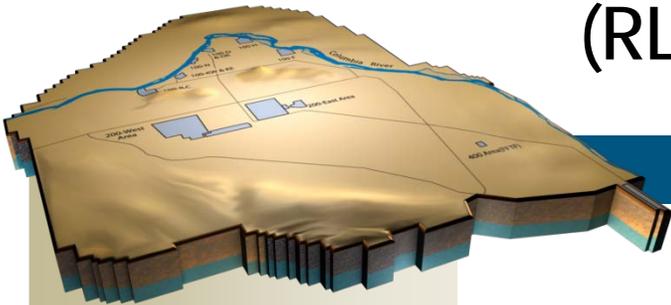


Section A

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



Monthly Performance Report

David Del Vecchio
Vice President and
Project Manager for
PFP Closure Project

Room 230C - Removing HC-230C-3 Shield Panels



Pert 13 Team performing removal of the Exhaust Filter
Housing from the Pulsar Glovebox in PRF

August 2010
DOE/RL-2008-69, Rev. 35
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

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

American Recovery and Reinvestment Act (ARRA)

Sixty-seven gloveboxes and hoods have been removed from their originally installed locations at PFP with Recovery Act funds. Of these, 61 have been shipped out of PFP for treatment or disposal, one has been packaged into an IP-2 waste shipping container awaiting shipment, and five are staged for future size reduction and disposal as transuranic (TRU) waste. CHPRC has now shipped approximately 1,493 cubic meters of waste from PFP with support from Recovery Act funds, including 1,310 cubic meters of low level and mixed low level waste (LLW/MLLW), 161 cubic meters of TRU waste, and 22 cubic meters of non-radioactive waste.

234-5Z Laboratory Areas – Preparations continued in the Analytical Lab for in-situ size reduction of five gloveboxes and hoods that failed to meet LLW criteria after completion of decontamination efforts. These components will be sized-reduced as necessary to allow placement into SWBs for disposal as TRU waste.

Plutonium Processing Areas – In the former processing areas, chemical decontamination is continuing on three gloveboxes in Room 235B using the RadPro process, and cold testing was initiated on the Aspigel[®] product, a complimentary process planned for use on liquid processing gloveboxes where RadPro is expected to be less effective. Surface Contaminated Object surveys of Glovebox HC-230C-3 have revealed areas of high contamination around several windows, and removal of the windows and associated gaskets has been initiated. External isolations continued on Gloveboxes HA-46 and 227-S, and preparations were initiated to isolate Glovebox 200 from building ventilation.

Infrastructure Systems – Non-destructive assay (NDA) measurements on the process vacuum system and transfer lines are 75% complete. To date, 54 feet of process vacuum piping has been removed, sized-reduced, and eight waste packages were handed off to Solid Waste operations for disposition.

During the month of August, 495 feet of asbestos insulation was removed, bringing the total for asbestos insulation removed with Recovery Act funds to more than 10,230 feet and the total for CHPRC to more than 10,795 feet.

2736Z/ZB Vault Facility – Completed 50% of the electrical deactivation, conduit removal, and radiological shielding removal associated with Glovebox 642.

242Z Americium Recovery Facility – The 242Z Team prepared the gloveboxes and applied the next coats of fixative. Removal of the false floor in the air lock was completed and a new containment tent was installed. The work package to change the E-3 filters in Room 262 of the 234-5Z building was completed resulting in restoration of proper air flow in 242Z and allowing the team to exit the LCO and begin D&D work activities.

Base

236Z Plutonium Reclamation Facility – The pulser glovebox was successfully removed from PRF, placed into a Standard Waste Box (SWB) and shipped. The removal of the pH glovebox was initiated and equipment removal from the east gallery glovebox continued and is approximately 60% complete.

On July 15, the PRF Canyon Crane failed. A containment tent for canyon entries was installed and canyon entries to repair the crane were initiated. During the canyon entries, there were two events involving breathing air. As a result of numerous breathing air events, breathing air work was suspended until corrective actions are completed. Review of the events and corrective actions are under way.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
10-EMS-PFP-OB1-T1	Reduce the environmental impacts of spills	Develop and implement effective measures that can be taken in advance of a spill to avoid or reduce the environmental consequences.	9/30/2010	On schedule, Training needs analysis completed, Briefing drafted
		Revise PFP spill response procedure consistent with revised company procedures.	2/28/2010	Completed 2/24/2010
		Develop and provide awareness, prevention, response and mitigation training (80% of project personnel).	9/30/2010	On schedule 93% Complete
		Establish and maintain a pre-designation central file for spills.	9/30/2010	Completed 8/30/2010

TARGET ZERO PERFORMANCE

The PFP Project achieved 30 days without a recordable injury or an Occurrence Reporting & Processing System (ORPS) reportable event in Hazardous Energy, Conduct of Operations, or Radiological Controls.

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	4	N/A
Total Recordable Injuries	0	7	N/A
First Aid Cases	11	126	ARRA - 8/3 - Employee received a laceration. (21168) Base - 8/5 - Employee received an insect bit. (21179) Base - 8/5 - Employee experienced pain in back. (21180) ARRA - 8/10 - Employee received an abrasion. (21191) Base - 8/12 - Employee received a sting by a sweat bee. (21202) Base - 8/16 - Employee experienced pain from repetitive work. (21278) Base - 8/17 - Employee received an abrasion. (21220) Base - 8/17 - Employee received a laceration to the knee. (21224) Base - 8/17 - Employee received a sting by a sweat bee. (21221) Base - 8/23 - Employee experienced a strain. (21257) Base - 8/31 - Employee experienced a sprain to the ankle. (21280)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

11.02 Maintain Safe and Compliant PFP – Base

- The 2736Z Complex was transitioned into its D&D mission documented safety analysis, which will allow for readying the facility for demolition

11.05 Disposition PFP Facility – Base

Plutonium Reclamation Facility (PRF)

- The pulser glovebox was removed, placed into a Solid Waste Box (SWB), and shipped
- The removal of the pH glovebox was initiated
- Equipment removal from the east gallery glovebox continued
- Corrective actions associated with breathing air issues were initiated

11.05 Disposition PFP (234-5Z) Facility – ARRA

- In RMA Line Room 235B, the team performed RadPro[®] chemical decontamination in gloveboxes HA-21I, HA-22, and Conveyor HA-28
- In RMA Line Room 232, work continued to remove the remaining external mechanical connections to Glovebox HA-46 and prepare for a characterization entry into the HA-46 process cell
- In RMC Line Room 227, the mechanical isolation of lines to Glovebox HC-227S continued. In addition, preparations were initiated for removal of transfer lines in Rooms 228A and 228B.
- In RMC Line Room 230C, the team provided support to CHPRC Engineering Project Construction (EPC) to complete the Door 638 modification. Glovebox HC-60 was relocated to Room 230A in preparation for removal from 234-5Z when the Door 108 modification is complete. Removal activities for Gloveboxes HC-230C-3, HC-230C-4, and HC-230C-5 were initiated. The shielding panels and windows for Glovebox HC-230C-3 were removed.
- In the RADTU area, Room 235D, the D&D team completed the visual characterization of GB300 and the external demister tank, removal of E4 duct work for GB400 was completed, and mechanical isolation for GB200 was initiated

Analytical Laboratory:

- Process equipment removal continued for the six gloveboxes in Room 139
- The work package for in-situ size reduction of five gloveboxes within the A-Labs has been approved and presented to the Hazard Review Board (HRB). Final Board approval is expected the end of August, with size reduction efforts getting under way in September.

Plutonium Process Support Laboratories:

- 180-1 hood was decontaminated, separated from its E4 connection, and transferred to Solid Waste Operations for disposal as Low Level Waste (LLW)

242Z Americium Recovery Facility

- Completed work package to change the E-3 filters located in Room 262 of 234-5Z
- Completed application of a second coat of fixative in the control room
- Removed the false floor in the air lock, packaged the waste and sent the drums to waste operations

2736Z/ZB Vault Complex

- Electrically Isolated and removed approximately 50% of the electrical conduit supporting Room 642 gloveboxes and Room 641 equipment
- Removed approximately 50% of the shielding around the gloveboxes in Room 642

MAJOR ISSUES

RL-0011 Nuclear Materials Stabilization and Disposition of PFP

Issue Statement – More effective decontamination agents for gloveboxes/hoods with contamination etched into the stainless steel by historical liquid chemical processes are not currently available.

Corrective Action – The Aspigel® Hazards Analysis is currently in the review cycle and will be released by the end of September. Once complete, final comments will be made to the work package and the Hazards Review Board (HRB) conducted during the first week of October. Due to changed procedural requirements for startup readiness, the Aspigel® decontamination process will now undergo a review by the CHPRC Joint Evaluation Team (JET).

Issue Statement – PFP submitted an “R” occurrence report due to recurring events and overall poor conduct of operations.

Corrective Action –

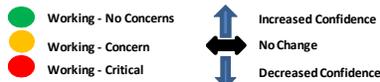
- Performed a Common Cause Analysis
- Conducted Root Cause Analysis
- Implemented Senior Supervisory Oversight
- Brought in outside expertise to assist the project in developing a plan of action to address the items identified in the “R” occurrence report.
- Developed a PFP Performance Improvement Plan

Issue Statement – Failure to effectively re-deploy D&D field work teams when work delays or stoppages are encountered.

Corrective Action – Working with the D&D management team to communicate and implement a paradigm shift from continuity of D&D field work teams to “qualified” jurisdictional positions. In addition, evaluating the weaknesses associated with work package availability (lack of work packages) to support this change in approach.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk



Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
RL-0011/WBS 011				
PFP-001: Inability to effectively decontaminate equipment/materials to LLW	Develop decontamination approach and perform proof-of-principle testing early enough to minimize the potential for unanticipated TRU waste. Incorporate surgical removal of isolated TRU on gloveboxes into the baseline. Implement use of the Contaminated Equipment - Special Package Authorization (CE-SPA) process for cases where the Surface Contaminated Object (SCO) survey process is not practical. Establish size reduction stations as needed.	●	↓	Three additional gloveboxes in the former process areas have failed to meet LLW criteria following use of the RadPro decontamination process. Preparations for implementation of a second decontamination process, Aspigel, are nearly complete. The hazard analysis is being revised and a management self-assessment of readiness is underway to support initial use of Aspigel during September. The revised SCO process has been implemented but is showing mixed results; further assessment of the procedure is underway. Meanwhile, windows and gaskets are being removed from one of the three process gloveboxes in an effort to reduce the level of residual contamination, and facility modifications are continuing to establish size reduction capability for other gloveboxes and hoods.
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.	●	↓	PRF glovebox work is continuing well ahead of schedule; however, failure of the PRF canyon crane has impacted both canyon cleanout and initiation of pencil tank removal activities. Crane repairs have in turn been delayed by a management-imposed suspension of work requiring the use of supplied breathing air in response to several events involving breathing air control. Improvement actions are being finalized and restart of breathing air work is expected by mid-September. At that time crane repairs will be completed as expeditiously as possible, followed by a resumption of work in the canyon.
PFP-004A: Risk of 291-Z D&D cost/schedule growth	Complete detailed planning/engineering for D&D of 291-Z, particularly characterization to help definitize the scope of work for relatively inaccessible areas and evaluation of the need for an alternate exhaust system.	●	↔	Preparations for initial inspection and sampling of the 291-Z plenum have been completed, and field work will be scheduled over the next month or two on a non-interference basis with ongoing D&D. Engineering has initiated the development of functional requirements for an alternate exhaust system, and a request for proposal has been issued requesting bids for conceptual design.
PFP-008, Unexpected High Concentration Material Holdup	Utilize supplemental NDA and other characterization techniques to identify areas of concern early in the project. Sample and analyze residual holdup on the PRF canyon floor. Maintain blend-down and pipe overpack container (POC) packaging capabilities will be maintained until no material level of risk remains. Procedures have been developed and coordinated with Safeguards and Security to respond to unexpected discoveries.	●	↑	Sampling and analysis of residues from the PRF canyon floor have determined that no unusual actions will be needed for disposition. Non-destructive assay measurements are now 70% complete for the process vacuum system and process transfer lines, with no unexpected concentrations of material identified. Measurements of sections of the E-4 exhaust ductwork/filters have also been initiated. Several gloveboxes/hoods in RMA Line are also known to have substantial holdup.
PFP-009: Problems with Aging Building Systems/Components Impacts D&D	Perform critical system reliability assessments; procure critical spares; maintain existing redundancies; repair or replace equipment as failures occur. Procurement of a supplemental cooling system for 234-5Z, 242-Z and 236-Z, and provisions for stabilization of the below-grade piping encasement to 241-Z are incorporated in PMB-2.	●	↔	Continuous air monitors failures remain at a low level following installation of line conditioners and new power cords. The new chillers are working well and avoided the need for intensive heat stress controls during the worst of the summer heat. No significant failures of essential systems were experienced during the month, however additional rainwater intrusion was experienced in 242-Z following previous roof repairs. Preparations are continuing for changing out the exhaust filters for 242-Z in an effort to restore sufficient ventilation flow to support glovebox cleanout. As mentioned above, the PRF crane failed during preparations for startup of pencil tank disposition and repairs have been delayed by a suspension of breathing air work.
PFP-034: Assessment Findings or Off-Normal Event Impacts	ISMS and work processes are designed to minimize the potential for significant occurrences and resulting programmatic impacts.	●	↔	Contracts were awarded for beryllium analysis of samples with high levels of radioactivity. Results from the initial set of samples submitted for analysis continued to be negative for beryllium. Intrusive work requiring supplied breathing air was suspended pending improvements to work and hazard controls following several unusual events involving personnel errors.
PFP-036: Loss of Contamination Control	Rigorous routine radiological surveillance program and contamination control measures.	●	↔	No significant contamination events occurred during August.

PROJECT BASELINE PERFORMANCE

Current Month

(\$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 (%)
ARRA	8.3	6.8	8.9	(1.5)	-18.2	(2.1)	-31.0
Base	3.9	3.3	3.9	(0.7)	-17.0	(0.6)	-19.1
Total	12.3	10.1	12.8	(2.2)	-17.8	(2.7)	-27.2

ARRA

CM Schedule Variance: (-\$1.5M/-18.2%)

Due to availability of only one decontamination agent (RadPro[®]), additional time was required for chemical decontamination. In addition, ultra-conservative application of the SCO process limited effectiveness of this process, resulting in significant additional glovebox work and decontamination efforts. A supplied air fitting failure suspended all supplied air work for multiple days.

Recovery – This negative schedule variance is expected to continue. Utilization of an additional decon agent (Aspigel[®]), additional overtime, and application of the revised SCO process is expected to contribute to the schedule recovery. Shift work is also being evaluated.

CM Cost Variance: (-\$2.1M/-31.0%)

Inability to effectively re-deploy field work teams when work delays/stops are experienced has contributed to this variance. The cost of increased craft provided by MSA to support D&D efforts, and higher material cost for receipt of HEPA ventilation units, gantry cranes, and portable air conditioners are also contributing to this variance.

Recovery – This negative cost variance is expected to continue while corrective actions related to the breathing air work stoppage are implemented. Utilization of overtime will be managed to control the downward trend of the CPI.

Base

CM Schedule Variance: (-\$0.7M/-17.0%)

Suspension of breathing air work prevented completion of canyon crane repairs and canyon floor cleaning.

Recovery – Breathing air work is expected to resume in late September resulting in re-start of canyon crane repairs, floor cleaning, and manual size reduction of the PRF Pencil Tanks.

CM Cost Variance: (-\$0.6M/-19.1%)

Suspension of breathing air work prevented completion of the repairs to the canyon crane and canyon floor cleaning, while labor costs for the field work teams remained relatively constant. Corrective actions for resumption of the canyon floor cleaning and canyon crane repairs have been initiated.

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	138.3	128.2	124.6	(10.1)	-7.3	3.6	2.8	279.2	277.3	1.9
Base	<u>121.7</u>	<u>118.6</u>	<u>116.2</u>	<u>(3.1)</u>	-2.6	<u>2.4</u>	2.0	<u>340.8</u>	<u>337.4</u>	<u>3.3</u>
Total	260.0	246.8	240.8	(13.2)	-5.1	6.0	2.4	619.9	614.7	5.2

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance: (-\$10.1M/-7.3%)

Negative schedule variance is primarily caused by:

- Safety stand-down and stop works
- Breathing air issues
- Ultra conservative application of the SCO process
- Unplanned process vacuum mockup work to support application of new glovebag technique

Recovery – This negative schedule variance is expected to continue. Utilization of an additional decon agent (Aspigel[®]), additional overtime, and application of the revised SCO process is expected to contribute to the schedule recovery. It is expected that the negative schedule variance will be recovered by March, 2012.

CTD Cost Performance: (+\$3.6M/+2.8%)

Efficiencies recognized on cross-cutting support to the D&D work teams (primarily in solid waste management, project management, NDA, and consumables and subcontracts), early demolition of ancillary buildings, and the removal of asbestos and non-process equipment from 234-5Z are the cause of this positive variance.

NOTE: This positive cost variance will diminish as corrective actions and recovery plans are implemented. Additional overtime will be used to mitigate schedule delays and maintain baseline milestones. Overtime will be monitored closely to ensure the trend does not drive CPI below the threshold of 1.0.

Base

CTD Schedule Variance (-\$3.1M/-2.6%)

Safety stand-down and stop works, delayed equipment procurement for manually size reducing pencil tanks, canyon crane operability, and breathing air suspensions are contributing to this variance.

Recovery - A BCR is being prepared to incorporate the manual size reduction approach into the PRF Plan and remove the scope associated with the procurement of the BROKK. This BCR will be developed and implemented the end of November.

CTD Cost Variance (+\$2.4M/+2.0%)

This positive cost variance is the result of early completion of Special Nuclear Material De-Inventory, D&D Materials Subcontracts, Waste Container Procurements, D&D staff ramp-up, recognized efficiencies in Min-Safe Operations and Demolition, and PRF east gallery glovebox cleanout.

Recovery – This positive cost variance is expected to decrease with increased utilization of overtime to recover schedule associated with the PRF canyon floor cleaning and pH and Pulsar Hood Removal.

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

FUNDS vs. SPEND FORECAST (\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	FY2010		Variance
	Projected Funding	Spending Forecast	
ARRA	106.7	101.2	5.5
Base	<u>57.2</u>	<u>51.3</u>	<u>5.9</u>
Total	163.9	152.5	11.4

Funds/Variance Analysis

Projected funding includes FY2009 un-costed and FY2010 expected new budget authority. The positive variance in RL-0011 Base reflects the elimination of the “Q” shift resources planned for the PRF Pencil Tank Removal, the elimination of the PRF waste elevator, delay in potential procurement of the BROKK remote handling system, delay in procurement of the transformers to support installation of temporary power, and delay in the installation and procurement of the alternate exhaust system.

Critical Path Schedule

Critical Path analysis can be provided upon request.

Estimate at Completion (EAC)

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

Baseline Change Requests

BCR-PRC-10-042R0, Modify Waste Volumes for Balance of 234-5Z

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.