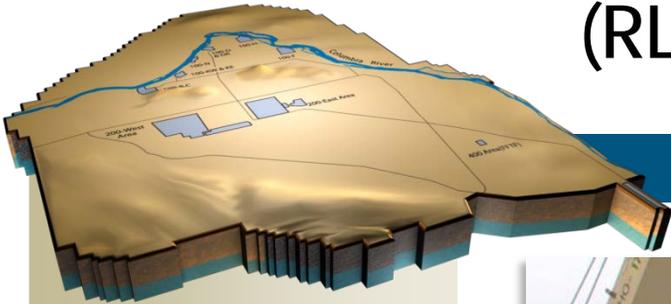


Section A

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



Monthly Performance Report

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Vice President and
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The final glovebox to be removed from the 2736-Z/ZB Facility is loaded into a shipping container for disposal.



Aspigel Decontamination of Glovebox HA-19B2, Room 235B

February 2011
CHPRC-2011-02, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The Plutonium Finishing Plant (PFP) Project continues to maintain PFP facilities compliant with authorization agreement requirements. The project attained more than one million work hours without a lost workday injury during February, and completed 60 days without a reportable event involving hazardous energy control, radiological control or conduct of operations. Only three minor first aid injuries were experienced during the month.

American Recovery and Reinvestment Act (ARRA)

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 lab, and vault areas. Two gloveboxes were removed during the month, including the last of the gloveboxes from the 2736ZB vault support facility. With this work completed, the vault D&D team prepared to begin removal of the remaining exhaust filters and ductwork to support readiness for demolition of the facilities later this year. A total of 104 gloveboxes and hoods have been removed to date with Recovery Act funds. Of these, 101 have been shipped out of PFP for treatment or disposal and 3 have been staged for size reduction and disposal as transuranic waste. The size reduction team completed cutting and packaging three gloveboxes (139-3, 139-4, 139-5) for disposal as transuranic waste (TRU). Twelve gloveboxes were shipped to an offsite treatment facility for size reduction.

Glovebox removal work is nearing completion in the Analytical Laboratory, with just one glovebox each remaining in rooms 145 and 152. Process equipment removal and chemical decontamination was completed on glovebox 152-522, while equipment removal and isolations continued on glovebox 145-1. In the Plutonium Process Support Laboratory (PPSL), work continued on concurrent cleanout of the nine gloveboxes in Room 179. Preparations are also underway to accelerate work on the final remaining glovebox in Room 188, now expected to start next month.

To support the larger number of crews now assigned to glovebox removal in the process areas, preparations were completed to initiate rotating day-swing shift crews, beginning next month. In the Remote Mechanical A(RMA)/Remote Mechanical C (RMC) Lines, the last section of the 70-foot long HA-28 conveyor was removed. Preparations continued for cleaning out the hydrogen fluoride scrubber cell behind HA-46 to support in-situ disposition of that glovebox. Surface Contaminated Object SCO surveys were completed following decontamination of gloveboxes HC-3 and HC-4, and these gloveboxes are nearly ready for removal. The final application of Aspigel® decontamination product was also completed on the upper sections of HA-19, bringing those two gloveboxes to a condition where they are nearly ready for removal. Crews also continued preparations to disposition four gloveboxes in place in rooms 232 and 235D. The 242Z Americium Recovery Facility D&D team completed external isolations and equipment removal from gloveboxes WT-4 and WT-5.

Progress in completing process vacuum piping removal continued, with 358 feet removed this period, bringing the total removed to 1,011 feet. The process transfer line removal crew completed final modifications and successfully tested their new size reduction box. The crew was then able to resume piping removal, taking out 30 feet this period, for a total removed of 367 feet. Insulator crews also removed asbestos from piping and ductwork, bringing the total linear footage completed at PFP with Recovery Act funds to 13,624 feet. As the pace of D&D work has accelerated at PFP, so have waste generation rates. CHPRC has now shipped approximately 2,822 cubic meters of waste from PFP with support from Recovery Act funds, including 2,393 cubic meters of low level and mixed low level waste, 406 cubic meters of TRU waste, and 23 cubic meters of nonradioactive waste.

Base

236Z Plutonium Reclamation Facility – Preparations for size reduction of pencil tank assembly 17 (Tank 17) were completed and size reduction was initiated on February 3, 2011. Size reduction of the assembly was approximately 40% complete at month-end. Engineering is working on a concept for use of a band saw for cutting the tanks, which is expected to expedite size reduction of future assemblies. Size reduction of the maintenance, loading, and canning gloveboxes was completed. The sections of the maintenance, loading, and one section of the canning gloveboxes were transferred to Waste Operations for loading into Standard Waste Boxes (SWBs) and shipment to the Central Waste Complex (CWC).

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
		➤ Actions to achieve target		
11-EMS-PFP-OB1-T1	Broaden spill mitigation efforts at PFP	Reduce opportunity for hydrocarbon spills		35% Complete
		➤ Evaluate additional controls	12/31/2010	Complete
		➤ Standardize controls for SOWs	3/31/2011	In progress
		➤ Evaluate alternate fuel options	6/30/2011	
11-EMS-PFP-OB2-T1	Reduce number of private vehicles used for commuting to/from PFP	Ben Franklin Transit (BFT) bus service		50% Complete
		➤ Conduct survey	12/31/2010	Complete
		➤ Summarize survey results	3/1/2011	Complete
		➤ Obtain cost estimate	5/1/2011	
11-EMS-PFP-OB3-T1	Materials Redeployment	Redeployment of unused and contaminate free items		35% Complete
		➤ Review release procedures	12/31/2010	Complete
		➤ Evaluate excess practices	3/31/2011	In progress
		➤ Evaluate procurement practices	6/30/2011	
		➤ Document 3 successes	9/30/2011	

TARGET ZERO PERFORMANCE

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	5	N/A
Total Recordable Injuries	0	10	N/A
First Aid Cases	3	102	Base - 2/11 Employee experienced strain to right calf due to popped tendon. (21725) ARRA - 2/17 Employee received cut to right knee. (21762) ARRA - 2/28 Employee received cut to top of head. (21787)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

11.02 Maintain Safe and Compliant PFP – Base

- Approval of a Justification for Continued Operation that officially recognizes the 242Z Annex as one of the facility confinement boundary airlocks was received from RL. An implementation plan has been approved and is expected to be completed in late March.

11.05 Disposition PFP Facility – Base

Plutonium Reclamation Facility (PRF)

- Size reduction of the maintenance, loading, and canning glovebox was completed. SWBs for the gloveboxes have been loaded and transferred to Waste Operations for shipment to CWC.
- The modification of the closed loop cooling system in room 41, to support repair to the damaged wall and door from the explosion in room 40, was completed.
- Repairs to the damaged wall in room 40 were initiated and the door removed. In order to support containment tent design and size reduction of the MT gloveboxes, the door will not be replaced.
- Work on a change to the safety basis to support cleanup of the canyon was initiated. This change will allow many of the final cleanup activities for the canyon floor to be performed.

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

- In Remote Mechanical A Line Room 235B, the removal of the final two sections of conveyor HA-28 was completed. The chemical decontamination of gloveboxes HA-19B1 and HA-19B2 was completed and the removal activities associated with these gloveboxes was started.
- In RMA Line Room 232, the chemical decontamination of glovebox HA-46 was successfully completed and the cleanout of the HA-46 process cell was started.
- In RMA Line Room 235A-3 the isolation of mechanical lines to glovebox HA-7A was started.
- In RMC Line Room 230C, the chemical decontamination of conveyor gloveboxes HC-3 and HC-4 was completed and removal activities for these gloveboxes were started.
- In RMC Line Room 228B, a team from PRF was reassigned to this room and began glovebox activations and work package planning activities.
- In the RADTU area, Room 235D, the final removal of waste from glovebox 200 was completed and the mechanical separation of gloveboxes 100 and 200 continued.

Analytical Laboratory

- Completed process equipment removal from the 145-1 and 152-522 gloveboxes. Completed decontamination of the 152-522 glovebox and applied fixative to the interior surfaces in preparation for separation from the E4 system.

PPSL

- Completed process equipment removal from the 179-2, 3, 4, 6, 10, 11 and 12 gloveboxes
- Completed decontamination of and fixative application in the 179-2, 3, 4, 10, 11 and 12 gloveboxes
- Continued with mechanical isolation of, and process equipment removal from, the 179-9 glovebox

Disposition PFP (234-5Z) Facility

- Process vacuum piping removal is 16 percent complete with 1,011 total feet removed.
- A total of 367 feet of chemical piping transfer line has been removed.

- 567 feet of asbestos-containing materials on piping was removed during the month of February bringing the total to 13,624 feet of asbestos removed to date.

242Z Americium Recovery Facility

- D&D activities were initiated in and process equipment removed from gloveboxes WT-4 and WT-5.

2736Z/ZB Vault Complex

- The final glovebox (642A), in the 2736Z/ZB Complex, was removed from ventilation and removed from the facility.
- The Z-7 stack was downgraded from major to minor stack status.
- Removal of the final contaminated duct work commenced to allow downgrade of the facility to an “operationally clean” status.

PFP Facility Modifications

- Installed pipe sleeve for Grouting and Grouted the first three Phase II Floor Trenches
- Completed the installation of eight Distribution Panels and associated wiring & connectors for Temporary Power System.

MAJOR ISSUES

None.

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 Decon 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.	●		This risk has been fully realized, resulting in extended durations and increased costs for glovebox removal and disposition, and a substantial increase in the number of gloveboxes expected to require size reduction and disposal as TRU waste. Mitigation and schedule recovery actions were added to field execution schedules in December, and were incorporated in the project baseline through a Baseline Change Request implemented in January. Aspigel has now been used to decontaminate two gloveboxes. The results indicate it will significantly reduce the duration of future decontamination activities, but is unlikely to materially reduce the number of boxes requiring disposal as TRU waste. Through February, 20 gloveboxes have been successfully dispositioned through the new centralized size reduction station or shipped to an offsite treatment facility. During January and February, resources were significantly increased to recover schedule on RMA/RMC Line glovebox cleanout and removal, including four additional D&D crews and implementation of a swing shift. A statement of work has also been developed for an independent review of PFP schedule efficiency, including processes currently in use for prioritization and resource allocation.
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.	●		Two D&D teams have been diverted from glovebox cleanout and removal in PRF, which has been running on or ahead of schedule, to similar work in the 234-5Z process areas. Critical path work to clean out the PRF canyon is continuing, with size reduction of the pencil tanks now underway. Dispersion modeling for demolition of the canyon is continuing at PNNL, and exploratory meetings are being held with AREVA in an effort to obtain applicable experience from their nuclear facility D&D experience in France.
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.	●		Supplemental NDA measurements were completed on the inactive section of the process vacuum system piping, reducing concerns over the greater than expected holdup originally identified during December. Planning is continuing on the detailed phase of the 291-Z characterization plan, which should resolve the uncertainties leading to this project risk.
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 and complete planned facility modifications.	●		No significant failures were experienced in February and reporting on this risk is being discontinued unless and until significant failures are experienced.
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.	●		Improvement actions from the "R" occurrence report and the PFP Performance Improvement Plan are continuing, and PFP completed 60 days without an OSHA Recordable injury or a reportable event in radiological control, conduct of operations or hazardous energy control during February. The project also achieved 1 million hours without a lost workday case in February. Reporting on this risk is being discontinued unless additional issues are identified.
PFP-036: Loss of Contamination Control	Rigorous routine radiological surveillance program and contamination control measures.	●		A series of relatively minor contamination events continue to be experienced as a result of legacy contamination discovered in infrequently accessed areas and during the performance of D&D work.

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	10.8	10.8	12.3	0.0	-0.1	(1.5)	-13.7
Base	0.4	0.2	1.6	(0.2)	-43.9	(1.3)	-545.8
Total	11.3	11.1	13.9	(0.2)	-1.8	(2.8)	-25.4

Numbers are rounded to the nearest \$0.1M

ARRA

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

The current month schedule variance is within reporting threshold.

CM Cost Variance: (-1.5M/-13.7%)

Current month unfavorable cost variance is primarily a result of a one-time point adjustment associated with implementation of BCR-PRC-11-020R0, *Align FY11 PMB Scope to RL Priorities*, which affected the indirect (Direct Distributable and General & Administrative) budget. The balance is due to additional MSA-supplied resources to support D&D, including overtime to support shifts and weekend work.

Base

CM Schedule Variance: (-\$0.2M/-43.9%)

Current month schedule variance is within reporting threshold.

CM Cost Variance: (-\$1.3M/-545.8%)

Current month unfavorable cost variance is due to vital safety systems which were originally planned to be deactivated are still supporting D&D, thus requiring unbudgeted surveillance, monitoring, and maintenance; overtime used to complete PRF size reduction of the maintenance glovebox and the east gallery glovebox. In addition, a one-time point adjustment associated with implementation of BCR-PRC-11-020R0, *Align FY11 PMB Scope to RL Priorities*, which affected the indirect (Direct Distributables and General & Administrative) budget, and the transfer of fiscal-year-to-date BCWS, BCWP, and ACWP in the current period (all being credit values) from Project Management and Usage-Based Services Base to ARRA are contributing to this variance.

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	187.8	187.7	183.2	(0.1)	-0.1	4.4	2.4	283.3	286.8	(3.6)
Base	136.8	137.0	135.9	0.2	0.1	1.0	0.8	346.4	345.9	.4
Total	324.6	324.7	319.2	0.0	0.0	5.5	1.7	629.6	632.8	-3.1

Numbers are rounded to the nearest \$0.1M

ARRA

CTD Schedule Performance: (-\$0.1M/-0.1%)

Negative schedule variance is within threshold. The project is currently experiencing impacts associated with:

- Leak Path Factor/periphery confinement barrier issues associated with 242Z entry point
- Disqualification of multiple electrical disciplines impacted completion of 2736Z/ZB cold and dark activities and deployment of the 2736Z/ZB team to support RMA/RMC Key Performance Parameter (KPP) glovebox removals
- The complexity of the remaining RMA/RMC glovebox removal effort

Recovery –Nuclear Safety is working to implement the RL-approved Justification for Continued Operation to address the 242Z Leak Path Factor/periphery confinement barrier issues; completion expected late March. Eight gloveboxes have been shipped to PermaFix Northwest, offsetting delays experienced with glovebox removal and size reduction in the 234-5Z facility. On February 28, 2011, changes were made to realign the PFP organization in support of achieving the September 30, 2011, KPP. Additional resources were applied to the RMA/RMC glovebox removal effort, increasing confidence and reducing the risk associated with achieving the KPP. In addition, work scope was redistributed among the D&D managers to level their workloads.

CTD Cost Performance: (+\$4.4M/+2.4%)

Favorable cost variance is within threshold and is primarily due to lower overhead costs. The balance is due to efficiencies recognized on cross-cutting support to the D&D work teams (primarily in solid waste management, project management, nondestructive assay, consumables and subcontracts), demolition of ancillary buildings, and the removal of asbestos and non-process equipment from 234-5Z.

Base

CTD Schedule Variance (+\$0.2M/+0.1%)

The positive schedule variance is within established reporting thresholds.

CTD Cost Variance (+\$1.0M/+0.8%)

This positive cost variance is within established reporting thresholds. Contributors to the variance include early completion of Special Nuclear Material De-Inventory, lower procurement of D&D Materials, Subcontracts, and Waste Containers, D&D staff ramp-up, early demolition of ancillary facilities, and efficiencies in facility modifications to support D&D.

Recovery –Effective February 28, 2011, two of the PRF field work teams were re-assigned to support RMA/RMC glovebox removal and will not return to support PRF until FY2012. This change to the field teams is reflected in the spend forecast. However, the total impact to PRF completion, PFP milestones, and cost is being evaluated and will be reflected in next month's spend forecast update.

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

FUNDS vs. SPEND FORECAST

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	(\$M)		
	FY2011		
	Projected Funding	Spending Forecast	Spend Variance
ARRA	163.1	161.9	1.2
Base	39.3	35.7	3.5

Funds/Variance Analysis

Funding includes FY2010 carryover and FY2011 new Budget Authority. The positive variances reflect an approved realignment of ARRA and Base work scope that was implemented in February.

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-11-020R0, Align FY11 PMB Scope to RL Priorities

BCRA-R11-11-001R0, Correct Admin Errors Made During PFP Recovery Plan

BCRA-PRC-11-023R0, General Administrative & FOC Changes for February 2011

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.