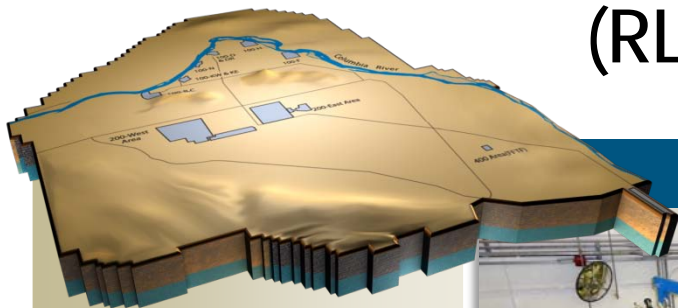


Section A

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 Seismic Structure around HC-230C-3.

October 2010
DOE/RL-2010-126-10, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

Millwright getting FRHAM
suit removed upon exiting the
Canyon.



PROJECT SUMMARY

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

American Recovery and Reinvestment Act (ARRA)

Removal of plutonium-contaminated process equipment continued as a top priority in readying the PFP Complex for demolition. A total of 75 gloveboxes and hoods have been removed to date with Recovery Act funds. Of these, 67 have been shipped out of PFP for treatment or disposal. An additional five have been packaged into an IP-2 waste shipping container awaiting shipment, three have been removed and are waiting to be loaded into shipping containers. As the pace of D&D work accelerates, so does the waste generation at PFP. CHPRC has now shipped approximately 2,312 cubic meters of waste from PFP with support from Recovery Act funds, including 2,087 cubic meters of low level and mixed low level waste (LLW/MLLW), 203 cubic meters of TRU waste, and 22 cubic meters of non-radioactive waste.

Nondestructive assay measurement of process support equipment is also continuing ahead of schedule, with more than 75% of the highly contaminated process vacuum system and process transfer lines now measured. To date, 274 feet of process vacuum piping has been removed, size-reduced, and packaged into waste containers waiting disposition. In addition, 252 feet of transfer lines have been removed, size reduced and packaged into waste containers waiting disposition.

With four of nine gloveboxes removed and all process equipment removed from the others, the former PFP SNM Storage Vault Complex is rapidly approaching a ready-for-demolition condition. Process equipment removal, chemical decontamination efforts, electrical isolation of various rooms and areas, and removal of hazardous materials that must be disposed of separately from the demolition debris continue in the laboratory and processing areas. HC-230-C3, C-4, and C5 have been removed from building ventilation and seismic stabilization beams are being removed. All three gloveboxes have qualified for onsite disposal as low level waste at ERDF. Preparations are also under way to remove the first two sections of the 70 foot long HA-289 conveyor glovebox which will make room for the subsequent removal of three other process gloveboxes. Characterization samples were taken in 242-Z from gloveboxes 1 and 3. The 242-Z team supported one of the RMA D&D teams to prepare for and execute upcoming supplied breathing air entries into the hydrogen fluoride scrubber cell in room 232 of the 234-5Z building. They also supported Advanced Dress and Undress training at the Hammer facility.

Base

236Z Plutonium Reclamation Facility – Repairs to the canyon crane were completed and the crane returned to service. Authorization to proceed with pencil tank size reduction activities was received.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
11-EMS-PFP-OB1-T1	Broaden spill mitigation efforts at PFP	Reduce opportunity for hydrocarbon spills <ul style="list-style-type: none"> •Evaluate opportunities •Contracted work controls in SOWs •Alternate fuel options review 	12/31/2010 3/31/2011 3/31/2011	
11-EMS-PFP-OB2-T1	Reduce number of private vehicles used for commuting to/from PFP	Ben Franklin Transit (BFT) bus service <ul style="list-style-type: none"> •Conduct survey •Evaluate survey •Estimate cost •Report to management 	12/31/2010 3/1/2011 5/1/2011 7/1/2011	5% Complete
11-EMS-PFP-OB3-T1	Materials Redeployment:	Evaluate opportunities for redeployment of unused and contaminate free material <ul style="list-style-type: none"> •Rad release review •Identify oportunituies •Evaluate return to vendor •Document 3 sucessess 	12/31/2010 3/31/2011 6/30/2011 9/30/2011	

TARGET ZERO PERFORMANCE

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	5	
Total Recordable Injuries	2	10	Base - 10/6 Employee received fractures to face due to a fall. (21380) Base - 10/19 Employee received fracture to toe due to roll of plastic falling on the foot. (21406)
First Aid Cases	9	101	Base - 10/5 Employee received strain to the ankle. (21379) ARRA - 10/11 Employee received strain to the ankle. (21390) ARRA - 10/11 Employee received strain to the lower back. (21394) ARRA - 10/13 Employee received strain to the knee. (21398) Base - 10/20 Employee experienced a pulled muscle. (21409) ARRA - 10/5 Pain, Complaint of (21411) ARRA - 10/25 Employee experienced irritation of the eyes. (21417) ARRA - 10/26 Employee received abrasions to the right foot during a walk down due to safety shoes. (21419) ARRA - 10/8 Employee received an abrasion to knee. (21384)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

11.02 Maintain Safe and Compliant PFP – Base

- CHPRC-00891, Justification for Continued Operation – Lack of Sufficient Clarity for Documented Safety Analysis Credited Leak Path Factor, and annual updates to the Tank 241-Z-361 DSA and TSRs were implemented in October

11.05 Disposition PFP Facility – Base

Plutonium Reclamation Facility (PRF)

- Repairs to the canyon crane were completed and the crane returned to service
- Authorization to proceed with pencil tank size reduction activities was received
- Internal equipment removal from the maintenance glovebox was completed
- Mechanical isolation of the maintenance glovebox was initiated and is approximately 90% complete
- Preparations of the canning and charging gloveboxes for size reduction were initiated

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

- In RMA Line Room 235B, the team completed painting fixative on the interior of gloveboxes HA-21I, HA-22, and conveyor HA-28. Activities for isolating these gloveboxes from ventilation and removal were started.
- In RMA Line Room 232, preparations for the initial entry into the HA-46 process cell continued
- In RMC Line Rooms 228A, 228B, and Lab Room 166, the first two increments for the removal of process transfer lines were completed
- In RMC Line Room 230C, removal activities for gloveboxes HC-230C-3, HC-230C-4, and HC-230C-5 continued
- In the RADTU area, Room 235D, the D&D team continued the GB200 mechanical isolation and internal process equipment removal was started. The characterization of GB100A was also completed.

Analytical Laboratory

- Decontamination efforts are complete for the six Gloveboxes in Room 139. Attempts for meeting LLW requirements were unsuccessful. The gloveboxes will be removed and set aside for future size reduction and packaging as TRU waste.
- The 144-9 Hood was mechanically isolated, successfully decontaminated to LLW levels, separated from its E4 connection, and set aside in Room 144. Removal of the hood is pending completion of minor modifications to enlarge the door.

Plutonium Process Support Laboratories

- Process equipment removal was completed for the 179-5 glovebox, and decontamination efforts were commenced

242Z Americium Recovery Facility

- Obtained samples from inside gloveboxes WT-1, WT-2, and WT-3 for isotopic analysis
- Initiated the installation of temporary power into the 242-Z Control Room
- Initiated the electrical isolation of the 242-Z building

2736Z/ZB Vault Complex

- Removed BTS Welder Cabinet under GB642E and physically moved out of room for NDA in low background area of 2736-ZB
- Removed 50 percent of the support equipment in room 641 and 642
- Completed Removal of the shielding around the glove boxes in Room 642
- Performed NDA of GB636. Attempts for meeting LLW requirements were unsuccessful. This glovebox has been set aside for size reduction.

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/Status – The CHPRC Joint Evaluation Team (JET) review of the Aspigel® decontamination process concurred with the project determination that a Level 3 Readiness Assessment (RA) was the appropriate level of readiness review for implementation of Aspigel® at PFP. The independent RA team is scheduled to complete their review from November 17th to 19th with the subsequent release of the final report to follow shortly thereafter. Activities completed in preparation for the RA include the Hazards Review Board (HRB) evaluation and approval of the work package for the first application of Aspigel®, additional mock-ups using water, and an operational drill.

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

Corrective Action/Status –

- Implemented Senior Supervisory Oversight
- Brought in outside expertise to assist the project in performance of the Common Cause Analysis
- Common Cause Analysis prepared and approved by ESRB
- Corrective Actions entered into CRRS (CR 2010-2424)
- Occurrence Report is Final

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk

● Working - No Concerns ↑ Increased Confidence
● Working - Concern ↔ No Change
● Working - Critical ↓ Decreased Confidence

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.	●	↔	The Aspigel decontamination process remains on-track for deployment in early December. Based on experience with RadPro alone, the number of gloveboxes and hoods that may be able to qualify for direct onsite disposal as low level waste is lower than previously assumed in the project baseline. Without Aspigel or if it proves to be less effective than expected, up to 70% of the 112 gloveboxes/hoods remaining to be removed from the 234-5Z lab and process areas could require size reduction and packaging for disposal as transuranic waste. Pending results from Aspigel, risk mitigation work to establish two central size reduction stations has been accelerated. The first station in room 172 is nearing completion, with startup planned on or before December 6, and the second station is expected to be in operation in room 235B by April.
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.	●	↑	Canyon crane repairs were completed and the crane returned to service, although a minor problem will need to be resolved with clearance of the cable reel past a work platform. Work to clean up the canyon floor has been resumed and is going well, with increased confidence that this work can be completed by December. Glovebox cleanout and removal continues ahead of schedule.
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.	●	↔	Work documents and preparations for initial characterization of the 291-Z plenum are complete. Work scheduled to be conducted in late October was deferred to avoid impacting ongoing D&D activities and has been rescheduled for the Thanksgiving weekend. The contract for conceptual design of an alternate exhaust system has been placed and a kickoff workshop with the sub-contractor is scheduled for November 15-17.
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.	●	↑	The PRF canyon crane has been repaired. No other significant failures of essential systems have been experienced during the past three months. With the onset of fall weather, an increase in continuous air monitor alarms due to Radon has been experienced with the older models of CAMs that have less ability to differentiate activity originating from Radon from other contamination.
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.	●	↑	PFP's substantially expanded beryllium sampling program is continuing with no analyses showing actionable levels of beryllium contamination. The Senior Supervisory Observation program hit its target number of observations in October, with improved timeliness in report submittal and processing. An employee stop-work was imposed on work involving radiological containments.
PFP-036: Loss of Contamination Control	Rigorous routine radiological surveillance program and contamination control measures.	●	↑	A loss of control over contamination occurred during separation of inter-connected hoods in room 139 of the Analytical Laboratory this month, and recovery actions were in progress at month-end. Two other minor contamination events occurred in October with only minor impacts, and a number of apparent contamination events were determined to result from Radon activity on surfaces, protective clothing and equipment throughout the plant.

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	7.0	9.0	7.1	2.0	28.5	1.9	20.9
Base	-1.4	3.0	2.7	4.4	-306.7	0.3	8.7
Total	5.6	12.0	9.8	6.4	115.1	2.1	17.9

ARRA**CM Schedule Variance: (\$+2.0M/+28.5%)**

A BCR that modified the Earned Value Method for Project Management activities is the primary cause of this month's variance. The method was changed from apportioned to level-of-effort.

CM Cost Variance: (+\$1.9M/+20.9%)

Earned 100% of FY10 project management. These activities were previously portrayed as behind schedule in proportion to discrete D&D work.

Base**CM Schedule Variance: (+\$4.4M/-306.7%)**

Implementation of BCR-PRC-10-059R0, *PRF Pencil Tank Replan* (which included removal of the Brokk) resulted in a single point adjustment (negative current period BCWS).

CM Cost Variance: (+\$0.3M/+8.7%)

Current month cost variance is within reporting threshold.

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	159.4	150.2	143.5	(9.2)	-5.8	6.7	4.5	277.5	270.3	7.1
Base	126.1	126.6	124.4	0.5	0.4	2.3	1.8	326.8	348.6	(21.8)
Total	285.5	276.8	267.9	(8.7)	-3.1	9.0	3.2	604.2	618.9	(14.7)

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance: (-\$9.2M/-5.8%)

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 – Utilization of an additional decontamination agent (Aspigel[®]), additional overtime, leaving gloveboxes in place for removal during demolition, and application of the revised SCO process are expected to contribute to the gradual the schedule recovery. The Aspigel[®] Readiness Assessment has been initiated, with authorization for use expected in early December.

CTD Cost Performance: (+\$6.7M/+4.5%)

Efficiencies recognized on cross-cutting support to the D&D work teams (primarily in solid waste management, project management, NDA, consumables and subcontracts), 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 CPI does not fall below the threshold of 1.00.

Base

CTD Schedule Variance (+\$0.5M/0.4%)

The positive schedule variance is within established reporting thresholds.

NOTE: BCR implemented in October to re-plan remaining PRF work scope: changed mechanical to manual size reduction of pencil tank assemblies, updated PRF facility modifications, eliminated PRF P/Q shift support. The revised plan supports completion of PRF D&D by its original baseline date of September 28, 2012.

CTD Cost Variance (+\$2.3M/+1.8%)

This positive cost variance is within established reporting thresholds. Contributors to the variance include 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 cleanup.

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 Canning and Charging glovebox removals, but will be monitored closely to ensure the trend does not drive CPI below the threshold of 1.0.

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	FY2011		Variance
	Projected Funding	Spending Forecast	
ARRA	163.1	138.7	24.5
Base	<u>45.3</u>	<u>46.2</u>	<u>-.9</u>
Total	208.4	184.9	23.6

Funds/Variance Analysis

Funding includes FY2010 carryover and FY2011 new budget authority. The positive variance in ARRA reflects the delay in removal of gloveboxes from 234-5Z process and lab areas associated with safety stand-down and stop-works. The negative variance in Base is associated with the funding guidance received from RL (10-FMD-0191, dated October 1, 2010).

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-10-059R0, Plutonium Reclamation Facility (PRF) Pencil Tank Re-plan
BCR-PRC-11-003R0, Incorporate Revised Labor, Non-Labor and Escalation Rates
BCRA-011-11-001R0, Changes to EVMS Methodology

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.