

Nuclear Material Stabilization and Disposition (RL-0011)

**D. B. Klos, Vice President of the
Plutonium Finishing Plant Closure Project/
(509) 373-3574**



**Deactivation and Decommissioning of Ancillary Facilities at the
Plutonium Finishing Plant**

Overview

This section addresses work in Project Baseline Summary RL-0011, *Nuclear Material Stabilization and Disposition*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of August 2004.

Notable Accomplishments

The Plutonium Finishing Plant (PFP) Stabilization and Packaging Project has won Honorable Mention in the Secretary of Energy's fourth annual Project Management Award program recognizing outstanding performance and management. The certificate for honorable mention was awarded to PFP as the result of a competition for the Secretary's Award of Achievement.

Achieved over 2,000,000 hours without a lost workday injury.

Maintain Safe and Compliant

The Technical Services Team has cancelled 102 procedures (~10% reduction in overall procedures) in the past 12 months.

Disposition Special Nuclear Material (SNM)

Completed disposition of seven sources/standards of miscellaneous nuclear materials, bringing the total nuclear materials shipped in support of the SNM de-inventory to seventeen.

Disposition the PFP Facility

On August 31, 2004, RL formally notified the Washington Department of Health of their acceptance of the conditions and limitations for the 232-Z Air Permit, thus allowing deactivation and decommissioning (D&D) activities to resume.

Completed 40 percent of Legacy Holdup Removal and 35 percent of Legacy Holdup Disposition.

Legacy removals on glove boxes HC-3 Conveyor and cement residue from HA-20MB were completed.

Plutonium Reclamation Facility (PRF) holdup removal teams completed field activities on miscellaneous treatment glove boxes MT-1 and MT-2, both of which have been accepted as complete by Safeguards.

The formal sample results for the waste contents of Tank D5 were received from the 222-S Laboratory on August 17, 2004. The D5 tank contents will meet Tank Farms acceptance criteria with some minor chemical adjustment. The turnaround time for the sample analysis was 29 days, which is less than half the duration for Tank D5 sample analysis experienced in recent years.

The 241-Z Resource Conservation and Recovery Act Closure Plan was approved by the State of Washington Department of Ecology.

Notable Accomplishments, continued

The chemical mitigation effort completed 74 of 93 lines in the PRF. All lines in 234-5Z have been drained.

Completed assessment sampling in 75 percent of the rooms identified as suspect for beryllium and shipped these samples to the Waste Sampling and Characterization Facility for analysis. This will help the various D&D teams to ensure that proper controls are in place to mitigate any identified beryllium hazards. This assessment is on schedule for a mid-September completion.

Issues

SNM De-inventory Delay: Authorization to allow shipment of Hanford plutonium to the Savannah River Site by August 30, 2004, has not been received. The continued delay in authorization will result in a delay in completion of de-inventory of the PFP complex. The record of decision is not expected to be issued until sometime after November 2004.

FY 2004 FH Funds vs. Spend Forecast (\$M)

	FY 2004 Anticipated Funding w/Carryover	FY 2004 Fiscal Year Spend Forecast	Variance
Nuclear Materials Stabilization & Disposition	\$ 151.6	\$ 143.1	\$ 8.5

The current spend forecast indicates the behind-schedule progress (on selected D&D activities with a corresponding impact to solid waste disposal activities) is contributing to the projected year-end funding variance. This scope and associated funding will carry over into FY 2005.

FY 2004 Schedule/Cost Performance (\$M)

	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
Nuclear Materials Stabilization & Disposition	133.3	126.4	123.7	-6.9	-5%	2.7	2%	153.7

Numbers are rounded to the nearest \$M and include the closure services allocation.

Schedule Performance (-\$6.9M/-5%):

Primary contributors to the unfavorable schedule variance include:

- Delay in packaging of 9975s due to lack of authorization to ship.
- D&D activities are behind schedule due to staff shortages in selected skill categories and delayed resolution of decontamination solution disposal method (234-5Z), delays in Tank D-5 liquid waste transfer, sampling and pit entry (241-Z), delays in subcontract scope and material procurements for the PRF canyon work (legacy holdup), and delays in characterization sampling and equipment procurements (lab support for transition).
- Earned value on transition operation support apportioned to delayed D&D work scope and being behind schedule on facility modifications.
- Corresponding delays in solid waste disposal activities from delayed D&D activities.

FY 2004 Schedule/Cost Performance, continued

This negative schedule variance is partially offset by early completion of plutonium stabilization activities and early start on the PRF pencil-tank removal project

Cost Performance (+\$2.7M/+2%):

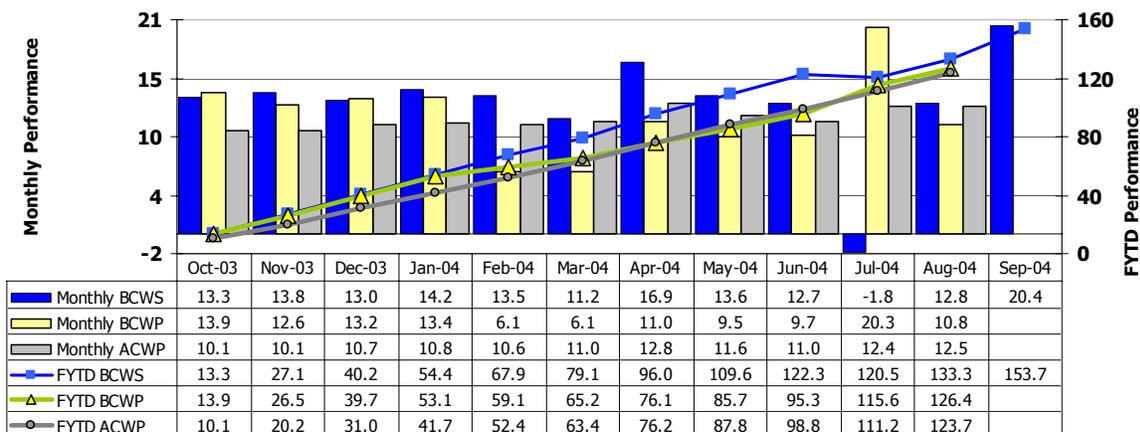
Primary contributors to the favorable cost variance include:

- Early completion of plutonium stabilization and efficiencies in min-safe surveillance operations and corrective/preventive maintenance, solid waste disposal, legacy plutonium hold-up removal of \$1.3M and PRF pencil-tank removal preparation activities;
- Use of existing lab teams for cleanout of the first 20 glove boxes/hoods within the 234-5Z facility; and
- Revenue and work transfers in Closure Services.

These positive cost variances are partially offset by:

- Dedicated partial staffing for 241-Z with slowed progress due to the Tank D5 liquid transfer delay, unplanned scope associated with 241-Z tank hazards analysis and waste consolidation;
- Costs for D&D facility modifications pending resolution of technical problems;
- Increased documented safety analysis implementation and engineering evaluation/cost analysis costs, plus utilizing more staffing than planned; and
- Apportioned D&D project management activities due to overall delays in D&D.

Performance Analysis FYTD and Monthly (\$M)



Milestone Achievement

Number	Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comments
TRP-05-501 TRP-05-506	Discontinue Waste Discharges from the 241-Z Tanks to Tank Farms	TPA PI	6/30/05		6/30/05	On Schedule
TRP-05-503	Complete Deinventory of DOE-STD-3013 Containers & Unirradiated Fuel by Shipment to SRS or Other Approved Location	PI	9/30/06		TBD	Behind Schedule Awaiting Authorization to Ship
TRP-05-504	Complete Legacy Pu Holdup Removal	PI	9/30/05		7/31/05	Ahead of Schedule
TRP-05-505	Transition 10 Facilities to Slab-on-Grade	PI	9/30/05		7/31/05	Ahead of Schedule
TRP-06-500	Decontaminate Glovebox HA-20MB	TPA	3/31/06		9/30/05	Ahead of Schedule
TRP-06-501	Complete Pu Legacy Holdup Removal	TPA	9/30/06		7/31/05	Ahead of Schedule
TRP-06-502	Transition 232-Z Bldg Incinerator to Slab-on-Grade	TPA	9/30/06		11/30/05	Ahead of Schedule
TRP-06-503	Remove Remaining SNM From PFP Such That Protected Area Not Required	PI	9/30/06		TBD	Behind Schedule Awaiting Authorization to Ship
TRP-06-507	Transition 232-Z Bldg Incinerator to Slab-on-Grade	PI	3/31/06		11/30/05	Ahead of Schedule
TRP-06-509	Disposition Miscellaneous PFP Nuclear Materials	PI	9/30/06		9/30/06	On Schedule
TRP-06-510	Transition 241-Z/ZA Facility to Demolition Ready	PI	9/30/06		9/30/06	On Schedule
TRP-06-511	Remove or Decontaminate 236-Z Pencil Tanks	PI	9/30/06		9/30/06	On Schedule
TRP-06-512	Remove or Decontaminate the 236-Z Process Equipment in Rooms 50 & 60	PI	9/30/06		9/30/06	On Schedule
TRP-06-513	Remove or Decontaminate the Remaining 236-Z Process Equipment	PI	9/30/06		9/30/06	On Schedule
TRP-06-514	Remove or Decontaminate 189 Gloveboxes and Hoods in 234-5Z	PI	9/30/06		9/30/06	On Schedule
TRP-06-515	Complete 242-Z Initial Entry & Characterization	PI	9/30/06		9/30/06	On Schedule
TRP-06-516	Cleanout Pu & Am Contaminated Gloveboxes and Tanks in 242-Z	PI	9/30/06		9/30/06	On Schedule
TRP-06-517	Dispose of Approximately 600 Pu Nitrate Containers at PFP	PI	9/30/06		9/30/06	On Schedule