

Section A

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



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PROJECT SUMMARY

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

<i>Key Performance Indicators</i>	<i>Current Month</i>	<i>Contract To Date</i>
Glovebox/ Hood Removed or Dispositioned in Place	-	162 gloveboxes/hoods
KPP Rooms/Areas Dispositioned	1	53 rooms/areas
Asbestos/ACM Removed	130 feet	16,013 feet
Process Vacuum Piping Removed	-	1,210 feet
Process Transfer Line Removed	-	594 feet
Pencil Tank Units Removed	20	55 pencil tank units
Buildings Ready for Demo	-	32 structures
Buildings Demolished or Relocated	1	29 structures
Non-radioactive Waste Shipped	34 m ³	34 m ³
TRU/TRU-M Shipped	29 m ³	830 m ³
LLW/MLLW Shipped	104 m ³	3,521 m ³

In the last eight months, PFP has had only one Occupational Safety and Health Administration (OSHA) Recordable injury. The project is approaching one million hours worked since the last lost or restricted workday case.

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. 162 (70 percent) of the gloveboxes have been removed to date. The two gloveboxes loaded into SLB-2 containers last month have been shipped.

Demolition of the buildings in and around the 2736 Vault Complex continued. Three of the six buildings have been demolished, and demolition of the largest of the facilities—the 2736-ZB Vault Support Facility—is 55 percent complete.

The PRF Canyon Crane has experienced no recent problems and size reduction of pencil tank assemblies is now proceeding ahead of schedule. The second increment for the pencil tank Performance Incentive (PI) was completed.

The enhanced preventive maintenance program for Vital Safety Systems was implemented this month. Exhaust Fan weld repair is planned to start next month.

The now trained and qualified restructured workforce made good progress this period. Schedule performance is trending in a favorable direction, having improved 19 percent over last month. Improved efficiency is reflected in the cost performance index, which is also trending favorably. Resource utilization continued to improve—93% this month compared to 88% last 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	75%
			Research improved hydraulic line technology	06/29/2012	
			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	10%
			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	2	N/A
Total Recordable Injuries	1	2	Base - 2/15/2012 – While wearing hard hat, employee hit head on horizontal scaffolding bar. (22668)
First Aid Cases	7	72	<p>Base - 2/6/2012 - Employee experienced abdominal strain while reaching out and pushing down. (22636)</p> <p>Base - 2/6/2012 - Employee experienced contusion to left foot and right shoulder strain when they stripped over scaffolding tube and fell to the deck. (22637)</p> <p>Base – 2/8/2012 – Employee experienced contusion to head when they hit head on the inside of a cart while removing a waste package. (22645)</p> <p>Base - 2/15/2012 – Employee experienced lower back strain due to a slipping on the ice. (22663)</p> <p>Base - 2/15/2012 - Employee experienced shortness of breath when power went off on PPE. (22665)</p> <p>Base - 2/19/2012 - Employee experienced pain in their left wrist while lifting a waste bag. (22667)</p> <p>Base - 2/22/2012 - Employee experienced upper back strain/contusion when they jammed it on a steel beam. (22672)</p>
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

ARRA

11.05 Disposition PFP Facility – ARRA

- In Room 235B, the removal of the E4 duct that interfered with the installation of gantry cranes for glovebox separation was completed. In addition, 50% of the HA-23S lead shielding planned for removal was also completed.
- In Room 235A-3, the disposition of the HA-9C holdup material was completed, the wet wipe down and NDA of gloveboxes HA-8A, HA-8B, HA-9C, HA-9D, and HA-9E was completed, and the removal of asbestos insulation and associated steam heat trace line was completed to prepare for HF line removal in Room 235A-3.
- In Room 228A, the conveyor section HC-1A and E4 duct that serviced HC-11 was removed. In addition, one of two large emergency exhaust valves over the remaining conveyor sections was removed.
- Electrical isolations in Rooms 228C and 228B were completed.
- In Rooms 230A and 230B, Aspigel chemical decontamination for the gloveboxes and conveyor were completed and fixative was applied to the interior and conveyor sections of the gloveboxes.

Base

11.02 Maintain Safe & Compliant PFP - Base

- PFP Maintenance continues to perform work activities designed to enhance the condition of the exhaust ventilation system for the facility.

11.05 Disposition PFP Facility – Base

Backside Rooms (Rooms 158-172) D&D

- In room 166, reconfiguration was completed on the 17 inch vacuum system to support planned glovebag work, steel plating was placed over the floor trench to support planned D&D work, and the legacy TRU HEPA vacuum was packaged and dispositioned.

Disposition PFP (234-5Z) Facility

- Process vacuum piping removal is just over 30 percent complete with 1,262 total feet removed.
- A total of 594 feet of chemical piping transfer line has been removed.
- 785 feet of asbestos containing material was removed during the month of February. The total is 16,013 feet of asbestos removed.

2736Z/ZB Vault Complex

- Demolition continued on 2736-ZB, the building is 55% demolished.

Plutonium Reclamation Facility (PRF)

- Size reduction of Tank 15, 27, 28, 41, and 42 was completed.
- The SWBs containing the segments from Tank 26 and Tank 28 were shipped.
- The use of overtime and the improvements in the process have significantly reduced the impact in the delay of the transfer of a second field work team to the PRF Project for pencil tank size reduction and initiation of P/Q shift.
- Work was completed on the removal of the exhaust and pre-inlet filters on the Miscellaneous Treatment (MT) gloveboxes.
- Fire maintenance air gapping of the 2nd floor east gallery glovebox heat detectors was completed.

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 - Exhaust Fan 3 and 5 weld repair preparations are continuing. Welding on Exhaust Fan 5 is scheduled to begin in late March. 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 when Exhaust Fan 5 is returned to service.

Issue - D&D workers supporting 2736-ZB Demo will be released March 30, to Washington Closure Hanford (WCH).

Corrective Action – Balance of site will support the completion of 2736Z/ZB demolition activities with D&D workers from K-Basins through completion.

Issue – Recent injuries and a contamination event in the Duct Level in 234-5Z has prompted senior management to implement a corrective action to post the duct level as a continuous Airborne Radioactivity Area (ARA) and added additional controls for congested work areas.

Corrective Action – Due to working full time ARA in duct level and the extra controls to provide a safer work environment, efficiency has decreased in the overall baseline work plan. Additional radiological controls technician support is being evaluated to offset this loss of efficiency. The project is evaluating cost and schedule impacts with the other functional managers.

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.			Unexpected contamination discovered in the duct level of the 234-5Z building during routine, non-intrusive work, along with a review of historical contaminations in this area, has led to placing much of the area on Airborne Radioactivity Area status pending further characterization. This could significantly impact on staffing requirements for routine work conducted in these areas, and on schedule performance for removal of highly contaminated piping and ductwork. Development of a detailed facility characterization plan continued during February, and action was initiated to add two Radiological Control Technicians as planned to support implementation of the plan later in the year.
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. 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.			The PRF canyon crane operated as expected in February, although minor impacts were experienced due to failure of two small electric hoists, which were rapidly replaced. Pencil Tank disposition continued at an accelerated pace and continued to regain previously lost schedule.
PFP-009: Problems with Aging Building Systems/Components Impacts D&D	Complete detailed planning/engineering for D&D of PRF canyon, particularly pencil tank removal and canyon decontamination. 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.			Following the catastrophic failure of an exhaust fan in 291-Z, implementation of an enhanced inspection and preventative maintenance program for Vital Safety Systems and VSS support systems has been completed. Preparations continued for repair of minor cracks observed on the blades of two other fans, and planning is underway to increase exhaust flow through the ventilation 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.			With all previously identified material now dispositioned, no additional locations with unexpected levels of holdup were identified in February.
PFP-042, Increased Attrition Impacts Availability of Qualified Resources	Risks have historically been accepted without mitigation.			Training and qualification of personnel transferred to PFP following layup at WRAP is continuing ahead of schedule and it is likely that the second process vacuum system removal team can begin work prior to the planned April startup. Preliminary information was received late in the month regarding an upcoming ramp-up in staff to support Tank Farm operations; however the implications for staffing at CHPRC and PFP have not yet been assessed.
PRC-021A, Workforce restructuring caused by funding changes	Risks have historically been accepted without mitigation.			Training and qualification of personnel transferred to PFP following layup at WRAP is continuing ahead of schedule and it is likely that the second process vacuum system removal team can begin work prior to the planned April startup. Preliminary information was received late in the month regarding an upcoming ramp-up in staff to support Tank Farm operations; however the implications for staffing at CHPRC and PFP have not yet been assessed.
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.			Most of the historical interferences between the various subprojects have been resolved, and those experienced in February were not material. With a fully staff crew available from CHPRC D&D, demolition work on the PFP vault complex is proceeding as weather permits. Staffing forecasts by craft/discipline for other near-term work continue to be analyzed to better anticipate and avoid future resource conflicts.
PFP-061, Experienced Demolition Crews/Equipment Not Available	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.			Most of the historical interferences between the various subprojects have been resolved, and those experienced in February were not material. With a fully staff crew available from CHPRC D&D, demolition work on the PFP vault complex is proceeding as weather permits. Staffing forecasts by craft/discipline for other near-term work continue to be analyzed to better anticipate and avoid future resource conflicts.

<p>PFPP-064 OPP: Reduced Size Reduction Required Consistent With SLB2 Packaging</p>	<p>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.</p>			<p>A sizeable inventory of both SLB-2 and 4X4X8 containers have now been received and are available for use at PFP. Two gloveboxes direct loaded into SLB-2s in the PFP yard in January were transferred to CWC in February for eventual shipment to WIPP. Additional gloveboxes are expected to be removed without size reduction and loaded into the larger containers in March and April. Preparations are continuing for loading the SLB-2s inside PFP facilities and for packaging of miscellaneous debris such as piping and ductwork.</p>
<p>PRC-014, Site-Wide Occurrence</p>	<p>None</p>			<p>Asbestos removal work was suspended on a site wide basis during February. Assessments have been scheduled in March to review asbestos removal practices and controls at each project/facility prior to the resumption of work. Most asbestos removal work at PFP has historically been performed using temporary containments, however concerns have been expressed regarding pieces of transite siding likely originating from a 1940's vintage construction debris trench near the complex.</p>
<p>PRC-029: Unforeseen Facility Conditions</p>	<p>None</p>			<p>Two issues identified during January were resolved and no new occurrences were experienced. Demolition of the PFP vault complex was resumed following additional research to verify that all drain lines had been identified and entry points sealed to prevent inadvertent discharge of high-pH water used for dust suppression to TEDF. Intrusive work in 234-5Z building contamination areas was also resumed following ventilation air flow adjustments to prevent unfiltered air from flowing from the Zone 3 RMC Line Control Room back into the Zone 1 front side corridor.</p>

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	-2.5	-2.1	-2.6	0.4	-16	0.5	-24.3
Base	12.5	12.5	12.8	0.0	-0.1	(0.3)	-2.1
Total	10	10.4	10.2	0.4	3.8	0.2	2.3

Numbers are rounded to the nearest \$0.1M

ARRA

CM Schedule Variance: (+\$0.4M/-16.0%)

The schedule variance is within reporting thresholds.

CM Cost Variance: (+\$0.5M/-24.3%)

The cost variance is primarily due to the single point adjustment resulting from implementation of BCR 011-R11-12-001R0, *Realignment of ARRA KPP Work Scope*. Scope, budget, performance, and actual costs were transferred from ARRA control accounts to Base-funded control accounts, retroactive to December 27, 2011.

Base

CM Schedule Variance: (-\$0.0M/-0.1%)

The schedule variance is within reporting thresholds.

CM Cost Variance: (-\$0.3M/-2.1%)

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	282.7	279.3	287.4	(3.5)	-1.2	(8.1)	-2.9	290.9	297.2	(6.3)
Base	<u>182.1</u>	<u>181.3</u>	<u>183.2</u>	<u>(0.8)</u>	-0.5	<u>(1.9)</u>	-1.1	<u>598.3</u>	<u>603.8</u>	<u>(5.5)</u>
Total	464.9	460.6	470.6	(4.3)	-0.9	(10.0)	-2.2	889.2	901.0	(11.8)

Numbers are rounded to the nearest \$0.1M

ARRA

CTD Schedule Performance: (-\$3.5M/-1.2%)

The schedule variance is within reporting thresholds.

CTD Cost Performance: (-\$8.1M/-2.9%)

The cost variance is within reporting thresholds.

Base

CTD Schedule Variance (-\$0.8M/-0.5%)

The schedule variance is within reporting thresholds.

CTD Cost Variance (-\$1.9M/-1.1%)

The cost variance is within reporting thresholds.

Variance at Completion (-\$1.3M/-0.1%)

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 January to February, for both ARRA and Base, are within reporting thresholds.

FUNDS vs. SPEND FORECAST (\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	FY2012		
	Projected Funding	Spending Forecast	Spend Variance
ARRA	33.4	33.4	0.0
Base	99.4	95.5	3.9
RL-0011 Total	132.8	128.9	3.9

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-R11-12-001R0 - Realignment of ARRA KPP-1 Work Scope

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.