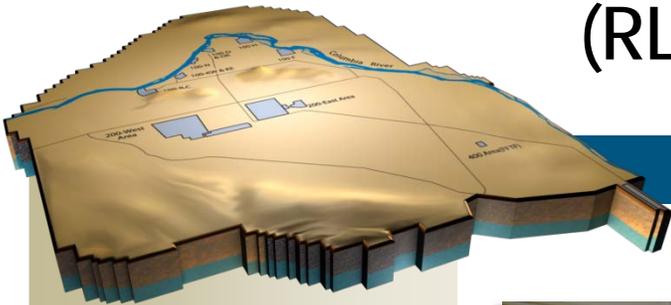


Section A

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



Monthly Performance Report

Removal of the pulser glovebox



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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-six 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 and five are staged for future size reduction and disposal as transuranic (TRU) waste. CHPRC has now shipped approximately 1,393 cubic meters of waste from PFP with support from Recovery Act funds, including 1,220 cubic meters of low level and mixed low level waste (LLW/MLLW), 151 cubic meters of TRU waste, and 22 cubic meters of non-radioactive waste.

234-5Z Laboratory Areas – A hood in Room 180 of PPSL was decontaminated, separated from its E4 connection, and was transferred to Solid Waste Operations (SWO) for disposal as LLW.

Plutonium Processing Areas – Gross decontamination of the 70' long Conveyor Glovebox HA-28 was completed. Non-destructive assay measurements and other preparations for chemical decontamination were then initiated on HA-28, HA-21I, and HA-20MB. As a prerequisite to remove three large gloveboxes from Room 230C, work resumed on the enlargement of the 658 doorway. External isolations continued on Gloveboxes 227-SA and HA-46, and preparations continued for isolation and equipment removal from Gloveboxes 200 and 300.

Infrastructure Systems – Non-destructive assay (NDA) measurements on the process vacuum system remain at 67% complete. NDA for transfer lines is now at 69% complete, having incorporated the use of historical data for several of the lines. The field crew has set up containment tents and other items per the work document. The set up work includes the portable glovebox for size reduction of long pieces of vacuum piping removed from overhead runs that was fabricated and staged for final setup in the work area upon release of the work document.

During the month of July, 224 feet of asbestos insulation was removed, bringing the total for asbestos insulation removed with Recovery Act funds to more than 9,700 feet and the total for CHPRC to more than 10,300 feet.

Field construction forces continued installation of a supplemental cooling system to improve safety and working conditions during D&D of the process facilities during the summer months.

2736Z/ZB Vault Facility – Removed about 50% of the support tubing and ventilation from Room 636. Staged 90% of the process equipment for removal from Room 642 Gloveboxes A, B, C and D. Completed transition of 2736-Z/ZB Complex to a D&D DSA.

242Z Americium Recovery Facility – 242Z Team installed temporary shielding to reduce the dose rates in front of Glovebox WT-2 (the location of the 1976 explosion). The team also completed ten consecutive entries to size reduce, package and remove waste, change filter media, perform monthly GFCI checks, and prepare the gloveboxes for the next coats of fixative. Continued development of the work package to change the E-3 filters in Room 262 which will allow the team to exit the LCO and begin D&D work activities. Electrical isolation, mechanical isolation and temporary power work packages are ready to work.

Base

236Z Plutonium Reclamation Facility – The Readiness Assessment (RA) of the pencil tank size reduction activity was successfully completed. The RA team had two positive observations, four pre-start findings, five post-start findings and four observations and determined that upon successful completion of the pre-start findings and manageable list item, that size reduction can safely proceed.

Work continued on the removal of the pulser glovebox and is approximately 50% complete. Canyon floor cleaning was initiated. On July 15, the canyon crane failed and repairs were initiated.

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
		Establish and maintain a pre-designation central file for spills.	9/30/2010	On schedule

TARGET ZERO PERFORMANCE

	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	121	Base - 7/2 - Employee received a laceration to finger. (21042) Base - 7/5 - Employee experienced a strain in the shoulder. (21062) ARRA - 7/7 - Employee smelled odor while on supplied air. (21065) ARRA - 7/7 - Employee smelled odor while on supplied air. (21066) ARRA - 7/7 - Employee smelled odor while on supplied air. (21068) ARRA - 7/7 - Employee received a laceration to head. (21067) Base - 7/13 - Employee received abrasion when fell in parking lot. (21071) Base - 7/16 - Employee received scrape to hand. (21109) Base - 7/19 - Employee experienced a strain in elbow. (21108) Base - 7/20 - Employee experienced strain to back. (21110) Base - 7/27 - Employee experienced knee pain. (21147)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

11.02 Maintain Safe and Compliant PFP – Base

- In preparation for transition of the 2736-Z Complex into its D&D mission, Buildings 2736-Z and 2736-ZA were entered into the Operationally Clean facility program. As part of the preparations for transition, verification that the 2736-Z Complex radiological material at risk did not exceed DSA maximum inventory assumptions was also completed.

11.05 Disposition PFP Facility – Base

Plutonium Reclamation Facility (PRF)

- The Readiness Assessment was successfully completed for manual size reduction of pencil tanks resulting in two positive observations
- Removal of the pulser glovebox continued. This work scope is approximately 50% complete.
- Initiated canyon floor cleaning and size reduction of the hard waste.
- Troubleshooting of electrical problem with the canyon crane was initiated and planning for repairs was completed
- Preparations were initiated for the transfer of the pencil tank assembly counterbalance to the canyon

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

- In RMA Line Room 235B, the team completed the mechanical decontamination of Conveyor HA-28 and the subsequent NDA to establish an updated fissile inventory. These actions allow more flexible criticality controls to be used during future chemical decontamination work.
- In RMA Line Room 232, work continued to remove the remaining external mechanical connections to Glovebox HA-46
- In RMC Line Room 227, the mechanical isolation of lines to Glovebox HC-227S continued
- In RMC Line Room 230C, the team removed and size-reduced the process ventilation duct to Glovebox HC-60. HC-60 was also relocated within the room pending completion of the enlargement of Door 638. This team also provided support to Construction for the Door 638 work scope.
- In the RADTU area, Room 235D, the D&D team made preparations to perform visual characterization of GB300 and the external demister tank and supported planning for the GB200 mechanical isolation work package

Analytical Laboratory:

- Process equipment removal continued for the six gloveboxes in Room 139
- Preparations are under way for in-situ size reduction of gloveboxes within the A-Labs

Plutonium Process Support Laboratories:

- A hood in Room 180 of PPSL was decontaminated, separated from its E4 connection, and was transferred to Solid Waste Operations for disposal as LLW

242Z Americium Recovery Facility

- Completed installation of temporary shielding for WT-2 Glovebox
- Completed ten consecutive entries to size reduce, package and remove waste and changed filter media
- Cut up 48 square feet of lead shielding

2736Z/ZB Vault Complex

- Removed approximately 50% of remaining support piping and ventilation from Room 636
- Staged 90% of process equipment for removal from Room 642 Gloveboxes A, B, C, and D
- Transitioned to D&D DSA and TSRs

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 – PFP recently held training for the work crews on the Aspigel® application equipment. The first Aspigel® procurement (36 kg of product) arrived at PFP at the beginning of August. Additionally, initial industrial hygiene sampling of nitric acid and ammonia vapors generated during product preparation is complete (preliminary results are less than detectable). Also, the criticality organization has released the CSER and CPS for the Aspigel® process, and the work package for field validation of the Aspigel® procedure in Glovebox HA-19 is now being prepared. However, due to the requirement to initiate a separate control decision document, the expected release date for the hazards analysis (HA) is now mid September. When the HA is complete, the field validation work package will be reviewed by the hazards review board (HRB). Following the HRB PFP will then conduct an activity based management review (ABMR) to verify that the Aspigel® decontamination technique is ready for implementation. It is anticipated that the PFP D&D organization will be ready to start using Aspigel® in late September.

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				
PPF-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 technical basis document has been released for safe packaging and transport of Aspigel® waste. Other technical documentation and work packages to support the implementation of Aspigel® are under development. The first order for Aspigel® has been placed, and PFP plans to begin using the product in gloveboxes before the end of August. The revised SCO process training has been completed and the process will be applied to re-survey GB HC-230C-3 in August. A bounding CE-SPA document is now in place to support transport/disposal of gloveboxes marginally exceeding SCO criteria but within the CE-SPA limitations. Modifications to room 172 in 234-5Z for size reduction are well underway and in-situ size reduction capability is being installed in the Analytical Laboratory.
PPF-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.	●		Sampling of the canyon floor residues has been completed. The material can be dispositioned as planned and floor cleanup is now 25% complete. The readiness assessment for manual size reduction of the pencil tanks was successfully completed; however the canyon crane failed during early preparations to initiate the activity, which has impacted both floor cleanup and pencil tank disposition activities. Repairs will likely require several weeks.
PPF-004A: Risk of 291-Z D&D cost/schedule growth	Complete detailed planning/engineering for D&D of 291-Z, particularly characterization to help define the scope of work for relatively inaccessible areas and evaluation of the need for an alternate exhaust system.	●		Characterization of less accessible portions of the 291-Z exhaust plenum was incorporated in the baseline update. Preparations for initial inspection and sampling are nearly complete and will be scheduled to be performed over the next month or two on a non-interference basis with other ongoing D&D work. Engineering has initiated the development of functional requirements for an alternate exhaust system.
PPF-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.	●		Non-destructive assay measurements on support systems are continuing: 67% complete for the process vacuum system and 69% complete for process transfer lines. Additional areas to be addressed are sections of the E-4 exhaust ductwork/filters and several gloveboxes/hoods in RMA Line with known substantial holdup.
PPF-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 monitor failures continue to impact D&D work, but to a significantly reduced extent following installation of line conditioners and new power cords. The supplemental cooling system is installed and operating well. Repairs have been completed to the 242-Z roof and there have been no subsequent indications of water intrusion in the airlock or control room. Efforts to increase differential pressure in the 242-Z control room to a level acceptable for initiation of glovebox D&D were not successful and it currently appears that the exhaust filters in 234-5Z duct level will need to be changed out. As mentioned above, the PRF crane failed during preparations for startup of pencil tank disposition and preparations for repairs are underway.
PPF-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.	●		Enhanced beryllium controls have been incorporated in applicable work documents, sub-contractor personnel have been trained and qualified where necessary, stop works have been lifted and work has resumed. Contracts are being negotiated with laboratories for analysis of samples with higher radioactivity than is acceptable at WSCF or 222-S.
PPF-036: Loss of Contamination Control	Rigorous routine radiological surveillance program and contamination control measures.	●		Several minor contamination events impacted facility availability during July. Discovery of substantial legacy contamination in the duct level also resulted in a stop work, which was lifted following implementation of recovery actions.

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	9.9	8.0	9.8	(1.9)	-19.6	(1.8)	-22.7
Base	4.4	3.9	4.2	(0.5)	-11.9	(0.3)	-8.1
Total	14.4	11.9	14.0	(2.5)	-17.3	(2.1)	-17.9

ARRA

CM Schedule Variance: (-\$1.9M/-19.6%)

- (-\$2.0M) D&D 234-5Z –Field Work Supervisor absence/attrition restricted planned work, due to limited span of management, or decreased efficiency pending replacement/qualification, beryllium work permit (BWP) comment incorporation, development of room-specific BWP, stop works on the Duct Level, and lost days to resolve potential electrical shock hazard or to implement recovery actions associated with contamination releases from a breached glove and removal of a 26-inch vacuum pipe.
- (-\$0.3M) D&D 242Z – Access to the facility was restricted by a Limiting Condition for Operation (LCO) SAC 5.24.2e.4, Work Control Requirements - ventilation restoration. Control room filters were replaced; however, the room negative did not improve enough to exit the LCO.
- (+\$0.4M) Accelerated D&D - Isolation of five access control buildings and inner security fence and razor wire removal are being worked ahead of schedule.

Recovery – this negative schedule variance is expected to continue. The RMA/RMC D&D project is three months behind schedule and the ability to consistently recover schedule has yet to be demonstrated, which presents a risk for meeting the baseline completion date. Additional overtime, including weekend work, will be used to recover the behind schedule condition.

CM Cost Variance: (-\$1.8M/-22.7%)

- (-\$1.4M) Inability to perform work due to work delays/stops, while labor costs for the field work teams remained relatively constant.
- (-\$0.5M) Overhead allocations.
- (-\$0.2M) D&D 242Z – D&D Team personnel continue to make entries in order to remove waste and debris that was not initially identified. In addition, contamination levels require the team to prepare for and spray fixative in excess of what was planned.
- (\$+0.3M) D&D Misc. Buildings - Synergy realized with other projects in completing access control building isolations, partially offset by timecard corrections not yet processed.

Recovery – this negative cost variance is expected to continue while corrective actions related to work stoppage are implemented. The life cycle cost performance is expected to decline due to the need for utilization of increased overtime to recover schedule associated with stop work and safety stand-downs.

Base

CM Schedule Variance: (+\$0.5M/-11.9%)

- (-\$0.4M) D&D 236Z (PRF) – Reassignment of team performing the process equipment removal from the west gallery gloveboxes to work on other work scope outside of the project, failure of the canyon crane, and two contamination events. The negative schedule variance is expected to continue until the reassigned team returns to work on PRF. Overtime will be utilized to maintain limited progress on the process equipment removal from the west gallery gloveboxes.

CM Cost Variance: (-\$0.3M/-8.1%)

Current Month 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	129.9	121.4	115.7	(8.5)	-6.6	5.7	4.7	292.1	274.4	17.8
Base	<u>117.8</u>	<u>115.3</u>	<u>112.4</u>	<u>(2.4)</u>	-2.1	<u>3.0</u>	2.6	<u>339.6</u>	<u>346.5</u>	<u>(6.9)</u>
Total	247.7	236.7	228.0	(11.0)	-4.4	8.7	3.7	631.7	620.9	10.8

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance: (-\$8.5M/-6.6%)

- (-\$4.9M) 234-5Z Process Facility and Labs – Performance impacted by safety stand-down and stop works, diversion of resources to support emergent activities to remove legacy combustible waste, recovery actions from the nitric acid event, additional time needed on chemical decontamination and removal of external connections, spurious Continuous Air Monitor (CAM) alarms, resource constraints, and delays in enlarging Room 230C door to facilitate glovebox removal. Recovery actions are being developed to address this schedule delay to ensure the milestone for completing glovebox removal is achieved by September 30, 2011. Schedule delay will not be completely realized until the end of fiscal year 2011.
- (-\$2.0M) Balance of 234-5Z – Unplanned process vacuum mockup work to mitigate risk associated with this high hazard radiological work, safety stand-down, stop works, resource constraints (out-of-service freight elevator, planners, NCOs and RCTs, field crew), and delays either due to or to avoid disruption of higher-priority work in the facility.
- (-\$1.0M) D&D 242Z – Greater-than-expected obstacles due to stop work issues, challenges in E-3 ventilation system compliance, and water intrusion.
- (-\$0.5M) Facility Modifications – Primarily due to lack of engineering resources associated with alternate exhaust system design and installation, and delay in completing 234-5Z door modifications impacted by safety stand down and stop works. Recovery: alternate exhaust system engineering resources assigned and a Request for Proposal issued in August for conceptual design. 234-5Z doors modifications will complete in FY2010. The schedule cannot be recovered.
- (-\$0.9M) 2736Z/ZB – Work package priorities and engineering paperwork has caused delays in removal of NDA equipment from Room 637 and clean out of process support equipment from Room 641. Expected schedule recovery – November 2010.
- (+\$0.7M) D&D Misc. Buildings – Under an accelerated D&D program, harvested physical security equipment earlier than planned, exterior barriers and monitoring equipment redeployed to other projects, ISV's and Fuel Vault completed early and redeployed to ERDF, inner fence, razor wire, and physical isolations of five control access buildings being completed ahead of schedule.

CTD Cost Performance: (+\$5.7M/+4.7%)

- (-\$3.2M) Inability to perform work due to the safety stand-downs, work stoppages and implementation of recovery actions, while labor costs for the field work teams remained relatively constant.
- (+\$6.0M) Efficiencies recognized on cross-cutting support to the D&D work teams (primarily in solid waste management, project management, NDA, and consumables and subcontracts).
- (+\$3.0M) Efficiencies experienced in completing facility modifications, early D&D of ancillary buildings, and the removal of asbestos and non-process equipment from 234-5Z.
- (+\$2.5M) Overhead allocations.

- (-\$2.6M) Use of overtime and additional usage-based services (MSA Brokered Resources) to recover schedule.

Recovery – this positive cost variance is expected to continue to decline as corrective actions and recovery plans are implemented. Additional overtime and weekend work will be used to mitigate schedule delays and maintain baseline milestones. As a result of near-term actions taken (installation of air conditioning, work simulations, dedicated resources, planning templates), efficiencies are expected during execution of D&D work scope which will bring cost performance at or better than plan.

Base

CTD Schedule Variance (-\$2.4M/-2.1%)

- (-\$1.8M) D&D 236Z (PRF) – BROKK remote handling system procurement delayed by decision to manually size-reduce pencil tanks, and Canyon Floor Cleaning and removing pulsar and pH hood gloveboxes delayed by reactivation of canyon crane. These delays are offset by early execution of Readiness Assessment in support of Manual Size Reduction of Pencil Tanks, pencil tank size reduction, and east gallery glovebox internal strip out.
 - The schedule variance associated with the procurement of the BROKK will continue pending the completion of the evaluation of the manual size reduction approach (~November 2010). Expected Recovery ~January 2011.
 - The schedule variance associated with floor cleaning and hood removal is due to the increased duration for canyon crane reactivation. Expected Recovery – September 2010.
- (-\$0.6M) Facility Modifications – Additional safety, health, and Beryllium requirements are causing this variance.

CTD Cost Variance (+\$3.0M/+2.6%)

- (+\$1.4M) Early Completion of Spent Nuclear Material De-Inventory.
- (+\$1.7M) D&D Materials, Subcontracts, and Waste Container Procurements, D&D staff ramp-up, and recognized efficiencies in Min-Safe Operations.
- (+1.4M) Efficiencies associated with PRF east gallery glovebox cleanout and elimination of “Q” shift to support pencil tank size reduction.
- (-\$1.5M) Usage Based Services – Increased cost in training tuition and in Facility Services due to the increased number of trailers to support D&D work activities.

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	100.5	6.3
Base	<u>57.2</u>	<u>50.6</u>	<u>6.7</u>
Total	163.9	151.1	13.0

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

None.

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.