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

CH2MHILL
Plateau Remediation Company

J.W. Long
Vice President and
Project Manager for
PFP Closure Project

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PROJECT SUMMARY

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

Key Performance Indicators	*Current Month*	*Contract To Date*
Glovebox/ Hood Removed or Dispositioned in Place	3 gloveboxes	165 gloveboxes/hoods
KPP Rooms/Areas Dispositioned	-	53 rooms/areas
Asbestos/ACM Removed	25 feet	16,268 feet
Process Vacuum Piping Removed	179 feet	1,389 feet
Process Transfer Line Removed	-	594 feet
Pencil Tank Units Removed	5	80 pencil tank units
Buildings Ready for Demo	-	32 structures
Buildings Demolished or Relocated	1 structure	31 structures
Non-radioactive Waste Shipped	- m^3	35 m^3
TRU/TRU-M Shipped	34 m^3	895 m^3
LLW/MLLW Shipped	31 m^3	3,594 m^3

There were no lost or restricted workday cases this period.

Removal of plutonium-contaminated process equipment continued as a top priority in readying the PFP Complex for demolition, with a particular focus on removal of gloveboxes and associated piping and ductwork from the process and lab areas. 165 (71 percent) of the gloveboxes have been removed to date. The final section of HC-1 (HC-1B) and glovebox HC-10 were removed and transferred to Solid Waste Operations, along with large glovebox HC-21C. Glovebox HC-21A was successfully separated from the HC-2 conveyor and is currently staged in Room 230B. The project removed 179 feet of highly contaminated process vacuum lines, and an additional 25 feet of asbestos was removed.

Demolition of the buildings in and around the 2736 Vault Complex continued. All six buildings have been demolished. Load out of demolition rubble and site grooming remain to be complete.

Size reduction of the 200 liter pencil tank assemblies was initiated and this work continues ahead of schedule.

Schedules were developed and activities initiated on all three breakthrough initiatives identified in a recent Value Engineering session. All initiatives have the potential to accelerate schedule and reduce cost (life cycle).

Schedule and cost performance continued near plan for the seventh straight month.

EMS Objectives and Target Status

Objective #	Objective	Target	Actions to Achieve Target	Due Date	Status
12-EMS-PFP-OB1-T1	Reduce generation/ toxicity of waste through spill reduction	Reduce likelihood of hydraulic spills from D&D work at PFP	Review history of D&D hydraulic failures	12/30/2011	100%
			Identify types of failure and impact	03/29/2012	100%
			Research improved hydraulic line technology	06/29/2012	40%
			Report recommendations to management	07/30/2012	
12-EMS-PFP-OB2-T1	Reduce vehicle miles/ greenhouse gas emissions by use of mass transit	Formally request Ben Franklin Transit (BFT) bus service to 200W/PFP	Formally request BFT/CHPRC to implement	10/31/2011	100%
			Conduct tour/employee meetings with BFT	11/01/2011	100%
			Formally request proposal from BFT	11/24/2011	100%
12-EMS-PFP-OB3-T1	Reduce radioactive air emissions from open air demolition of 236-Z	Decontamination of 236-Z Building canyon	Review decontamination methods	12/30/2011	100%
			Evaluate selected method for air emissions	06/30/2012	20%
			Evaluate method's ability for source reduction	08/31/2012	

TARGET ZERO PERFORMANCE

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	4	N/A
Total Recordable Injuries	0	5	N/A
First Aid Cases	4	72	**Base -** 4/6/2012 – Employee experienced a fall in the parking lot. No injuries and went to CSC as a precaution. **(22724)** **Base -** 4/11/2012 – Employee received an abrasion to their left arm when they hit it on a security key box. **(22729)** **Base -** 4/15/2012 – Employee experienced pain in left shoulder. **(22737)** **Base -** 4/18/2012 – Employee received laceration to right finger on bucket while unscrewing the lid. **(22745)**
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

ARRA

11.05 Disposition PFP Facility – ARRA

- In Room 235A-2, the stair was removed and the door permanently blocked. In addition, the abandoned capacitor frame work and associated conduit and enclosure were removed from the pit floor.
- In Room 235Z-3, the removal of two 2" process vacuum lines was completed and approximately 50% of the North mezzanine was removed.
- In Room 228A, the conveyor section of HC-1B, glovebox HC-10, and the balance enclosure above HC10 and large support beam for this balance were removed.
- In Room 228B, the D6 drain line was removed and the mechanical isolation of HC-12S was started.
- In Room 228K, the mechanical isolation of glovebox HC-17P and HC-17BB was completed.
- In Room 230A, glovebox HC-21C was removed and staged in Room 170 awaiting completion of the 2736-Z demolition to support a travel route out the South side of 234-5Z.
- In Room 230B, glovebox HC-21A was separated from the conveyor and will be moved to Room 170 once HC-21C is dispositioned.

Base

11.02 Maintain Safe & Compliant PFP - Base

- 291-Z Exhaust Fans
  - Completed HRB for EF-5 repair work activities
  - Initiated field work in preparation for EF-5 weld repairs. The weld surfaces were decontaminated and prepared for inspection.
  - Continued weekly fan vibration and thermal monitoring

11.05 Disposition PFP Facility – Base

Backside Rooms (Rooms 158-172) D&D

- Room 166 GB Mechanical Isolation: completed removal of Distilled Water, 30 and 40 pound air piping
- Room 166 Shield Wall Removal planning effort:
  - Received analytical results for shield wall asbestos and lead content
  - Completed radiological screening for the shield wall removal package.

Disposition PFP (234-5Z) Facility

- Process vacuum piping removal is just over 40 percent complete with 1,389 total feet removed.
- During the month of April, 25 feet of asbestos containing material was removed bringing the total to 16,228 total feet removed.

2736Z/ZB Vault Complex

- Demolition and site demobilization continued on 2736-ZB Complex; which is now 99.5% complete overall.

Plutonium Reclamation Facility (PRF)

- Size reduction of Pencil Tank Assembly 128 was completed and size reduction of Pencil Tank Assembly 18 was initiated.
- Mechanical isolation of the gloveboxes was initiated. The nitric acid line and process water line from Tank 119 was drained and removed.

- Field preparations for the removal of the mechanical service lines around the 3rd floor criticality drain were completed and field work initiated. The fogging header, instrument airlines and steam line were removed.

MAJOR ISSUES

Issue - On August 29, Exhaust Fan #1 in the 291-Z facility catastrophically failed and caused a small fire when a hot bearing made contact with the drive belt.

Corrective Actions - A thorough evaluation of the 291-Z exhaust fans was performed. The evaluation identified additional mechanical issues with most of the remaining exhaust fans. A positive Unreviewed Safety Question (USQ) determination was declared and Evaluation of Safety of the Situation (ESS) was prepared and submitted to RL for approval. The ESS was approved by RL on September 15, 2011 (Letter #11-SED-0165). Normal ventilation fans were restarted and the Terminate Activities condition was exited. Normal D&D activities were authorized to commence. A JCO was submitted to RL via letter CHPRC-1104667 R1 on November 28 as directed by the ESS.

Status – Performance of weld repair activities began April 12, 2012. Upon successful completion of the welding and balancing of Exhaust Fan 5, the installation of switches to shut down the fans on high vibration will begin. The exhaust ventilation system Enhanced Maintenance Program procedures have been completed and will be implemented by mid-June. Approval of the Justification for Continued Operation was received March 27, 2012.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

Working - No Concerns
Working - Concern
Working - Critical

Increased Confidence
No Change
Decreased Confidence

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
RL-011/WBS 011				
PFP-003: More Extensive Cleanout/Decon Required	Develop and implement a detailed process facility characterization plan. Determine and obtain approval for ready-for-demolition criteria (contamination removal/cleanup endpoints prior to building demolition). Early characterization provides an opportunity to avoid project schedule impact; however, cost impacts remain.	Working - Concern	No Change	The duct level of the 234-5Z building will remain on Airborne Radioactivity Area status pending further evaluation and characterization, which is impacting on staffing requirements for work in this area, and on schedule performance for removal of highly contaminated piping and ductwork. Development of a detailed PFP-wide characterization plan is continuing, and two Radiological Control Technicians were added to support implementation of the plan later in the year. Regular meetings have been initiated to further define ready-for-demolition criteria for the Plutonium Reclamation Facility (236-Z), the most challenging of the facilities.
PFP-004, Risk of PRF Canyon D&D cost/schedule growth	Complete detailed planning/engineering for D&D of PRF canyon, particularly pencil tank removal and canyon decontamination.	Working - Concern	Decreased Confidence	The PRF canyon crane continued to operate as expected in April, and pencil tank disposition continued at an accelerated pace. Work was suspended, pending further investigation, in late April due to two personnel events involving a cracked window in room 41 and a damaged safety plate in a section of the gallery gloveboxes.
PFP-009: Problems with Aging Building Systems/Components Impacts D&D	Perform critical system reliability assessments for all of the PFP safety and essential systems; procure critical spares; maintain existing redundancies; repair or replace equipment as failures occur and complete planned facility modifications.	Working - Concern	Increased Confidence	Preparations continued for repair of minor cracks observed on the blades of two of PFP's main exhaust fans. Planning is also underway to increase exhaust flow through the ventilation system to reduce system stresses created by insufficient flow. Minor but recurring problems continue to be experienced with air monitoring equipment and the PRF air sample vacuum system.
PFP-008: Unexpected High Concentration TRU Material Holdup Discovered	Utilize supplemental NDA and other characterization techniques to identify areas of concern early in the project. Discuss potential response actions and administrative controls with Safeguards and Security, and proceduralize them as needed to guide the project in responding in the event unexpected material is identified.	Working - No Concerns	Decreased Confidence	A short section of process vacuum piping contained higher than expected material. Planning is underway to further evaluate the disposition path for this section of piping.
PFP-042, Increased Attrition Impacts Availability of Qualified Resources **PRC-021A, Workforce restructuring caused by funding changes**	Revise project schedules and work planning documents around workforce restructuring timelines. Work with other contractors to minimize impacts associated with Bump and Roll.	Working - Concern	Decreased Confidence	Competition for personnel is increasing from the Office of River Protection, Waste Treatment Project, which is aggressively recruiting for staff experienced in nuclear safety analysis and a few other disciplines. Based on FY13 baseline update guidance projections PFP is initiating workforce restructuring to incorporate into baseline.
PFP-006: Overall D4 Schedule Impacts from Interferences Between Subprojects	Ensure that activity schedules for all subprojects are integrated and are detailed enough to identify and avoid possible conflicts, and maintain coordination between closely related efforts that could overlap or that use the same resources.	Working - No Concerns	Increased Confidence	Most of the historical interferences between the various subprojects have been resolved.
PFP-064 OPP: Reduced Size Reduction Required Consistent With SLB2 Packaging	Implementation of the use of SLB-2s has been identified as a site wide initiative by CHPRC and RL. A specific plan of action was developed and is being executed to support this opportunity.	Working - No Concerns	Increased Confidence	This opportunity will continue to be tracked until ongoing efforts to implement miscellaneous debris in SLB2's are complete, and incorporated into the project baseline.

PRC-020, Weather Delays	As weather impacts operations, workarounds are continually developed to re-schedule work activities.			2736-ZB demolition/loadout continued to experience delays due to high winds for the month of April, extending completion of loadout and site stabilization into early May.

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 (%)
ARRA	1.7	1.0	2.1	(0.6)	-38.5	(1.1)	-104.3
Base	7.5	8.3	8.2	0.7	9.8	0.1	1.2
Total	**9.2**	**9.3**	**10.3**	**0.1**	**1.1**	**(1.0)**	**-10.4**

Numbers are rounded to the nearest $0.1M

ARRA

CM Schedule Variance: (-$0.6M/-38.5%)

The schedule variance results from RMA/RMC D&D teams unable to effectively work planned shifts due to contamination events, recovery actions, and work documents not released to support planned activities. Baseline schedule durations were predicated on an "enhanced time on tools efficiency" after January 01, 2012, which has not yet been realized.

CM Cost Variance: (-$1.1M/-104.3%)

The cost variance results from inefficiencies associated with schedule issues and the limited ability to re-assign resources to other projects when events prevent work in assigned areas. Three months of TRU waste disposal cost occurring in the current period also contributes to the variance.

Base

CM Schedule Variance: (+$0.7M/+9.8%)

The positive current period schedule variance is primarily due to performance earned on ZB Complex demolition activities scheduled to be complete in prior periods and receiving SLB-2 waste containers ahead of schedule.

CM Cost Variance: (+$0.1M/+1.2%)

The cost variance is within reporting thresholds.

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)
ARRA	286.7	282.3	291.2	(4.4)	-1.5	(8.9)	-3.1	290.9	297.3	(6.4)
Base	198.1	199.6	201.2	1.5	0.7	(1.7)	-0.8	600.7	599.5	1.2
Total	**484.8**	**481.9**	**492.4**	**(2.9)**	**-0.6**	**(10.5)**	**-2.2**	**891.7**	**896.8**	**(5.2)**

Numbers are rounded to the nearest $0.1M

ARRA

CTD Schedule Performance: (-$4.4M/-1.5%)

The schedule variance is within reporting thresholds.

CTD Cost Performance: (-$8.9M/-3.1%)

The cost variance is within reporting thresholds.

Base

CTD Schedule Variance (+$1.5M/+0.7%)

The schedule variance is within reporting thresholds.

CTD Cost Variance (-$1.7M/-0.8%)

The cost variance is within reporting thresholds.

Variance at Completion (-$5.0M/-0.6%)

The variance at completion is within reporting threshold.

Contract Performance Report Formats are provided in Appendix A and Appendix A-1.

Estimate at Completion (EAC)

The BAC and EAC include FY2009 through FY2018, the PRC contract period.

The EAC changes from March to April, for both ARRA and Base, are within reporting thresholds.

FUNDS vs. SPEND FORECAST ($M)

	FY2012		
WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	**Projected Funding**	**Spending Forecast**	**Spend Variance**
ARRA	33.4	33.4	0.0
Base	99.4	91.0	8.4
RL-0011 Total	**132.8**	**128.7**	**8.4**

Numbers are rounded to the nearest $0.1M

Funds/Variance Analysis

Funding includes FY2011 carryover and FY2012 new Budget Authority.

Critical Path Schedule

Critical Path analysis can be provided upon request.

Baseline Change Requests

BCR-PRC-12-015R1 - *Contract Modification 220*

MILESTONE STATUS

None at this time.

SELF-PERFORMED WORK

The Section H. clause entitled, “Self-Performed Work,” is addressed in the Monthly Report Overview.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None identified at this time.