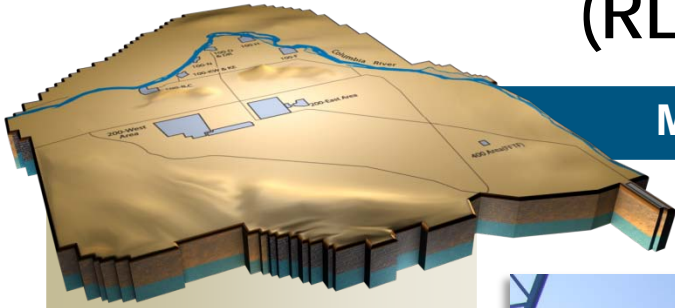


Section A

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

Monthly Performance Report



David Del Vecchio
Vice President and
Project Manager
PFP Project

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Setting the Interim Storage
Container on to the transporter



Interim Storage Container in
position on the transporter

PROJECT SUMMARY

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

American Recovery and Reinvestment Act (ARRA)

Field qualification is continuing for the many new staff hired or subcontracted to support an expansion in the number of D&D field work teams. New team members are being rotated through the existing seven teams to gain hands-on experience and complete their on-the-job training and qualification.

Ventilation ducting has been removed and containerized for disposal, completing removals from Rooms 134 and 154. NDA measurements were completed confirming the eight ventilated sample cabinets removed from vault 174 of the 234-5Z building as Low Level Waste (LLW). Forty-nine glove boxes and laboratory hoods have now been cleaned out, decontaminated to low level waste standards and removed from PFP facilities since October 1, 2008, 26 of which were under ARRA. Crews completed final decontamination actions in glove boxes HA-20MB and HA21I. Crews also continued decontamination of process glove boxes HC-230C-3 and HC-230C-5, and continued equipment removal from HC-60. Preparations were completed for removal of four glove boxes in room 146 of PFP's former Analytical Laboratory.

Cold and dark isolation was verified for PFP ancillary building 2734-ZJ, nitrogen storage tank/pad, in preparation for removal of the vendor-owned tank in November, subject to plant priorities.

Decommissioning of the nitrogen generator facility near the 2731-ZA building and preparations for cold and dark isolation were also initiated with draining of the coolant from this structure.

Insulators continued removal of asbestos insulation from piping in the 234-5Z building, bringing the total removed under Recovery Act funding to more than 4700 feet.

The initial phase of removal of glycols and other regulated materials from the 234-5Z building was completed. The materials are being handled in a manner which protects worker safety and maintains compliance with applicable environmental regulations.

Base

De-inventory of Special Nuclear Material (SNM) continues. All 3013/9975 containers and all Hanford Un-Irradiated Fuel Packages have been shipped from PFP, and the last of the 19 excess sources and standards to be dispositioned by September 30, 2009, have been shipped to the Central Waste Complex (CWC). De-inventory of slightly irradiated fuel is proceeding on schedule, and terminal cleanout operations are continuing in the 2736-Z/ZB Vault complex.

D&D teams continue removing process equipment from the Plutonium Reclamation Facility (PRF) (236-Z Building) gallery glove boxes, and have completed process equipment removal from the first floor west glove box along with Nondestructive Analysis (NDA) to help determine "hot spots" for future decontamination. Process equipment removal from the second floor west gallery glove box is 70% complete. PRF canyon entries focused on reactivation of the canyon crane during October. The 30% design review for the PRF pencil tank lay down, tank cutting, and transport system is complete. Multiple shear cutting demonstrations were held to verify success during size reduction evolutions; however the cost and schedule duration associated with this approach are of significant concern. A decision by senior management on alternatives for pencil tank removal is under way and should be completed by mid-November.

PRF NCOs conducted a one-day training session for a two-week period of time for the new workers at PFP for advanced dress/undress methods to get individuals out of highly contaminated PPE clothing. Approximately 170 individuals successfully completed this training.

Detailed planning was initiated for D&D work scope in the 242-Z facility.

TARGET ZERO PERFORMANCE

	CM Quantity	FYTD Quantity	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	
First Aid Cases	5	5	ARRA - 10/1 - Employee experienced noise related ear pain. (20508) Base - 10/8 - Employee pinched nerve in knee while kneeling. (20510) Base - 10/12 - Employee felt dizzy/lightheaded while wearing PAPR. (20511) Base - 10/17 - Employee received puncture wound to leg (20514) Base - 10/29 - Employee felt tingling in wrists. (20526)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

11.02 Maintain Safe and Compliant PFP – Base

- To support future deactivation of the Hanford Patrol Central Alarm Station at PFP, facility modifications to enable remote monitoring of the Criticality Alarm System (CAS) panels in the 321 power control room were completed for Criticality Alarm Panels (CAP) 1 through 6. Completion of CAPs 7 and 9 are planned for November.
- Completed annual video inspection and leak testing of the 291-Z-1 stack probe in support of satisfying the National Emissions Standards for Hazardous Air Pollutants, (NESHAP) requirements.
- Successfully completed 291-Z air sample vacuum system (ASV) outage. The scope of the outage was to replace a Trap Silencer Tank (TST), ASV #2 pump discharge valve and worn out components within the breaker cubicle.
- Successfully completed TSR six month criticality alarm system horn sounding/testing. No deficiencies were identified.
- In preparation for the Environmental Management System (EMS) independent audit, an internal assessment of PFP EMS conformance to the ISO 14001 Standard and the DOE requirements was completed.
- In response to the declaration of PFP transition to CERCLA, the State of Washington Department of Health is in the process of removing the PFP stacks from the radioactive air license for the Hanford Site.

11.04 Disposition SNM - Base

- Authorization to ship the slightly irradiated fuel to the 200 Area Interim Storage Area (ISA) was received on September 30, 2009.

- Shipped two Interim Storage Casks (ISC) to the 200 Area ISA. As the second ISC was being placed into the storage location, the ISC dropped approximately one foot to the pad. An investigation of the incident at the ISA was completed and the ISC lifting equipment was inspected for damage from the drop. No damage was found. Corrective actions will be completed and shipments resumed sometime in November.

11.05 Disposition PFP Facility - Base

- Process equipment removal from the PRF second floor west gallery glovebox is 70% complete. Integration of new teams to get field experience has slowed monthly progress but the concept of training new workers with experienced workers will help in the future for completing CHPRC milestones.
- Progress continued with the PRF canyon entries for reactivation of the canyon crane with some electrical work left to do for task 5. It was determined that a new cable reel would be needed. Work efforts are under way to obtain the reel while also changing the work package to allow for installation.
- The CHPRC engineering team received the 30% design for the PRF pencil tank lay down, tank cutting, and transport equipment, and the design scope has been placed on hold. A review by senior management of alternative approaches for pencil tank removal is under way and should be completed by mid-November.
- PRF NCOs conducted a one-day training session for a two-week period of time for the new workers at PFP for advanced dress/undress methods to get individuals out of highly contaminated PPE clothing. Approximately 170 individuals successfully received this training.
- The South Canyon Airlock (SCA) containment tent has been set up in preparation for entries to allow for tank measurements and characterization. This will lead into clean-up and disposition of the tank and other equipment in SCA.
- The rough draft of the work instructions for entries into 242-Z was distributed for review and comments incorporated. The work scope includes disposal of the combustibles, addressing the ventilation control, waste characterization and the inspection of the fire suppression system.
- Initiated discussions with Waste Support Services on the various packaging options for the high dose waste in 242-Z. Unshielded waste in drums or Standard Waste Boxes (SWBs) are limited to 200 millirem per hour at contact. It is expected that shielded drums or SWBs will be needed at various times in the project. The use of shielded SWBs requires approval from DOE.
- An evaluation of the feasibility of performing nondestructive analysis of the glove boxes through the wall between 242-Z and the Analytical Laboratory to support revision of a Criticality Safety Evaluation Report (CSER) for removal of the glovebox equipment was initiated.
- All of the members of the 242-Z work team have attended the dress/undress training to support entries into high contamination and airborne areas.
- Initiated evaluation of several options to obtain the required air sampling of the 242-Z tank room.

11.05 Disposition PFP Facility – ARRA

- The following D&D work was performed in the Laboratory Areas of PFP:
 - Completed fixative application to internals of the Analytical Laboratory, Room 146-1,2,3,4 glovebox unit, separated the unit from its E4 connections, and staged the glovebox unit for transfer to the PFP solid waste organization for disposal.
 - Completed fixative application to internals of the Standards Lab Room 221E Hoods 221E-1,2,3 (three separate hoods) in preparation for their removal.
- The following D&D work was performed in the RMA/RMC Line Areas of PFP:
 - Completed chemical decontamination of glove boxes HC-230C-3 and HC-230C-5 in Room 230C pending analysis of the measurement results.

- The mechanical isolation and internal equipment removal was started for glove boxes HA-19B1 and HA-19B2 in Room 235B. Work in October included the replacement of glovebox inlet filters, repair of a cracked panel on the HA-19B1 ceiling, removal of external cooling coils and supply lines, and removal of induction furnace supply lines.

Note: above margins don't line up, information is presented differently than for Base, and there is no information here on Balance of 234-5Z D&D, Facility Mods, etc.

MAJOR ISSUES

RL-0011 Nuclear Materials Stabilization and Disposition of PFP

Issue Statement - Excessive summer heat and recurring failures of Continuous Air Monitoring Systems (CAMS) impacted the D&D field work teams throughout the summer.

Corrective Action - Engineering has determined that the best method to improve temperature control in 234-5Z, 236-Z and 242-Z is to install chillers in the yard near 234-5Z and cooling coils in six of the eight supply inlet ducts in room 321. The older style CAMS currently installed in many areas of the 234-5Z building will also be replaced as needed with newer CAMS operating on portable vacuum pumps.

Status - For the cooling upgrade, functional requirements have been approved, and statements of work and related technical specifications for the major contracts were nearly ready for final review and approval at the end of the reporting period. A sufficient number of newer CAMS have been ordered and received, and the older units are being replaced as needed.

Issue Statement - Delays in hiring, training and qualifying the large number of new staff added at PFP has delayed deployment of all the new field work teams beyond their planned October 1 start date. Some of the new teams have been deployed to the field and the remainder will initiate field work during November and December. Schedule impacts will also be compounded for the near term due to an insufficient number of qualified Radiological Controls Technicians (RCTs) to support the expanding number of D&D field work teams.

Corrective Action - Work around schedules, additional overtime and potentially shift work will be incorporated in an update of the performance measurement baseline to recover lost time on D&D field work. Alternative actions to minimize the impact of the RCT shortage are being evaluated, including on site posting of additional positions, substitution of less radiologically intensive work in lieu of currently scheduled higher risk work, consolidation of work teams/work areas, etc.

Status - All of the new field work team staff have completed block training and are located at PFP undergoing on the job training and evaluation. Training has been initiated for the final group of newly hired RCTs. The impact due to the shortage of RCTs is likely to persist through training and qualification of the last of the newly hired RCTs into April 2010.

Issue Statement - Late in August, technical issues with the application of the Surface-contaminated object (SCO) process to several glove boxes were identified and are being evaluated.

Status - Six glove boxes previously removed and destined for ERDF disposal have been put on hold pending a technical evaluation. The SCO survey process and nondestructive assay measurements continue to be used for other glove boxes in the facility where applicable.

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	
FFP-001: Inability to Effectively Decon Equip/ 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.	●	↔	Accelerated proof-of-principle glovebox decon testing with the RadPro process was resumed in July following resolution of decon waste safety concerns. Three additional boxes have been successfully decontaminated since that time.
FFP-004: Risk of 291-Z and PRF Canyon D&D cost/schedule growth	Complete detailed planning/engineering for D&D of 291-Z and cleanout of the PRF Canyon, particularly pencil tank removal and canyon decontamination.	●	↑	Selection of an improved approach for removal and disposition of pencil tanks is nearing completion. The preferred approach will reduce industrial and radiological safety risks, reduce programmatic risk, and has the potential to reduce schedule duration and cost. Resequencing of canyon work activities and development of detailed planning have been initiated.
FFP-008: Unexpected high concentration TRU Material Holdup Discovered	Utilize supplemental NDA and other characterization techniques to identify any areas of concern early in the project. Maintain Pipe Overpack Container packaging capability.	●	↔	POC packaging capability was reactivated and is being maintained. Confirmatory NDA is underway in the active D&D areas and on the process vacuum system, with no issues identified to date.
FFP-009: Problems with Aging Building Systems/Components Impacts D&D	Perform critical system reliability assessments; procure critical spares; maintain existing redundancies; replace the 234-5Z filter room 310 filters; remove 234-5Z filter rooms 311 and 316 from service; replace 234-5Z TSR-related transmitter and controllers. Procurement of new, more reliable continuous air monitors has been completed.	●	↔	CAM failures and false alarms are continuing. CAMS are being replaced as needed and methods to reduce voltage fluctuations are being investigated. No other significant failures experienced.
FFP-009: Problems with Aging Building Systems/Components Impacts D&D	Same as above	●	↔	Extended high temperatures last summer significantly impacted D&D productivity due to heat stress controls. Engineering of an improved cooling system for 234-5Z and PRF is nearly complete, but initial estimates indicate a cost of several million dollars due to the sheer volume of airflow to be treated.
PRC-042: Resource Availability.	Conduct job fairs; contract with alternate resource providers; develop training programs and work with local educational facilities and union halls to train required job specialties; establish company-wide prioritization for resource assignments.	●	↔	RCT shortage will impact PFP activities beginning in late November 2009 and through April 2010. Sufficient staff have been enrolled in basic training to resolve the shortage, but will not complete training until April.

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 (%)	Budget at Completion (BAC)
ARRA	7.4	5.9	5.7	(1.5)	-20.5	0.2	3.7	256.9
Base	<u>3.2</u>	<u>2.5</u>	<u>3.9</u>	<u>(0.7)</u>	-21.5	<u>(1.4)</u>	-54.7	<u>321.8</u>
Total	10.7	8.4	9.6	(2.2)	-20.8	(1.2)	-13.9	578.7

Numbers are rounded to the nearest \$0.1M.

ARRA

CM Schedule Performance: (-\$1.5M/-20.5%)

The current month schedule performance is not within reporting threshold. The current month negative schedule variance is associated with delay in field work team qualification and preparation of various documents that must precede the field work (criticality safety, engineering, and work planning). This delay has affected D&D work in 234-5Z (\$422K), PPSL/Standards Lab (\$138K), and Balance of 234-5Z (\$305K). In addition, the extended durations for chemical decontamination of glove boxes HC-230-C-3 and HA-20MB (\$269K), high dose rates encountered in the 234-5Z Lab Room 139 work (\$210K), and delays in several planned facility modifications, including establishing more efficient waste routes and relocation of the PFP tool crib out of the 234-5Z (\$171K) are contributing to this negative variance.

CM Cost Performance: (+\$0.02M/+3.7%)

Variance is within reporting threshold.

Base

CM Schedule Performance: (-\$0.7M/-21.5%)

The unfavorable schedule variance is associated with work in the 236-Z (PRF) facility. Electrical issues on the PRF canyon crane identified during reactivation entries have led to more entries than originally planned. Delay in field work team qualification, along with decontamination of contaminated glove and port ring have impacted the ability to complete the West Gallery glove box internal cleanout. The delay in field work team availability has diverted fifty percent of the gallery glove box team's time to support canyon entries. In addition, a management decision was made to perform two weeks of dress/undress training for all PFP D&D field work teams. This will mitigate risk exposure ALARA in high risk areas and minimize the potential for spread of contamination. In addition, a three to four week delay has been experienced in PRF due to development of a modified approach to removal of pencil tanks from the facility.

CM Cost Performance: (-\$1.4M/-54.7%)

The unfavorable cost variance is a result of extra entries being made to reactivate the canyon crane as a result of electrical deficiencies found during investigations, use of overtime to try and recover schedule for the West Gallery glove box cleanout, and delay in field work team qualification to begin work on the East Gallery glove box cleanout on October 1, 2009. In addition, overrun of labor to support the min-safe activities at PFP is caused primarily due to erroneously omitted budget from the FY 2010 baseline which will be corrected in the submittal of CHPRC Performance Measurement Baseline, Revision 2 in December, 2009. Application of G&A and Direct Distributables are also 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)
ARRA	54.3	52.0	42.4	(2.3)	-4.2	9.6	18.5	256.9
Base	<u>78.9</u>	<u>77.9</u>	<u>78.9</u>	<u>(1.0)</u>	-1.3	<u>(1.0)</u>	-1.2	<u>321.8</u>
Total	133.2	129.9	121.2	(3.3)	-2.5	8.7	6.7	578.7

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance: (-\$2.3M/-4.2%)

The cumulative schedule performance is not within reporting threshold. The cumulative negative schedule variances are associated with delay in field work team qualification and preparation of various documents that must precede the field work (criticality safety, engineering, and work planning). This delay has affected D&D work in 234-5Z (\$422K), PPSL/Standards Lab (\$138K), and Balance of 234-5Z (\$305K). In addition, delays in procurement of several large pieces of equipment (\$139K), delays in several planned facility modifications, including establishing more efficient waste routes and relocation of the PFP tool crib out of the 234-5Z, modifications to PRF (elevator), and removal of the Liquid Nitrogen Storage Pad (\$594K), and late delivery of the PFP Decontamination Trailer (\$216K) are contributing to this negative variance.

CTD Cost Performance: (+\$9.6M/+18.5%)

The cumulative cost performance is not within reporting threshold. The cumulative positive cost variance is associated with under runs caused by late hiring of ARRA funded staff (\$384K), overstatement of resources for cross-cutting support (\$3.7M), delay in completion of facility modifications (\$420K), delayed procurement of waste containers (\$400K), overstatement of 222S lab sampling support (\$146K), delay in receiving costs associated with waste disposition (\$1.1M), delayed receipt of Decontamination Trailer (\$559K), and allocation of G&A (\$2.9M).

Base

CTD Schedule Performance: (-\$1.0M/-1.3%)

The unfavorable schedule variance is associated with work in the 236-Z (PRF) facility. Specifically, electrical issues identified during investigations have led to more entries than originally planned. Delay in field work team qualification, along with contaminated glove and port ring issues resulting in decontamination activities has impacted the ability to complete the West Gallery glove box internal cleanout. The impact of the delay in field work team availability has diverted fifty percent of the Gallery Glove box field work team's time to support canyon entries. In addition, a management decision was made for one of the qualified PRF field work teams' to perform two weeks of dress/undress training for all PFP D&D field work teams. This will mitigate ALARA in high risk areas and minimize the spread of contamination. In addition, a three to four week delay has been experienced in PRF due to development of a modified approach to the D&D of the PRF facility.

CTD Cost Performance: (-\$1.0M/-1.2%)

The unfavorable cost variance is a result of extra entries being made to reactivate the canyon as a result of electrical deficiencies found during investigations, use of overtime to try and recover schedule for the West Gallery glove box cleanout, and delay in field work team qualification to begin work on the East Gallery glove box cleanout on October 1, 2009.

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	FY 2010		Variance
	Projected Funding	Spending Forecast	
ARRA	138.5	123.8	14.7
Base	<u>58.1</u>	<u>59.4</u>	<u>(1.3)</u>
Total	196.6	183.2	13.4

Funds/Variance Analysis:

Projected Funding includes FY 2009 uncosted and FY 2010 expected new Budget Authority (BA). Fiscal Year 2010 Base expenditures are forecasted to exceed planned funds due to a newly planned approach in the Plutonium Reclamation Facility (PRF) utilizing a remote handling system and continuing min-safe operations in the 2736Z/ZB vaults until the facility is ready for demolition in the first quarter of FY 2011. Funds management coupled with efficiencies from implementation of the new approach in PRF will mitigate the variance.

Critical Path Schedule:

Critical Path analysis can be provided upon request.

Estimate at Completion:

The BAC and EAC now include FY 2009 through FY 2018, 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.