due to the first-of-its-kind project at the Hanford Site, CHPRC will be directed by the customer to perform a more rigorous RA than planned resulting in cost impacts and schedule delays.

CHPRC Comment: The rework required between the first submittal on May 26, 2015, through the resubmittal on August 27, 2015, and subsequent approval on October 8, 2015, has increased cost of demolition and impacted schedule. The additional cost is due to a technical difference in the readiness scoring by RL that is not consistent with historical scoring. The addition of a readiness team and performance of an exercise versus a drill have impacted the project. The additional requirements may represent realization of previously identified risk PRC-010, Requirements Change. Accordingly, CHPRC is entitled to an adjustment to cost and fee to implement the direction. In December, a notice of change was sent to RL for the potential change. The letter was re-submitted based on RL feedback. The project continues to wait for direction from RL and will revisit after completion of the RA as actual costs will be able to be compiled.</td></tr>
</table>

CRITICAL PATH SCHEDULE

The PFP Critical Path Schedule is a resource-driven float path in which the critical path starts Asbestos abatement throughout 234-5Z, which leads to final Cold & Dark activities. This transitions 234-5Z to be ready for demolition. Demolition of 234-5Z will occur in the following sequence: 234-5ZA, Frontside, A-Labs, Backside Rooms/Plutonium Process Support Laboratories (PPSL), Remote Mechanical A (RMA) Process Lines, Remote Mechanical C (RMC) Process Lines, and the RADTU & Basement areas. Once the 234-5Z and 291-Z facilities have been demolished, the Tri-Party Agreement Milestone – M-083-00A - *PFP Facility Transition and Selection Disposition Activities* will have been met.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	* Due Date	**Forecast Date	Status/ Comment
RL-011.C2	Completion Demolition of all PFP Facilities	8/31/18	1/24/18	Progress continued to work toward CD-4 closure as teams continued to ready the PFP facilities for demolition. The PRF facility initiated demolition on November 8, 2016, and completion of demolition activities will occur in July 2017. There was a 35-day loss for the month of December. This is as a result of lack of RCT resources, identification of need for removal of additional asbestos, unusual inclement weather, and realignment of the remaining activities in the FES to reach ready for demolition status in the 234-5Z facility. As the PFP Project continues to make progress on the behind schedule critical path work scope being performed, it is expected efficiencies will be recognized, evaluated, and as appropriate implemented to help recover some of the schedule delays. The total number of gloveboxes removed to date is at 94 percent complete.

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

DOE ACTIONS / DECISIONS

None to report at this time.

RL-0011_C2
Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

December 2016
CHPRC-2016-12, Rev. 1
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 RL_0011_C2 PFP Demolition Capital Asset Project	a. FROM (YYYYMMDD) 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788	b. PHASE	b. TO (YYYYMMDD) 2016 / 12 / 25
	c. TYPE CPAF / d. SHARE RATIO	c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18	

5. CONTRACT DATA

a. QUANTITY	b. NEGOTIATED COST	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK	d. TARGET PROFIT/FEE	e. TARGET PRICE	f. ESTIMATED PRICE	g. CONTRACT CEILING	h. ESTIMATED CONTRACT CEILING	i. DATE OF OTB/OTS (YYYYMMDD)
1	51,683	0	5,000	56,683	50,894	56,683	50,894	

6. ESTIMATED COST AT COMPLETION

	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)
a. BEST CASE	42,797		
b. WORST CASE	56,406		
c. MOST LIKELY	45,894	51,683	5,789

7. AUTHORIZED CONTRACTOR REPRESENTATIVE

a. NAME (Last, First, Middle Initial)	b. TITLE	c. SIGNATURE	d. DATE SIGNED (YYYYMMDD)
Dickerson, Kala K	Prime Contract Compliance Manager		

8. PERFORMANCE DATA

CAPN.PBS Control Account.PARS 2 WBS (2) ITEM (1)	CURRENT PERIOD BUDGETED COST WORK SCHEDULED (2)	CURRENT PERIOD BUDGETED COST WORK PERFORMED (3)	CURRENT PERIOD ACTUAL COST WORK PERFORMED (4)	CURRENT PERIOD VARIANCE SCHEDULE (5)	CURRENT PERIOD VARIANCE COST (6)	CUMULATIVE TO DATE BUDGETED COST WORK SCHEDULED (7)	CUMULATIVE TO DATE BUDGETED COST WORK PERFORMED (8)	CUMULATIVE TO DATE ACTUAL COST WORK PERFORMED (9)	CUMULATIVE TO DATE VARIANCE SCHEDULE (10)	CUMULATIVE TO DATE VARIANCE COST (11)	REPROGRAMMING ADJUSTMENTS COST VARIANCE (12a)	REPROGRAMMING ADJUSTMENTS SCHEDULE VARIANCE (12b)	REPROGRAMMING ADJUSTMENTS BUDGET (13)	AT COMPLETION BUDGETED (14)	AT COMPLETION ESTIMATED (15)	AT COMPLETION VARIANCE (16)
RL-0011 Nuclear Mat Stab & Disp PFP																
RL_0011_C2.05 Disposition PFP Facility	2,388	212	1,081	-2,176	-869	45,162	11,158	14,411	-34,004	-3,253	0	0	0	48,586	42,797	5,789
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET														0	0	0
e. SUBTOTAL	2,388	212	1,081	-2,176	-869	45,162	11,158	14,411	-34,004	-3,253	0	0	0	48,586	42,797	5,789
f. MANAGEMENT RESERVE														3,097		
g. TOTAL	2,388	212	1,081	-2,176	-869	45,162	11,158	14,411	-34,004	-3,253	0	0	0	51,683		

9. RECONCILIATION TO CONTRACT BUDGET BASELINE

a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE									-34,004	-3,253				51,683	42,797	8,886

CLASSIFICATION (When Filled In)

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 2 - ORGANIZATIONAL CATEGORIES

DOLLARS IN Thousands of $

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project	a. FROM *(YYYYMMDD)* 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788		b. PHASE	b. TO *(YYYYMMDD)* 2016 / 12 / 25
	c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO: [ ] YES: [X] *(YYYYMMDD)* 2009 / 09 / 18	

5. PERFORMANCE DATA

WBS.Resp Org Group	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE					BUDGETED	ESTIMATED	VARIANCE
ITEM	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	COST VARIANCE	SCHEDULE VARIANCE	BUDGET			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12a)	(12b)	(13)	(14)	(15)	(16)
3B - PFP Closure Project	2,388	212	1,081	-2,176	-869	45,162	11,158	14,411	-34,004	-3,253	0	0	0	48,586	42,797	5,789
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET														0	0	0
e. SUBTOTAL *(Performance Measurement Baseline)*	2,388	212	1,081	-2,176	-869	45,162	11,158	14,411	-34,004	-3,253	0	0	0	48,586	42,797	5,789
f. MANAGEMENT RESERVE														3,097		
g. TOTAL	2,388	212	1,081	-2,176	-869	45,162	11,158	14,411	-34,004	-3,253	0	0	0	51,683		

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT

FORMAT 3 - BASELINE

DOLLARS IN THOUSANDS

Form Approved

OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	RL_0011_C2 PFP Demolition Capital Asset Project	4. REPORT PERIOD
CH2M HILL Plateau Remediation Company	a. NAME: Plateau Remediation Contract	a. NAME:	Plateau Remediation Contract	a. FROM: 2016/11/21
b. LOCATION:	b. NUMBER: RL14788	b. PHASE		b. TO: 2016/12/25
Richland, WA	c. TYPE: CPAF	c. EVMS ACCEPTANCE		
	d. SHARE RATIO:	NO	YES X 9/18/2009	

5. CONTRACT DATA

a. ORIGINAL NEGOTIATED COST	b. NEGOTIATED CONTRACT CHANGE	c. CURRENT NEGOTIATED COST (A + B)	d. ESTIMATED COST AUTH UNPRICED WORK	e. CONTRACT BUDGET BASE (C + D)	f. TOTAL ALLOCATED BUDGET	g. DIFFERENCE (E - F)
51,683	$0	$51,683	$0	$51,683	$51,683	$0

h. CONTRACT START DATE	i. DEFINITIZATION DATE	j. PLANNED COMPL DATE	k. CONT COMPLETION DATE	l. EST COMPLETION DATE
6/19/2008	6/19/2008	9/30/2018	9/30/2018	9/30/2018

6. PERFORMANCE DATA

BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)

ITEM	BCWS CUM TO DATE	BCWS FOR REPORT PERIOD	SIX MONTH FORECAST +1 Jan-17	+2 Feb-17	+3 Mar-17	+4 Apr-17	+5 May-17	+6 Jun-17	FY09-13	FY14	FY15	FY16	FY17	FY18	UNDISTRIB BUDGET	TOTAL BUDGET
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
a. PM BASELINE																
(BEGIN OF PERIOD)	**42,774**	**2,388**	**1,952**	**779**	**114**	**93**	**10**	**0**	**0**	**0**	**6,090**	**29,182**	**12,837**	**0**	**0**	**48,109**
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																
BCR-011C-17-003R0 - PFP CAP 2 Demolition Equipment MR Draw												**0**	**477**	**0**	**0**	**477**
c. PM BASELINE (END OF PERIOD)	**45,162**	**2,388**	**1,952**	**779**	**114**	**570**	**10**	**0**	**0**	**0**	**6,090**	**29,182**	**13,313**	**0**	**0**	**48,586**
7. MANAGEMENT RESERVE																**3,097**
8. TOTAL																**51,683**

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project	a. FROM *(YYYYMMDD)* 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788		b. PHASE	b. TO *(YYYYMMDD)* 2016 / 12 / 25
	c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO:	YES: X *(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)* SIX MONTH FORECAST BY MONTH *(Enter names of months)* +1 JAN 2017 (4)	+2 FEB 2017 (5)	+3 MAR 2017 (6)	+4 APR 2017 (7)	+5 MAY 2017 (8)	+6 JUN 2017 (9)	ENTER SPECIFIED PERIODS REMAIN FY17 (10)	FY18 (11)	FY19-LC (12)	AT COMPLETION (15)
3B - PFP Closure Project	29	187	34	38	39	41	98	78	211	70	0	795
g. TOTAL DIRECT	29	187	34	38	39	41	98	78	211	70	0	795

CLASSIFICATION (When Filled In)

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project	a. FROM (YYYYMMDD) 2016/11/21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788		b. PHASE	b. TO (YYYYMMDD) 2016/12/25
	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:	2,388.4	211.9	1,081.3	-2,176.5	-91.1%	-869.4	-410.3%	0.09	0.20
Cumulative:	45,162.4	11,158.4	14,411.4	-34,004.0	-75.3%	-3,253.0	-29.2%	0.25	0.77
	BAC	EAC	VAC in $	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:	48,585.9	42,797.0	5,789.0	11.9%	1.10	1.32			

Explanation of Variance/Description of Problem:

Current Month:

Schedule Variance: The current month negative schedule variance is associated with the delay in the demobilization and installation of the cover cap following demolition. This work is significantly impacted due to delays in getting 236-Z, 242-Z, 291-Z, and 234-5Z ready for demolition and cannot occur until all buildings are demolished. In addition, the Hanford Site is experiencing an unusually severe winter weather causing unplanned work delays and closures. In addition, four mechanical failures impacted the demolition crews ability to work in December. The failures impacted two of the excavators and a High Reach attachment. The high reach encountered a common bolt failure requiring replacement. Due to an approved, increased pace of work, two excavators were reintroduced into service. Due to the extended downtime, two hydraulic leaks were discovered and two O-Ring failed requiring replacements. Due to the expected continuous future use of this equipment, the project does not expect to encounter similar issues moving forward. A total of 6 work days were lost in December due to mechanical issues. impacts to the Hanford Site. Unexpected site closures due to snow and ice, as well as severe freezing temperatures impacted the demolition crew a total of five days for the month of December.

Cost Variance: The current month cost variance is due to significant down time for demolition due to mechanical equipment failures. Six working days were lost due to the mechanical failures in which the team was not reassigned, while repairs were on-going.

Cumulative to Date:

Schedule Variance: The cumulative schedule variance is due to delay of demolition of ancillary buildings and 236-Z caused by resources being redirected to support higher priority critical path work associated with decommissioning of 234-5Z, 242-Z, and 236-Z, as well ready for demo activities associated with impacts from 236-Z Canyon Crane failure, contamination impacts from an unplanned criticality alarm failure, contamination recovery in the duct level of 234-5Z (two week delay in July 2016) and increased characterization efforts. The contract to date negative schedule variance is due to work scope associated with the demolition of 236-Z, 242-Z, 291-Z, and 234-5Z not being performed as originally scheduled. The demolition of these facilities has been delayed due to resources being redirected to support ready for demolition activities (project critical path work). As a result of delays in the ready for demolition activities, the C2 CD-4 has been delayed. However, the TPA milestone M-083-00A has been re-negotiated to a due date of 9/30/2017 and is expected to be achieved. This is partially offset by the completion of demolition of the 2729-Z, and 2727-Z facilities, removal of gloveboxes, and the completion of demolition activities for the 5th floor, 6th floor, 60% of the 4th floor, and South Canyon Airlock of 236-Z.

Cost Variance: The cumulative negative cost variance is associated with MSA subcontracted resources arriving to support PFP demolition that had a planned as P/Q shift support with a baseline start date of January 2016. Because the project is behind schedule in initiating demolition activities, and because the decision was made not to execute demolition activities for the PRF/242-Z facilities on P/Q shift, these resources currently have limited work to support which contributes to inability to take performance until the ready for demolition work scope is completed. To ensure that the project is able to continue demolition activities as identified in the current schedule, these costs will continue to be realized resulting in a potential unrecoverable cost variance. 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. In addition, 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. Finally, 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. This is partially offset by recognized efficiencies associated with the demolition of the 2727-Z and 2729-Z facilities.

Impact:

Schedule Impact: Work efforts in getting 234-5Z ready for Cold & Dark resulted in a loss of 22 days since November to the critical path to achieving the CD-4 closeout. This is as a result of lack of RCT resources and realignment of the remaining activities in the FES to reach ready for demolition status in the 234-5Z facility. As the PFP Project continues to make progress on the behind schedule critical path work scope being performed, it is expected efficiencies will be recognized, evaluated, and implemented to recover schedule delays. The baseline completion date is not considered recoverable. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of September 30, 2017 and is expected to be achieved.

Cost Impact: Stop Works, Safety Pauses, multiple contamination events, the PRF Crane failure, and associated recovery actions have negatively impacted the field work to ready 234-5Z, 236-Z, 242-Z, and 291-Z for demolition. In addition, readiness activities took longer than originally assumed as a result of increased requirements required by the Readiness Assessment team to demonstrate readiness for demolition of the PRF facility and efforts to mobilize took longer than originally assumed as a result of implemented recommendations from the readiness assessment team. Finally, subcontracted MSA resources specializing in facility demolition continue to charge the project until ready for demo status is achieved. Mitigation actions are being reviewed and, when finalized, will be put in place to partially recover the cost impact.

The positive VAC is reflective of working one shift during demolition of 236-Z and 242-Z facilities rather than two as planned in the PMB. In addition, the duration for demolition of 234-5Z has been adjusted as it has been determined that due to the time of year demolition will occur, the number of days to demolish the facility will be less than originally planned. This reduces the amount of demolition and supervision labor resources needed, resulting in the reduction of EAC to BCWS values. The projected net EAC impact of $4.6M since October is the result of adjustment of project management support to line up with what is going to be required to support the demolition efforts going forward and an increased requirement to by PBS Fixative for demolition activities.

Corrective Action:

Cost: MSA subcontracted resources (e.g., Heavy Equipment Operators, Crane Operators, Mechanics, etc.) will be loaned out to other CHPRC and other Hanford contractors when the PFP project can support the needs of others and this offset unnecessary costs to the PFP Project. Action Mike Douglas due 6/30/17

Schedule: The PFP project will evaluate and incorporate actions to safely and effectively recover schedule that has been lost due to delays in the ready for demolition activities associated with 234-5Z, 236-Z, 242-Z, and 291-Z in order to allow demolition of facilities in the PFP complex to begin earlier than currently forecast. The FES will be updated by end of December to reflect these recovery actions. Action Mike Douglas 12/31/16

Initiate demolition of the 234-5Z facility efficiently on P/Q shift. Action Ruben Trevino 4/30/2017

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

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

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

1. Schedule Margin Analysis: In the EAC there is currently no remaining schedule margin in this capital asset account. Schedule margin was lost in February 2016 as a result of impacts from stop works associated with PremAire breathing air issues related to size reduction of the HA-9A glovebox and impacts from a safety pause associated with a PremAire Breathing Air radiological event resulting in increased survey requirements for PPE.
2. IMS Data dictionary Changes: No change in the month of November
3. Forecast Schedule with No Baseline: No change in the month of November
4. UB Balance: No change in the month of November
5. Negative ACWP: No change in the month of November
6. EAC Analysis: Best Case = $42,797; Most Likely = $45,894; Worst Case = $56,406
7. Negative CV > VAC: No change in the month of November
8. MR Transactions: No change in the month of November
9. Freeze Period Changes: No change in the month of November
10. Retroactive Changes: No change in the month of November
11. EVT Changes: BCR-0011C-17-002R), Convert Planning Package to Discrete EV Type was implemented in the month of November.

Prepared by: **Date:** **Approved by:** **Date:**

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

R. M. Geimer
Vice President for
K Basin Operations and
Plateau Remediation
(KBO&PR)

M. A. Wright
Vice President for
Project Technical
Services

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

1. Based upon discussions between RL and CHPRC Senior Management, the Sludge Treatment Plant (STP) Team has modified the field execution schedule (FES) to implement acceleration opportunities that could potentially facilitate the transfer of all sludge to T Plant in fiscal year (FY) 2018. In order to meet the accelerated schedule, support from CHPRC and RL is required for the following assumptions:
    - Significant overtime/weekend work will be required to reduce schedule duration.
    - Reduced approval time on safety documentation.
    - CD-4 approval will occur concurrently with sludge retrieval operations.
    - Approval of integrated Documented Safety Analysis (DSA) will occur within 120 days of submittal.
2. The DOE Safety Basis Review Team (SBRT) completed their initial review of the 105K West Facility DSA and technical safety requirement (TSR). Proposed resolutions are in development. CHPRC staff will continue to work with the SBRT to address comments as efficiently as possible, with the expectation that the 120-day RL review schedule can be achieved. The DSA/TSR must be approved and implemented prior to K Basin Preoperational Acceptance Testing (KPAT) activities that transfer 105K West Basin water into the 105K West Annex.

KEY ACCOMPLISHMENTS

RL-0012_C1_1 Accomplishments

KW Basin Sludge Retrieval Capital Assest Project

- Engineered Container Retrieval and Transfer System (ECRTS) Process Equipment Procurement:
    - Procurement Set #8: Sludge Transport & Storage Container (STSC) Vessels – The iron contamination root causal analysis was internally approved and formally transmitted to RL. ABW was subsequently authorized to proceed with all fabrication activities for STSC 414-424 within the provision of the corrective action plan. CHPRC personnel are working on contract change orders required prior to proceeding with testing/cleaning STSC 402-409.
    - Procurement Set #9: Safety Significant STSC Assemblies (Instrumentation & Appurtenances) – HiLine personnel completed installing STSC Instrumentation & Appurtenances on STSC 410, 412, and 413 and have successfully completed Mass Spectrometer Leak Decay testing. CHPRC personnel have successfully reviewed final data packages for STSC 410, 412, & 413. CHPRC personnel are also currently verifying comment incorporation on the Becht Engineering model/calculation that provides the seismic response spectra that will be utilized when testing the STSC Instrumentation & Appurtenances.
    - Maintenance and Storage Facility (MASF) Facility –

      The MASF test team completed the effort to re-establish the ECRTS mockup and finalized leak testing of the spare ECRTS production equipment. The MASF team also completed the process of removing the two Instrument Spools from the test pool. The MASF Pre-Operational Acceptance Test (MPAT) final test report is in the internal review process and solid progress is being made on producing the documentation to support the K-Basin Preoperational Acceptance Test (KPAT) at the 105KW Basin/Annex early next calendar year.

PTS Accomplishments

- Field Work
  - KW Annex Construction
    - Completed installation of the north side exterior nitrogen bottle awning.
    - Completed installation of the vertical hose chase.
    - Completed hydrostatic test on transfer and decant hose between Annex and Basin.
    - Completed preparation of Truck Scale base plates for grouting.
    - Completed preparation and application of primer for albi clad application.
    - Installed the mechanical room supplemental cooling condensing units.
  - KW Basin In Basin Modifications Construction
    - Completed the instrument air piping extension for H-750 from the Xago to the facility.
    - Completed preparation work at EC-230 and EC-240 for Instrument Spool installation.
    - Installed both Center and East Bay Instrument Spool assemblies and completed associated underwater connections.
    - Performed final routing of ECRTS cables between panels along with terminations and securement at the panels.

MAJOR ISSUES

Sludge Removal Project
Issue:
Based upon iron contamination discoveries in STSC 402, 403, and 410-413, ABW was instructed to conduct free iron testing of STSC 404-409.

Corrective Action:
ABW and CHPRC Technical Staff have developed procedures to aggressively remove iron contamination from STSCs and validate cleanliness via free iron testing of all 12 STSCs fabricated in FY2016 (first production run).

Status:

1. STSC 410-413 were cleaned, retested, and accepted by CHPRC.
2. STSC 404-409 have been shipped back to Arlington, WA, for testing, cleaning, and retesting, as appropriate. This work scope is on hold until CHPRC and ABW reach agreement on the change order submitted for testing, cleaning, and retesting STSC 410-413.
3. STSC 402-403 remain at HiLine (with instrumentation/appurtenances installed) and will be tested, cleaned, and retested by HiLine personnel, due to the difficulty and expense of returning these vessels to Arlington, WA, with instrumentation and appurtenance installed.
4. CHPRC has completed a causal analysis, which provides the basis for settling outstanding change orders and resolving this issue.

CORRECTIVE ACTION LOG

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

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

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

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

Increased Confidence
No Change
Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
RL-0012/WBS-012 (CAP)				
Explanation of major changes to the project monthly stoplight chart: No major changes to the monthly stoplight chart in the month of December.				
Realized Risks (Risks that are currently impacting project cost/schedule)				
STP-123-B: Design Maturity - ECRTS Annex/In-Basin Equip.	Finalization of design media for the ECRTS equipment installation will result in changes to both cost and schedule. **Risk Handling Strategy:** Accept **Probability:** Medium (26% to 74%) **Worst Case Impacts:** $912K, 64 days			**Risk Event:** The project realized additional cost and schedule impacts in December due to the need to add design details for a Cask Leak Test Tool/Panel in the KW Modified Annex (DCN-STP-ECRTS-485). The project will now be required to design, procure, fabricate, and install SRP Cask Leak Test Tool & Panel at the Annex Facility utilizing a vacuum decay leak test as a change in method of performance.

Risk recovery action(s)	Risk Date	FC Date	%
Prepare Design Change (DCN-STP-ECRTS-485) to provide details on new Sludge Transportation Cask Leak Test Tool & Associated Control Panel.	12/01/16	1/15/17	50
Award Contract Change Order to HiLine to Fabricate Hardware	12/1/16	1/31/17	0
Prepare Design Details to Install Leak Test Panel (ME-605)	12/01/16	2/28/17	0
Fabricate Leak Test Tool & Panel	12/01/16	3/31/17	0
Install ME-605 Panel in Annex Facility	12/01/16	4/15/17	0

Recovery Action Assessment:
The need to design, fabricate, and install a Cask Leak Test Tool/Panel resulted from a change in approach the project was forced to make to provide a positive means of ensuring leak tight integrity of the transportation cask prior to shipping sludge to T Plant.

<table>
<tr><th>Risk Title</th><th>Unmitigated Risk Impacts</th><th colspan="2">Assessment</th><th>Comments</th></tr>
<tr><th></th><th></th><th>Month</th><th>Trend</th><th></th></tr>
<tr><td colspan="5">RL-0012/WBS-012 (CAP)</td></tr>
<tr><td>STP-072: Delayed STSC/ECRTS Procurement & Delivery</td><td>Material delivery and fabrication issues at ECRTS vendor facilities delay the delivery of the components to the Sludge Treatment Plant (STP) resulting in cost impacts and schedule delays.

Risk Handling Strategy: Control

Probability: Medium (26% to 74%)
Worst Case Impacts: $3,000K 120 days</td><td>  </td><td>  </td><td>Risk Event:
Event 1: This risk has been realized. Rust was discovered in STSCs. As a result, additional testing and cleaning is required to quantify and correct this condition.
Event 2: Due to leak test failures encountered on the TLSB expansion joints, engineering processed a design change to revise the design to replace the expansion joint with a pipe spool. The late change and downstream procurement effort has pushed related installation activities onto project critical path. These components were installed in the 105K West Basin in late December.
<table><tr><th>Risk recovery action(s)</th><th>Risk Date</th><th>FC Date</th><th>%</th></tr><tr><td>Test at MASF</td><td>05/31/16</td><td>Complete</td><td>100</td></tr><tr><td>Install in 105KW Basin</td><td>05/31/16</td><td>Complete</td><td>100</td></tr><tr><td>Finalize Field FES activities dates consistent with change order.</td><td>5/13/16</td><td>1/31/17</td><td>0</td></tr></table>Recovery Action Assessment:
Contracting with NACE Certified SME to provide technical support in establishing acceptance criteria and monitoring progress to achieve receipt acceptance criteria. STSCs 410-413 were successfully cleaned and shipped to the Hanford site. ABW is on hold for further cleaning until a Change Order for STSCs 410-413 is settled with CHPRC, explaining the slip in completion date. The change order is forecasted to complete in January 2017.</td></tr>
<tr><td>STP-125-B: Inclement Weather - ECRTS Annex/In-Basin Equip.</td><td>Inclement weather and site closure days will have a day-for-day impact on construction execution and contractor performance with ECRTS equipment delivery and placement in the Annex or Basin.

Risk Handling Strategy: Accept

Probability: Likely (75% to 90%)
Worst Case Impacts: $50K, 12 days</td><td>  </td><td>  </td><td>Risk Event:
The project has incurred lost time delays as a result of inclement weather. The project incurred site closure days on 12/15 and 12/20 and early release on 12/14.
<table><tr><th>Risk recovery action(s)</th><th>Risk Date</th><th>FC Date</th><th>%</th></tr><tr><td>Obtain weather conditions for the area and adjust daily work scope/schedule accordingly</td><td>12/15/16</td><td>Ongoing</td><td>N/A</td></tr></table>Recovery Action Assessment:
Project estimates, per RL, allow only fair weather estimating practices and do not consider the impacts associated with normal local weather conditions. The implication is that planned time in the Annex and Basin will be reduced during both warm and cold weather. Common weather conditions such as high winds, ice storms, snow storms, and lightning will cause work scope delays potentially extending the project schedule duration and increasing costs. Work/Rest regiments can consume 2-4 hours each day and ice, snow, and wind closures have a day-to-day impact on the project schedule. No additional mitigation actions have been identified at this time.</td></tr>
</table>

<table>
<tr><th rowspan="2">Risk Title</th><th rowspan="2">Unmitigated Risk Impacts</th><th colspan="2">Assessment</th><th rowspan="2">Comments</th></tr>
<tr><th>Month</th><th>Trend</th></tr>
<tr><td colspan="5">RL-0012/WBS-012 (CAP)</td></tr>
<tr><td colspan="5">Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</td></tr>
<tr><td colspan="5">No critical risks identified in the month of December.</td></tr>
<tr><td colspan="5">High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</td></tr>
<tr><td colspan="5">FY2017 Risk Triggers (Risk could be realized in FY2017)</td></tr>
<tr><td>STP-103:
K Basin Pre-Operational Acceptance Testing (KPAT) & ECRTS Startup</td><td>The ECRTS equipment does not operate as expected, requiring increased engineering, startup, operations, and construction Firm Fixed Price contractor support; as well as equipment replacement, procurement, and retesting. Realization of this risk would also require additional training, procedure revision, and design modifications as a result of construction testing and/or Lines of Inquiry for Readiness Review resulting in cost impacts and schedule delays.

Risk Handling Strategy: Control

Probability: Medium (26% to 74%)
Worst Case Impacts: $4.5 million, 90 days</td><td>  </td><td>  </td><td>Risk Trigger:
1) The ECRTS equipment does not operate as expected.
2) Unexpected attrition of critical testing personnel.

<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Develop and refine procedures based upon feedback from testing and operations personnel.</td><td>3/15/17</td><td>25</td></tr><tr><td>Develop streamline strategy (work packages and procedures) to perform in-basin/annex integrated testing and troubleshooting.</td><td>3/15/17</td><td>10</td></tr><tr><td>Utilize Overtime to offset schedule impacts.</td><td>As Needed</td><td>N/A</td></tr><tr><td>Closely monitor employee satisfaction and consider employee incentive to retain key test personnel.</td><td>As Needed</td><td>N/A</td></tr></table>
Mitigation Assessment:
No major changes in the month of December.
Forecasted mitigation dates are consistent with overall STP critical path schedule.</td></tr>
<tr><td>STP-111-B:
Contractor/ Subcontractor Performance - ECRTS Annex/In-Basin Equip. Installation</td><td>The General Conditions Contractor and their supporting subcontractors have historically performed poorly and will be challenged on this project by compliance with project and contract flow down requirements (e.g., quality, nuclear standards, site safety requirements, subcontract management to ensure contract requirements are met, NRTL compliance, suspect counterfeit, Buy-American contract clause, Project Controls requirements, development of Construction Acceptance Testing [CAT], timely processing of submittals compliance with all the subcontract flow down requirements) as well as deployment and maintenance of key staff that are essential to safe, cost effective and on-time project delivery.

Risk Handling Strategy: Control

Probability: Very Likely (> 90%)
Worst Case Impacts: $792K, 96 days</td><td>  </td><td>  </td><td>Risk Trigger: Contractor delays due to inadequate staffing/mobilization. The contractor has responded to CH requests, hired an additional Field Work Supervisor and Project Engineer, and rearranged their Org Chart to increase efficiency of managing the project.
<table><tr><th>Mitigation action(s)</th><th>FC Date</th><th>%</th></tr><tr><td>Contractor delays due to inadequate staffing/mobilization. Will work with contractor to stabilize work resource planning.</td><td>Ongoing</td><td>NA</td></tr></table>
Recovery Action Assessment:
All discrete recovery actions have been completed, however the remaining impacts of this risk still qualify it as a key project risk and therefore it will continue to be reported on in the monthly stoplight report.
This is a reoccurring risk relating to the performance of the General Contractor and their supporting subcontractors. The CHPRC project team continues to work with their subcontractors to ensure the contractors are thoroughly aware of their project responsibilities and have the opportunity to complete their project scope successfully.
Mitigation actions are in place to reduce the probability of the risk occurrence and reduce the potential cost and schedule impact, and the risk will continue to be monitored. No additional mitigation actions identified at this time.</td></tr>
<tr><td colspan="5">Unassigned Risks (Pending ownership of identified threats/opportunities)</td></tr>
<tr><td colspan="5">No unassigned risks identified in the month of December.</td></tr>
</table>

CRITICAL PATH SCHEDULE

The critical path flows through submersion testing of the Density Flowmeter/Instrument Spools at MASF, installation at 105K West Basin and eventual commissioning. Following a successful Operational Readiness Review, RL will provide Authorization to Commence Retrieval Operations in parallel with the DOE HQ review/approval of CD-4. Completing retrieval operations, including the filling of STSCs with sludge and transferring them to T Plant, to complete Tri-Party Agreement Milestone M-016-176, *Complete Sludge Removal from 105-KW Fuels Storage Basin*, is outside the current contract period in FY2019, however the Project is implementing acceleration strategies to complete sludge retrieval by September 30, 2018.

SCHEDULE MARGIN/MANAGEMENT RESERVE

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

CRITICAL DECISION MILESTONE STATUS

Number	Title	*Due Date	**Forecast Date	Status/ Comment
15-D-401	CD-4, Project Completion	11/30/2019	7/16/2018	The forecast date includes schedule margin from the Project's risk analysis. Project schedule margin is 123 days. The current forecast date before schedule margin and allowance for CD-4 is 1/11/2018.

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

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

DOE ACTIONS / DECISIONS

None currently identified.

RL-0012_C1_1
Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis

December 2016
CHPRC-2016-12, Rev. 1
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 1 - WORK BREAKDOWN STRUCTURE

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

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract	a. NAME 15_D_401 KW Basin Sludge Removal Project	a. FROM (YYYYMMDD) 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788	b. PHASE	b. TO (YYYYMMDD) 2016 / 12 / 25
	c. TYPE CPAF / d. SHARE RATIO	c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2019 / 09 / 18	

5. CONTRACT DATA

a. QUANTITY	b. NEGOTIATED COST	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK	d. TARGET PROFIT/FEE	e. TARGET PRICE	f. ESTIMATED PRICE	g. CONTRACT CEILING	h. ESTIMATED CONTRACT CEILING	i. DATE OF OTB/OTS (YYYYMMDD)
1	295,873	0	7,950	303,823	301,749	303,823	301,749	

6. ESTIMATED COST AT COMPLETION

	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)
a. BEST CASE	287,733		
b. WORST CASE	297,343		
c. MOST LIKELY	293,799	295,873	2,074

7. AUTHORIZED CONTRACTOR REPRESENTATIVE

a. NAME (Last, First, Middle Initial): Dickerson, Kala K

b. TITLE: Prime Contract Compliance Manager

c. SIGNATURE

d. DATE SIGNED (YYYYMMDD)

8. PERFORMANCE DATA

CAPN.PBS Control Account.PARS 2 WBS (2) ITEM (1)	CURRENT PERIOD BUDGETED COST WORK SCHEDULED (2)	CURRENT PERIOD BUDGETED COST WORK PERFORMED (3)	CURRENT PERIOD ACTUAL COST WORK PERFORMED (4)	CURRENT PERIOD VARIANCE SCHEDULE (5)	CURRENT PERIOD VARIANCE COST (6)	CUMULATIVE TO DATE BUDGETED COST WORK SCHEDULED (7)	CUMULATIVE TO DATE BUDGETED COST WORK PERFORMED (8)	CUMULATIVE TO DATE ACTUAL COST WORK PERFORMED (9)	CUMULATIVE TO DATE VARIANCE SCHEDULE (10)	CUMULATIVE TO DATE VARIANCE COST (11)	REPROGRAMMING ADJUSTMENTS COST VARIANCE (12a)	REPROGRAMMING ADJUSTMENTS SCHEDULE VARIANCE (12b)	REPROGRAMMING ADJUSTMENTS BUDGET (13)	AT COMPLETION BUDGETED (14)	AT COMPLETION ESTIMATED (15)	AT COMPLETION VARIANCE (16)
RL-0012 SNF Stabilization & Disp																
RL_0012_C1_1.16 Sludge Treatment Project	0	0	0	0	0	156,861	156,861	156,758	0	103	0	0	0	156,861	156,758	103
RL_0012_C1_1.17 D-401 KW Basin Sludge Removal Project	3,680	5,405	4,710	1,725	695	93,266	95,018	87,525	1,753	7,493	0	0	0	132,775	130,974	1,801
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET														0	0	0
e. SUBTOTAL	3,680	5,405	4,710	1,725	695	250,127	251,879	244,284	1,753	7,596	0	0	0	289,636	287,733	1,904
f. MANAGEMENT RESERVE														6,067		
g. TOTAL	3,680	5,405	4,710	1,725	695	250,127	251,879	244,284	1,753	7,596	0	0	0	295,703		

9. RECONCILIATION TO CONTRACT BUDGET BASELINE

a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE									1,753	7,596				295,703	287,733	7,970

CLASSIFICATION (When Filled In)

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 2 - ORGANIZATIONAL CATEGORIES

DOLLARS IN Thousands of $

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract		a. NAME 15_D_401 KW Basin Sludge Removal Project	a. FROM *(YYYYMMDD)* 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788		b. PHASE	b. TO *(YYYYMMDD)* 2016 / 12 / 25
	c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO: ; X YES *(YYYYMMDD)* 2019 / 09 / 18	

5. PERFORMANCE DATA

WBS.Resp Org Group	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE							
ITEM	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	WORK SCHEDULED	WORK PERFORMED	COST WORK PERFORMED	SCHEDULE	COST	COST VARIANCE	SCHEDULE VARIANCE	BUDGET	BUDGETED	ESTIMATED	VARIANCE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12a)	(12b)	(13)	(14)	(15)	(16)
3G - K Basin Oper & Plateau Remediation Project	3,680	5,405	4,710	1,725	695	250,127	251,879	244,284	1,753	7,596	0	0	0	289,636	287,733	1,904
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. UNDISTRIBUTED BUDGET														0	0	0
e. SUBTOTAL *(Performance Measurement Baseline)*	3,680	5,405	4,710	1,725	695	250,127	251,879	244,284	1,753	7,596	0	0	0	289,636	287,733	1,904
f. MANAGEMENT RESERVE														6,067		
g. TOTAL	3,680	5,405	4,710	1,725	695	250,127	251,879	244,284	1,753	7,596	0	0	0	295,703		

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT

FORMAT 3 - BASELINE

DOLLARS IN THOUSANDS

Form Approved
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
CH2M HILL Plateau Remediation Company	a. NAME: Plateau Remediation Contract	a. NAME: Plateau Remediation Contract	a. FROM: 2016/11/21
b. LOCATION:	b. NUMBER: RL14788	b. PHASE	b. TO: 2016/12/25
Richland, WA	c. TYPE: CPAF	c. EVMS ACCEPTANCE	
	d. SHARE RATIO:	NO YES X 9/18/2009	

5. CONTRACT DATA

a. ORIGINAL NEGOTIATED COST	b. NEGOTIATED CONTRACT CHANGE	c. CURRENT NEGOTIATED COST (A + B)	d. ESTIMATED COST AUTH UNPRICED WORK	e. CONTRACT BUDGET BASE (C + D)	f. TOTAL ALLOCATED BUDGET	g. DIFFERENCE (E - F)
295,873	$0	$295,873	$0	$295,873	$295,703	$170

h. CONTRACT START DATE	i. DEFINITIZATION DATE	j. PLANNED COMPL DATE	k. CONT COMPLETION DATE	l. EST COMPLETION DATE
6/19/2008	6/19/2008	9/30/2018	9/30/2018	9/30/2018

6. PERFORMANCE DATA

BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)

ITEM	BCWS CUM TO DATE	BCWS FOR REPORT PERIOD	SIX MONTH FORECAST +1 Jan-17	+2 Feb-17	+3 Mar-17	+4 Apr-17	+5 May-17	+6 Jun-17	FY09-13	FY14	FY15	FY16	FY17	FY18	UNDISTRIB BUDGET	TOTAL BUDGET
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
a. PM BASELINE																
(BEGIN OF PERIOD)	**246,446**	**3,071**	**2,746**	**3,204**	**4,100**	**3,764**	**3,573**	**3,582**	**94,574**	**27,547**	**50,942**	**67,673**	**38,547**	**8,525**	**0**	**287,809**
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																
BCR-012C-17-007R0 - SRP ECRTS Procurement and Annex & In Basin Equipment Installation MR Draw													**1,527**	**300**		**1,827**
c. PM BASELINE (END OF PERIOD)	**250,127**	**3,681**	**3,070**	**3,403**	**4,208**	**3,784**	**3,651**	**3,685**	**94,574**	**27,547**	**50,942**	**67,673**	**40,074**	**8,825**	**0**	**289,636**
7. MANAGEMENT RESERVE																**6,067**
8. TOTAL																**295,703**

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 4 - STAFFING

Dollars in: FTE

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract		a. NAME 15_D_401 KW Basin Sludge Removal Project	a. FROM *(YYYYMMDD)* 2016 / 11 / 21
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788		b. PHASE	b. TO *(YYYYMMDD)* 2016 / 12 / 25
	c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO: [ ] YES: [X] *(YYYYMMDD)* 2019 / 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)* SIX MONTH FORECAST BY MONTH *(Enter names of months)* +1 JAN 2017 (4)	+2 FEB 2017 (5)	+3 MAR 2017 (6)	+4 APR 2017 (7)	+5 MAY 2017 (8)	+6 JUN 2017 (9)	ENTER SPECIFIED PERIODS REMAIN FY17 (10)	FY18 (11)	FY19-LC (12)	ATCOMPLETE (13)	AT COMPLETION (15)
3G - K Basin Oper & Plateau Remediation Pro	70	6494	78	76	80	83	91	99	310	340	0	0	7651
g. TOTAL DIRECT	70	6494	78	76	80	83	91	99	310	340	0	0	7651

CLASSIFICATION (When Filled In)

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT
FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM			4. REPORT PERIOD
a. NAME	a. NAME		a. NAME			a. FROM (YYYYMMDD)
CH2M HILL Plateau Remediation Company	Plateau Remediation Contract		012- RL-12 SNF Stabilization and Disposition			2016/11/21
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE			b. TO (YYYYMMDD)
Richland, WA	RL14788					
	c. TYPE	d. SHARE RATIO	c. EVMS ACCEPTANCE			
	CPAF		No	X	Yes (YYYYMMDD) 2009 / 09 / 18	2016/12/25

5. Evaluation

Direct Projects

	Budget	Earned	Actuals	SV in $	SV in %	CV in $	CV in %	SPI	CPI
Current:	3,680.5	5,405.1	4,710.2	1,724.6	46.9%	694.9	12.9%	1.47	1.15
Cumulative:	250,126.8	251,879.4	244,283.6	1,752.6	0.7%	7,595.8	3.0%	1.01	1.03
	BAC	EAC	VAC in $	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:	289,636.1	287,732.5	1,903.6	0.7%	0.83	0.87			

Explanation of Variance/Description of Problem:

Current Period:

Schedule Variance: The project is showing a significant positive schedule variance due to accelerating the field schedule by working overtime in order to achieve sludge retrievals by 2018, installation of field equipment in the Annex and In-Basin areas, and construction acceptance testing is being performed earlier than planned. This positive schedule variance is also reflected in the cumulative totals, which is within reporting thresholds. The ECRTS Procurement – shipping of process equipment has been more complex than planned. This has resulted in realizing earned value in the current period, for budget planned in prior months (September 2016). In addition, work started early on the Fabricate Fill Tube/Float Assemblies. Performance has been recognized in the current month for work previously scheduled (October 2016) on the MPAT test report and equipment removal from MASF. Development of classes and classroom training was scheduled to start in October 2016. The current month reflects work completed for these previous scheduled classes.

Cost Variance: The current month positive cost variance has several contributors. The Title III support continues to underrun as field corrections have been less than planned. This may change as the construction crews complete the integrated construction acceptance testing and KPAT. EAC will be reviewed as part of January 2017 performance process. An accrual for In-Basin & Annex Equipment Install Acceptance Test work that was completed in December 2016 was under-accrued and will be corrected in January 2017. In addition, a current period positive CV is attributed to less resources being required to incorporate the ECRTS Design Redlines resulting from MPAT. Costs or the fabrication of the Fill Tube/Float Assembly Vessels for STSC 14-28 were significantly lower than budgeted. An accrual for work scope completed in December 2016 was under-accrued and will be corrected in January 2017. Efficiencies have been achieved by centralizing Program Management responsibilities to reduce overall resource requirements to the PBS. All required work scope is being accomplished with the reduced staff. Labor continues to underrun in the ECRTS Testing account, as technicians and engineers are supporting other projects. Long-term, the ECRTS Testing scope should complete under budget, and the EAC reflects this current and projected underrun. The Cold Commissioning account is reflecting a positive cost variance, due to personnel supporting both MPAT test report completion and preparations for the upcoming KPAT test procedure. Charges are higher in KPAT account and lower in Cold Commissioning account. The same personnel are supporting both test efforts.

Cumulative To Date:
Schedule Variance: Within Threshold.
Cost Variance: Within Threshold.

Impact:

Schedule Impact: No long term impacts are expected. Project is within threshold at the cumulative level. As the project continues to accelerate plans for retrieval, the variance will be eliminated.
The project continues to pursue acceleration of the first sludge container from the current plan of March 14, 2018 (non-risk adjusted date). The project is on schedule to meet TPA milestones M-016-177 "Complete 105-KW Sludge Transfer Equipment Installation" by 9/30/2017 and M-016-175 "Begin Sludge Removal from 105-KW Fuel Storage Basin" by 9/30/2018.

Cost Impact: No long term impacts are expected. Project is within threshold at the cumulative level. As the project continues to accelerate plans for retrieval, the variance will be eliminated.
The current ETC reflects the expected overall costs and further ETC adjustments will be considered as preparations are made to start KPAT testing (March 2017). With the re-installation of the ECRTS test article loop complete, the MASF test team continued their efforts to make the system operational. Final equipment testing and installation into MASF is ongoing. Currently, the EAC is projecting $287.7M overall for the project, against a life-cycle budget of $289.6M.

Corrective Action:

Schedule: No corrective actions identified in the month of December.

Cost: The project is in the process of verifying all CACNs for 12.16 are closed. An evaluation will be performed to assure all final contract costs and adjustments are reflected in the accounts, prior to closing. Approximately half of the CACNs have been closed. The remaining CACNs should be closed by February 15, 2017. (Action CAMS. February 15, 2017)

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

1. Schedule Margin Analysis: Project schedule margin is 123 days. There were no baseline changes in December which affected the schedule margin. Project continues to evaluate schedule for efficiencies.
2. IMS Data dictionary Changes: None in the month of December.
3. Forecast Schedule with No Baseline: None in the month of December.
4. UB Balance: N/A
5. Negative ACWP: None in the month of December.
6. EAC Analysis: Best Case = $287.7M; Most likely = $293.8M; Worst Case =$297.3M.
7. Negative CV > VAC: N/A
8. MR Transactions: BCR-012C-17-007R0 moved $1.83M from MR, due to the realization of risks STP-123-B Design Maturity, STP-103-M MASF Pre-Operational Acceptance Testing, STP-097B Unexpected Material & Procurement Item Delays (Hoses), STP-098B Changes & Training / Qualification Requirements for Construction Workers (additional FWS reading/training), STP-121-B As-Found Conditions (Vestibule and Rad Con Shift Office) and STP-122-B Interpretation of Site Requirements, Processes and Procedures (additional grounding). These realized risks have resulted in previously unrecognized tasks associated with mitigation of risks tracked through the STP Risk Register that are consistent with the general scope of work of the contract. Unexpected future growth within the currently authorized work scope associated with both CHPRC and Firm Fixed Price (FFP) subcontract costs.
10. Retroactive Changes: None in the month of December.
11. EVT Changes: None in the month of December.

Prepared by: KaeRae Parnell **Date: 01/22/17** **Approved by:** **Date:**