

# **Nuclear Materials Stabilization**

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*2734-Z Dismantlement*



*Solutions Processing Completion*



## INTRODUCTION

The Nuclear Material Stabilization Project includes Project Baseline Summary (PBS) RL-CP03, *Plutonium Finishing Plant (PFP)*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of January 2003.

## NOTABLE ACCOMPLISHMENTS

### Maintain Safe & Secure SNM

Initiated the first swap of International Atomic Energy Agency (IAEA) material from Vault 3 to appropriate process areas. At the end of January, 55 items had been transferred.

### Maintain Safe & Compliant PFP

Installation completed on seven Canberra Continuous Air Monitors (CAM) in rooms 228C, 230A, and 230B.

The PFP Training Implementation Matrix (TIM), Revision 8, was approved by RL ahead of the scheduled January 31, 2003 due date.

Completed D-5 Solution transfer to 244-TX Tank Farms on the scheduled due date (January 9, 2003).

### Stabilization of Nuclear Materials

**Metals, Alloys, Oxides and Polycubes:** Thirty-seven polycube items were stabilized during the reporting period. As of January 26, 2003, a total of seven hundred eighty oxide items have been processed under the 2736-ZB facility work scope. The seven hundred eighty items processed surpassed the contract-to-date goal by sixty-eight items.

The following activities relate to the Chloride Contaminated Oxides:

- Chloride wash draft design is underway, with an anticipated completion date of early February.
- Design, procurement, and work planning continue to support installation of the chloride wash system in room 230-C of the 234-5Z facility, and modification of the off-gas systems for the muffle furnaces to support stabilization of the high chloride oxides.
- A glovebox mock-up of the chloride wash system is being assembled. The mock-up will be used for design verification and procedure development.
- A Technical Equivalency Team has been assembled to develop the equivalency for low temperature stabilization of PFP chlorinated oxides. Personnel from DOE-Albuquerque, Los Alamos National Lab, Savannah River Technical Center, Rocky Flats Environmental Technology Site, PFP, and Pacific Northwest National Labs (PNNL) are on the team. A status meeting was held at PFP on January 29-30, 2003.

**Residues:** During the reporting period, 30,781 grams of low grade Mixed Oxide (MOX) were packaged into 24 Pipe Overpack Containers (POCs). Eighteen POCs containing Sand, Slag and Crucible (SS&C) were shipped to the Central Waste Complex (CWC). Calibration measurements on calorimeters AR-1 and AR-5 were completed. Calibration and safeguards measurements were completed on the Room 172 Segmented Gamma Scan Assay System (SGSAS). The startup plan for the Group 2 Pu/Al alloys was issued.

**Outer Can Packaging:** A total of sixty-nine 3013 containers were produced during this reporting period. A total of one thousand sixty-one 3013 containers have been produced since starting the Outer Can Welder in April 2001.

## Disposition of Nuclear Material

The new scanning system, purchased by Los Alamos, arrived and is operational for non-classified material scanning. It is scheduled to be converted to a confidential-level scanning machine in February.

The Solid Waste Operations Organization over packed thirteen 55-gallon transuranic (TRU) drums in preparation for shipment.

## Disposition PFP Facility

**Transition 232-Z Facility:** The 232-Z Notice of Construction (NOC) has been revised to address comments provided by Washington State Department of Health (WDOH) December 16 through 18, 2002. The revised draft was provided to WDOH on January 29, 2003. WDOH acceptance or further comment on the revised draft is expected the week of February 3, 2003.

In a formal response, RL has Disagreed with Fluor Hanford (FH) that no formal start-up activity is required for 232-Z. Preliminary information was provided to PFP Facility Representatives January 29, 2003. Development of an Activity Based Management Review checklist is in progress.

**Transition 234-5Z Facility:** Nondestructive Analysis data on Glovebox HC-7C in 234-5Z revealed higher than expected values.

Three tent structures were obtained from another FH Project. The tents were originally procured at a cost of \$8,000 per enclosure, but were transferred to PFP at no cost, a potential cost avoidance of \$24,000. The PFP Training group is interested in using the tents to develop some hands-on training classes, specifically a Controlling Organization Lock and Tag class.

**Transition 236-Z Facility:** All of the instrumentation and support lines/piping have been removed from Room 40 in 236-Z in preparation for the removal of additional tanks.

**Transition 241-Z Facility:** Interface Control Document (ICD) HNF-4486, Revision 1, was approved on January 20. This document defines the PFP and DST System responsibilities and commitments for ceasing discharges from 241-Z by June 30, 2005 (Tri-Party Agreement [TPA] milestone M83-31).

The 241-Z NOC for terminal clean out activities was declared incomplete by WDOH on January 6. A meeting and site tour to review their comments was held on January 14. The FH Environmental consensus is to reclassify the 241-Z back to a major stack. RL was briefed on this approach in a meeting January 22.

**Transition 241-Z-361 Facility:** Atomic Energy Authority Technology (AEAT), PNNL, Environmental Quality Management (EQM), and FH jointly explored the possibility of conducting further design development under a DOE-HQ contract for Hanford tank retrieval studies. If approved by HQ and RL, then FH and AEAT will carry out conceptual design for Tank 241-Z-361 retrieval.

## PFM Project Management & Support

Completed the FY 2003 baseline to the new contract. This was a significant effort that included a large number of actions, such as:

- Developed a "crosswalk" between the last baseline and the new contract baseline.
- Adjusted all milestones and Government Furnished Services/Items (GFS/Is) to the new contract.
- Supported the reorganization of Environmental, Safety, and Health (ES&H) and Site Mission Assurance (SMA).
- Negotiated a new series of Service Level Agreements.
- Developed the new stabilization, deactivation and other related gold chart metrics.

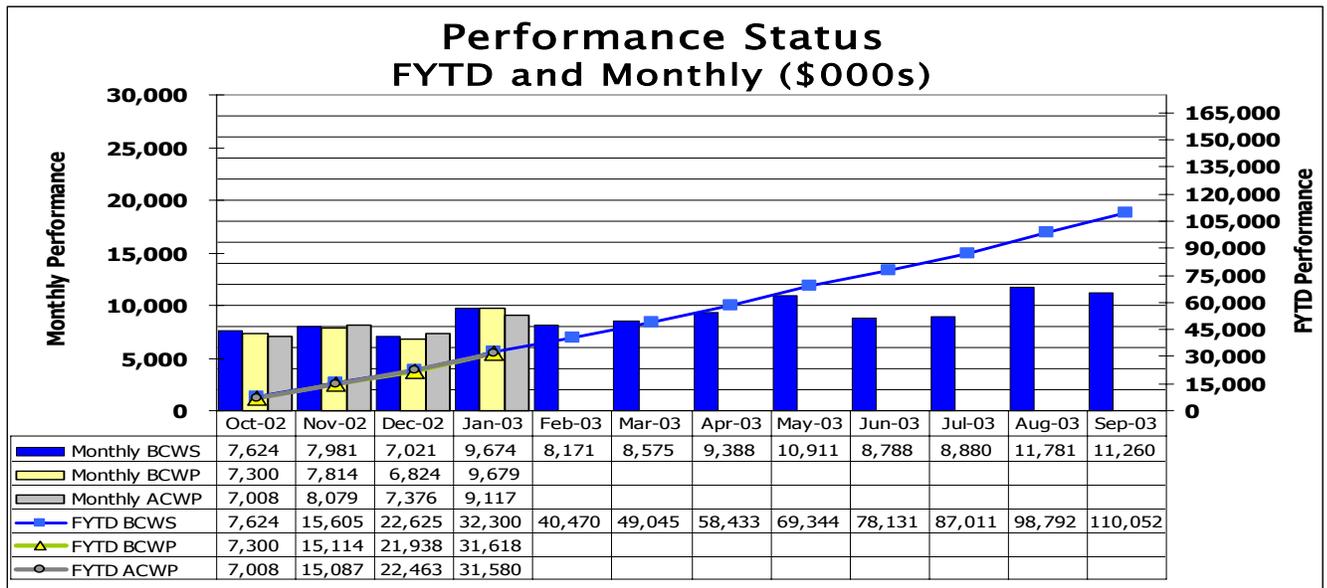
## FY 2003 SCHEDULE/COST PERFORMANCE ALL FUND TYPES (\$000)

**Schedule Variance: (-\$682K/-2.1%).** Variances are within the threshold (+/- 10% or \$1M); therefore no variance analysis is required.

**Cost Variance: (\$38K/0.1%).** Variances are within the threshold; therefore no variance analysis is required.

### 3.3.3 Plutonium Finishing Plant

WBS	Title	BCWS	BCWP	ACWP	FYTD SV \$	FYTD SV %	CV \$	CV %	BAC
PBS CP03									
WBS 3.3.3	Plutonium Finishing Plant	32,299.6	31,617.7	31,579.5	(681.9)	-2.1%	38.2	0.1%	110,052.3



## MILESTONE ACHIEVEMENT

Number	Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comments
TRP-03-501	Submit Facility End Point Criteria Document to Ecology	TPA	9/30/03			On schedule
TRP-03-503	Submit to Ecology a PFP Residual Chemical Hazards Assessment	TPA	12/31/02	12/27/02		Complete
TRP-03-504	Submit Closure Plan for 241-Z Waste Treatment Facility TSD Unit to Ecology	TPA	7/31/03			On schedule
TRP-04-506	Complete all Pu Stabilization and Packaging	PI	2/18/04			On schedule
TRP-04-508	Complete Repackaging of PFP Residues and Ship to CWC	TPA	4/30/04			On schedule
TRP-05-501	Discontinue Waste Discharges from the 241-Z Tanks to Tank Farms	TPA	6/30/05			On schedule
TRP-05-503	SNM Transferred to SRS or DOE Approved Interim Storage	PI	9/30/05			On schedule
TRP-05-504	Legacy Pu Holdup Removed & Dispositioned	PI	9/30/05			On schedule
TRP-06-501	Complete 100% Legacy Pu Holdup Removal	PI	9/30/06			On schedule
TRP-06-502	Complete Transition & Dismantlement of the 232-Z Bldg Incinerator	PI	9/30/06			On schedule
TRP-06-503	Eliminate the PFP Protected Area	PI	12/31/05			On schedule
TRP-06-507	PFP Facilities (61 Buildings) Ready For Demolition	PI	9/30/06			On schedule

## FY 2003 FH FUNDS VS FORECAST (\$000)

		Expected Funds	Spend Forecast	Variance
<b>3.3.3</b>	Plutonium Finishing Plant RL-CP03	\$ 110,000	\$ 112,428	\$ (2,428)
<b>Project Completion - Operating</b>				

## ISSUES

**Shipment of the first 3013 containers to Savannah River Site (SRS):** FH is working with DOE (RL, HQ and SRS) to resolve and complete all activities needed to make the first shipment of material from PFP to SRS. Goal is to ship one shipment to verify readiness in April 2003.