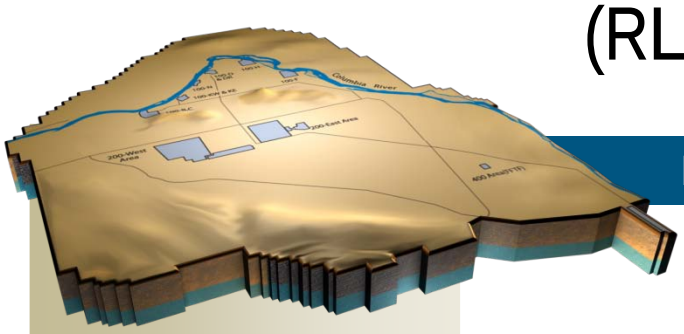
CH2MHILL
Plateau Remediation Company

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



Monthly Performance Report

Room 230C Removing Section of Glovebox HC-230C-2.

Room 232 Glovebox HA-46 Internal Process Equipment Removal

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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)

Fifty-six gloveboxes and hoods have been removed from their originally installed locations at PFP with Recovery Act funds. Of these, 47 have been shipped out of PFP for treatment or disposal, with four others loaded and awaiting shipment, and five staged for future size reduction and disposal as Transuranic (TRU) waste. CHPRC has now shipped approximately 1,100 cubic meters of waste from PFP with support from Recovery Act funds, including 944 cubic meters of low level and mixed low level waste (LLW/MLLW), 127 cubic meters of TRU waste, and 22 cubic meters of non-radioactive waste.

234-5Z Laboratory Areas – The last of the eight gloveboxes and hoods remaining in Rooms 221C and 221D of the Standards Laboratory were removed from building ventilation and prepared for removal from the laboratory. Beryllium clearance samples were taken and analyzed, and the boxes were cleared for release. The first four boxes were transferred to waste operations for packaging and disposal. Process equipment removal continued in the six hoods in Room 139, and preparations continued for cleanout of a glovebox and two hoods in Rooms 180 and 188.

Plutonium Processing Areas – In RMC Line, implementation of the recovery plan and corrective actions for a nitric acid exposure in Room 227 in late April neared completion and work is expected to resume on equipment removal from gloveboxes in May. In addition, preparations were initiated for removal of Glovebox HC-60 and fixative was applied to the interior of the glovebox. In the RMA Line, process equipment removal continued on Gloveboxes HA-28, HA-46, and 400. Non-destructive assay measurements were completed on Glovebox 400, which confirmed that it can be disposed of as low level waste.

Infrastructure Systems – Non-destructive assay (NDA) measurements on the process vacuum system are now over 60% complete. Training and cold area mockups in preparation for removal of process vacuum system piping were completed, and field crew performance evaluations are under way. A portable glovebox for size reduction of long pieces of vacuum piping removed from overhead runs was fabricated and successfully tested in the mockup area.

During the month of April, 890 feet of asbestos insulation was removed, bringing the total for asbestos insulation removed with Recovery Act funds to more than 9,200 feet.
Installation of a large, electrically operated door and cargo seal was completed to streamline receiving of materials and shipment of waste.

Field construction forces removed a section of the former Protected Area fencing and razor wire and began mobilizing for installation of three new 300 ton chillers.

2736Z/ZB Vault Facility – Preliminary survey results indicate the glovebox in Room 636 was successfully decontaminated to Surface-Contaminated Object (SCO) levels. Significant progress was made in disassembly and seal out of process equipment from four of the gloveboxes in Room 642.
242Z Americium Recovery Facility – The 242Z D&D team completed photographing and inspecting fire systems and removing legacy combustibles from the control room. Planning and preparations continued for future entries into the tank room to remove combustible materials, and for the application of contamination fixative throughout the control room.

Base

236Z Plutonium Reclamation Facility – The functional test of the canyon crane was completed and the crane returned to service. The function test of the canyon vacuum cleaning equipment was completed and the equipment is operational. Canyon floor cleanup was initiated with the disposition of the combustible waste. Preparations were initiated for a contractor Readiness Assessment to support size reduction of the

pencil tank assemblies. Process equipment removal continued on the first and second floor east gallery gloveboxes and preparations were initiated for removal of the Pulser, pH and maintenance gloveboxes.

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 percent 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	2	N/A
Total Recordable Injuries	0	2	N/A
First Aid Cases	9	110	**Base** - 4/7 - Employee experienced back strain. (20856) **ARRA** - 4/8 - Employee experienced muscle strain to arm. (20846) **ARRA** - 4/9 - Employee received laceration. (20848) **Base** - 4/21 - Employee experienced muscle cramp. 20871) **Base** - 4/21 - Employee received finger laceration. (20878) **Base** - 4/26 - Employee experienced knee strain. (20891) **Base** - 4/26 - Employee experienced a contusion. (20890) **Base** - 4/26 - Employee received a concussion. (20892) **Base** - 4/29 - Employee received ear pain after alarm sounded. (20898)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

11.02 Maintain Safe and Compliant PFP – Base

- Administrative controls restricting additions to the tank were implemented to place the tank into compliance with over-fill prevention requirements specified in Washington Administrative Code 173-360-305. This addressed an EPA inspection citation of the PFP Underground Storage Tank (2721-Z-2) for a legacy issue originating at the time of tank installation many years ago.

11.05 Disposition PFP Facility – Base

Plutonium Reclamation Facility (PRF)

- Process equipment removal from the first and second floor east gallery gloveboxes continued and is approximately 25% complete.
- The canyon crane repairs were completed and the crane returned to service.
- The cleaning of the canyon floor was initiated. This included functional testing of the vacuum cleaning system and initiation of disposition of combustible waste.
- A decision was made to proceed with a Contractor Readiness Assessment for the size reduction of the pencil tanks. Preparation activities have been initiated and key documents prepared.
- Work continued on the preparations for the removal of the Pulser, pH, and maintenance gloveboxes.

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

- In RMA Line Room 235B, a new end panel was installed on Conveyor HA-28 and the size reduction and removal of 140 feet of conveyor chain were completed. Size reduction and removal of the conveyor guide rails and supports was initiated.
- In RMA Line Room 232, the size reduction and removal of the internal process equipment for Glovebox HA-46 was started and was approximately 80% complete by the end of April.
- In RMC Line Room 227, the D&D team developed recovery plans for an occurrence resulting in a worker inhalation of nitric acid fumes while isolating external lines to Glovebox HC-227S.
- In RMC Line Room 230C, Glovebox HC-230C-2 was removed and removal actions for Glovebox HC-60 were initiated.
- In the RADTU area, Room 235D, size reduction and removal of the internal process equipment for Glovebox 400 was started and is approximately 90% complete.

234-5Z Laboratories

Standards Lab:

- The last of eight gloveboxes and hoods remaining in the Standards Laboratory were removed from building ventilation and fixative was applied to the interiors.
- Four of the gloveboxes and hoods were removed and turned over to PFP Solid Waste Operations (SWO) for packaging and disposal.

Analytical Lab:

- The 136-1, 2, 3 gloveboxes were separated from building ventilation and staged for removal.
- The 148-1, 2 Hoods had fixative applied to internal surfaces, the hoods were separated from building ventilation, and turned over to SWO for disposal as Low Level Waste (LLW).

Plutonium Process Support Lab:

- The 191-1, 2, 3 hoods had fixative applied to their internal surfaces; the hoods were separated from their E4 connections and were turned over to the SWO organization for disposal as LLW.

242Z Americium Recovery Facility

- Photographed the control room fire suppression system for fire department inspection.
- Began taking photographs in the control room to document legacy combustible control removal.

2736Z/ZB Vault Complex

- Radiological surveys were performed and initial analysis indicates Glovebox 636 has been successfully decontaminated to SCO levels. Preparations were initiated toward separation of the glovebox from building ventilation.
- Significant progress was made in disassembly and removal of process equipment from four gloveboxes in Room 642.
- Progress continued on development of the implementation plan to transition the PFP vault complex buildings to the 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. Plans to ready the PFP complex for demolition rely heavily on decontamination of the majority of gloveboxes and hoods to low level waste, followed by direct disposal at the Environmental Restoration Disposal Facility (ERDF).

Corrective Action – Additional testing of the Aspigel® product to determine its suitability for use as a supplemental decontamination agent has been completed. A final report has been received from Fauske and Associates, and the test results are promising. PFP Engineering is finalizing a technical basis document for incorporating the use of Aspigel® in the PFP decontamination process and a hazard analysis is scheduled to be completed in May. Demonstration of another product, DeconGel, is planned at 100K Area in May or June.

Issue Statement – Implementation procedures for the SCO process at PFP have limited the utilization and effectiveness of this program.

Corrective Action – Regulations and policy associated with this process are being reviewed to determine a path forward that will allow full utilization of the SCO process. Changes to the implementing procedure are in progress, with completion planned for July 2010. In the meantime, the Contaminated Equipment – Special Package Authorization (CE-SPA) process has been successfully applied to authorize transport and disposal of three gloveboxes as low level waste which slightly exceeded SCO survey criteria. A broader CE-SPA is under development for use in the future to authorize transport/disposition of other gloveboxes that meet the criteria of the CE-SPA.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk

Working - No Concerns
Working - Concern
Working - Critical

Increased Confidence
No Change
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.	Working - Concern	Increased Confidence	RadPro is working well on most gloveboxes. Testing on Aspigel® is complete and a technical basis document and hazard analysis are underway. The CE-SPA process was successfully used to transport/dispose of three gloveboxes in February, and a bounding authorization will be in place by the end of June as a disposition path for future gloveboxes meeting the CE-SPA criteria. Surgical removal of TRU and establishment of size reduction stations are incorporated in the baseline, and design of the initial size reduction station is nearly complete.
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.	Working - Concern	Increased Confidence	A dual approach has been identified for removal and disposition of pencil tanks in the PRF canyon (manual and mechanical size reduction). Preparations for a readiness assessment to support initiation of manual size reduction are underway. Manual size reduction offers the opportunity to begin work earlier and potentially avoid significant facility modifications and equipment procurements.
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.	Working - No Concerns	Increased Confidence	Characterization of less accessible portions of the 291-Z exhaust plenum was incorporated in the baseline update. Preparations for initial inspection and sampling are underway.
PFP-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. Procure new Canberra CAMs to replace less reliable existing CAMs. Procurement of a supplemental cooling system for 234-5Z and 236-Z, and provisions for stabilization of the below-grade piping encasement to 241-Z are incorporated in PMB-2.	Working - Concern	Increased Confidence	Continuous air monitor failures continue to impact D&D work; line conditioners and new power cords have been procured to resolve some of the more recent failure modes. Installation of a supplemental cooling system for the process facilities is now well underway with an ECD of early June. Development of a sampling and stabilization plan for the piping encasement from 234-5Z to 241-Z is continuing.

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	12.0	10.2	11.5	(1.8)	-14.9	(1.3)	-12.3
Base	5.2	5.0	4.1	(0.2)	-3.0	1.0	19.2
Total	**17.2**	**15.3**	**15.5**	**(1.9)**	**-11.3**	**(0.3)**	**-1.9**

ARRA

CM Schedule Variance: (-$1.8M/-14.9%)

- (-$0.7M) 234-5Z Process Facility and Labs – Room 227 emergent scope related to recovery actions from a nitric acid inhalation, lower than expected decontamination effectiveness , and HA28 Glovebox in Room 235B work delays due to a number of false Continuous Air Monitor (CAM) alarms. It is expected that these schedule delays will not be recovered until the end of the fiscal year.
- (-$0.5M) Facility Modifications – Project delays associated with completion of chiller design, lack of engineering resources associated with alternate exhaust system design and installation. Chiller schedule recovery is expected to occur by the middle of June. The recovery plan for the alternate exhaust system work scope is being evaluated and a recovery schedule is being developed.
- (-$0.4M) Balance of 234-5Z – Unplanned mock-up work was necessary to improve assurance of the proficiency of work crews to maintain contamination control to support process vacuum piping removal. Expected schedule recovery for process vacuum piping – October, 2010.
- (-$0.2M) 2736Z/ZB – Work package priorities and engineering paperwork 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.

CM Cost Variance: (-$1.3M/-12.3%)

- (-$0.3M) 234-5Z Process Facility and Labs – Progress was negatively impacted in April by a nitric acid inhalation event, false CAM alarms, and insufficient craft resources while labor costs for the teams remain relatively constant.
- (-$0.1M) Balance of 234-5Z – Expended resources to support unplanned mock-up simulations rather than removing process vacuum piping.
- (-$0.4M) D&D Project Management – Time card corrections, and increased craft walk-in resources to support cross-cutting D&D functions.
- (-$0.3M) Facility Modifications – Early receipt of Chillers impacted by delay in design and ability to begin installation as planned. Recovery is expected in May.
- (-$0.4M) G&A/DD – Overhead allocations directly related to the PRC accounting practice of distributing cost based on the Project's actual cost (i.e., Project Services Distribution, G&A, and Direct Distributables).
- (+$0.2M) 242-Z – Time card corrections for RCTs in training who were assigned to D&D field work scope and utilization of overtime to maintain schedule.

Recovery – this negative cost variance is not expected to continue to grow as more efficiencies are recognized during execution of D&D work scope.

Base

CM Schedule Variance (-$0.2M/-3.0%)

Current Month Schedule Variance is Within Reporting Thresholds

CM Cost Variance (+$1.0M/+19.2%)

- (+$0.6M) 236Z (PRF) – Efficiencies associated with east gallery glovebox cleanout and elimination of "Q" shift to support pencil tank size reduction.
- (+$0.3M) Maintain Safe & Compliant PFP – Subcontract underrun due to reassignment of teamsters to support higher priority D&D work scope.
- (+$0.1M) Time card corrections processed to align with February transfer of 242Z scope under ARRA.

Recovery – this positive cost variance is not expected to continue as increased overtime is expected to be utilized to recover schedule associated with the initial clean-up of the PRF canyon floor.

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	102.1	100.5	90.4	(1.6)	-1.6	10.0	10.0	290.0	281.5	8.5
Base	105.7	103.4	101.4	(2.3)	-2.2	2.0	1.9	339.6	336.1	3.5
Total	**207.8**	**203.9**	**191.9**	**(4.0)**	**-1.9**	**12.0**	**5.9**	**629.5**	**617.6**	**12.0**

Numbers are rounded to the nearest $0.1M.

ARRA

CTD Schedule Performance: (-$1.6M/-1.6%)

- (-$1.3M) 234-5Z Process Facility and Labs – Room 227 emergent scope related to recovery actions from a nitric acid inhalation, lower than expected decontamination effectiveness, and HA28 Glovebox in Room 235B work delays due to a number of false Continuous Air Monitor (CAM) alarms. It is expected that these schedule delays will not be recovered until the end of the fiscal year.
- (-$0.6M) Facility Modifications – Project delays associated with completion of chiller design, lack of engineering resources associated with alternate exhaust system design and installation. Chiller schedule recovery is expected to occur by the middle of June. The recovery plan for the alternate exhaust system work scope is being evaluated and a recovery schedule is being developed.
- (-$0.5M) 2736Z/ZB – Work package priorities and engineering paperwork 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.
- (+$0.8M) Accelerated equipment procurements (+$0.5M), better than expected performance in deactivation of non-process equipment and removal of asbestos insulation through the 234-5Z building, (+$0.1M) and early completion of ready for demolition activities associated with 15 fuel vaults (+$0.2M).

CTD Cost Performance: (+$10.0M/+10.0%)

- (+$5.4M) Efficiencies recognized on cross-cutting support to the D&D work teams (primarily in solid waste management, project management, NDA, and consumables and subcontracts)
- (+$2.0M) Efficiencies experienced in completing facility modifications and the removal of asbestos and non-process equipment from 234-5Z.
- (+$3.8M) Overhead allocations directly related to the PRC accounting practice of distributing cost based on the Project's actual cost (i.e., Project Services Distribution, General and Administrative, and Direct Distributables).
- (-$1.2M) Use of overtime and additional usage-based services (MSA Brokered Resources) to recover schedule on glovebox decontamination and disposition and delayed initiation of process vacuum system removal.

Recovery – this positive cost variance is expected to continue to grow as more efficiencies are recognized during execution of D&D work scope.

Base

CTD Schedule Variance (-$2.3M/-2.2%)

- (-$2.2M) PRF (-$1.4M BROKK Procurement, -$0.6M Canyon Floor Cleaning, -$0.2M Pulser Hood and PH Hood Removal).
- (-$0.1M) Facility Modifications – Delay of 2736Z/ZB door modifications due to vendor equipment failures, and additional safety and health requirements. (Expected Recovery – late June)
- The schedule variance associated with the procurement of the BROKK will continue pending the completion of the evaluation of the manual size reduction approach (~July 2010). If manual size reduction is successful, a Baseline Change Request (BCR) will be developed and implemented. If unsuccessful, procurement of the BROKK will proceed. (Expected Recovery ~January 2011).
- The schedule variance associated with floor cleaning and hood removal is due to the increased duration for Crane Reactivation. Expected Recovery – September, 2010.

CTD Cost Variance (+2.0M/+1.9%)

- (+$1.3M) Early Completion of Special Nuclear Material De-Inventory
- (+$1.6M) D&D Materials, Subcontracts and Waste Container Procurements, and recognized efficiencies in 242Z and 2736Z/ZB.
- (+$0.4M) Recognized efficiencies associated with initiating of work in the 242-Z facility and removal of process ho0ds in the 2736Z/ZB facility.
- (-$1.3M) Usage Based Services: (Increased Cost in Training Tuition, Increased Costs in Facility Services due to the increased number of trailers to support the D&D work activities).

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

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

FUNDS vs. SPEND FORECAST
($M)

	FY 2010		
WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	Projected Funding	Spending Forecast	Variance
ARRA	118.4	107.0	11.4
Base	57.5	50.6	6.8
Total	**175.9**	**157.6**	**18.2**

Funds/Variance Analysis
Projected funding includes FY 2009 un-costed and FY 2010 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, and delay in procurement of the transformers to support installation of temporary power.

Critical Path Schedule
Critical Path analysis can be provided upon request.

Estimate at Completion (EAC)
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.