

# **Nuclear Material Stabilization and Disposition (RL-0011)**

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D&D of Ancillary Facilities at PFP

## 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 June 2004.

## Notable Accomplishments

### Disposition Special Nuclear Material (SNM)

FH completed fabrication and delivery of three additional interim storage vaults bringing the completed total to eight out of a total of fourteen. Five Interim Storage Casks (ISCs) were transferred to five interim storage vaults. The empty ISCs will be returned to the Fast Flux Test Facility.

### Disposition the Plutonium Finishing Plant (PFP) Facility

The first of three increments of the Performance Incentive to disposition miscellaneous nuclear materials stored at PFP was completed with the shipment of seven standards to the Idaho National Engineering and Environmental Laboratory.

The third increment of ten for the Legacy Plutonium Holdup Material Removal was completed on June 11, 2004, two-and-one half weeks ahead of schedule. The overall project is now over 30 percent complete.

Mobile offices 834 and 839, 234-ZC and 234-ZB have been demolished, and Mobile Office 264 has been removed from the Protected Area. Punch lists remain to be completed on three of these facilities. Ultimately, a total of ten PFP facilities will be demolished to slab-on-grade or excised by September 2005.

Fluor Hanford (FH) is responding to RL comments on the 232-Z Removal Action Work Plan (RAWP). Responses and a revised RAWP are expected to be transmitted to RL in mid-July. The RAWP addresses management of the project under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, and must be approved by RL and the lead regulator (the State of Washington Department of Ecology). It includes the Air Monitoring Plan, Waste Management Plan, Quality Assurance Project Plan, and site specific Health and Safety Plan.

The Alternate Monitoring and Measurement Procedure and the revised corrected notice of construction were transmitted to the Washington State Department of Health and U. S. Environmental Protection Agency for review and approval. Approval of these documents will allow resumption of 232-Z Deactivation and Decommissioning (D&D) activities that would disturb source term.

FH is continuing to address additional RL comments regarding the 232-Z Data Quality Objective and 232-Z Sample Analysis Plan. A formal letter was submitted by FH to RL on June 14, 2004.

## Issues

### **SNM De-inventory Delay:**

RL's direction to delay the PFP SNM de-inventory is requiring a major revision of the PFP Closure Project baseline, including Performance Incentive objectives. Completion of the baseline adjustment is planned for submittal to RL in July 2004.

## FY 2004 FH Funds vs. Spend Forecast (\$000)

	FY 2004 Anticipated Funding w/Carryover	FY 2004 Fiscal Year Spend Forecast	Variance
Nuclear Materials Stabilization & Disposition	\$ 164,714	\$ 152,194	\$ 12,520

The fiscal year spend forecast reflects the RL-directed one-year delay in SNM de-inventory as well as the disposition of fuel stored at PFP. The current forecast indicates the following factors contributed to the positive funding variance: delayed staff ramp-up supporting Deactivation and Decommissioning (D&D) activities, delayed use of consumables and subcontracts supporting delayed D&D, delayed procurement of unirradiated fuel containers (CCC2 & ID-69) and the corresponding decrease in overhead costs.

## FY 2004 Schedule/Cost Performance (\$000)

	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	122,319	95,319	98,800	-26,999	-22%	-3,481	-4%	172,859

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

### Schedule Performance (-\$26,999K/-22%):

Primary contributors to the negative schedule variance include:

- Delayed shipment of SNM to Savannah River and associated procurement of shipping containers due to unavailability of safe and secure transports and approval of the record of decision for shipment (-\$6.9M);
- Delayed solid waste disposal due to slowed D&D work (-\$2.7M);
- Delay in staff ramp-up and Tank D-5 liquid waste transfers which impact D&D work along with technical issues on portable Nondestructive Analysis(NDA) measurements, delayed procurements/materials (e.g., robotics for 236-Z canyon floor), and Document Safety Analysis (DSA) implementation issues which further impact D&D activities (-\$12.1M);
- Difficulties associated with 232-Z deactivation (-\$2.0M);and
- Earned Value on transition operation support apportioned to delayed D&D work scope (-\$3.3M).

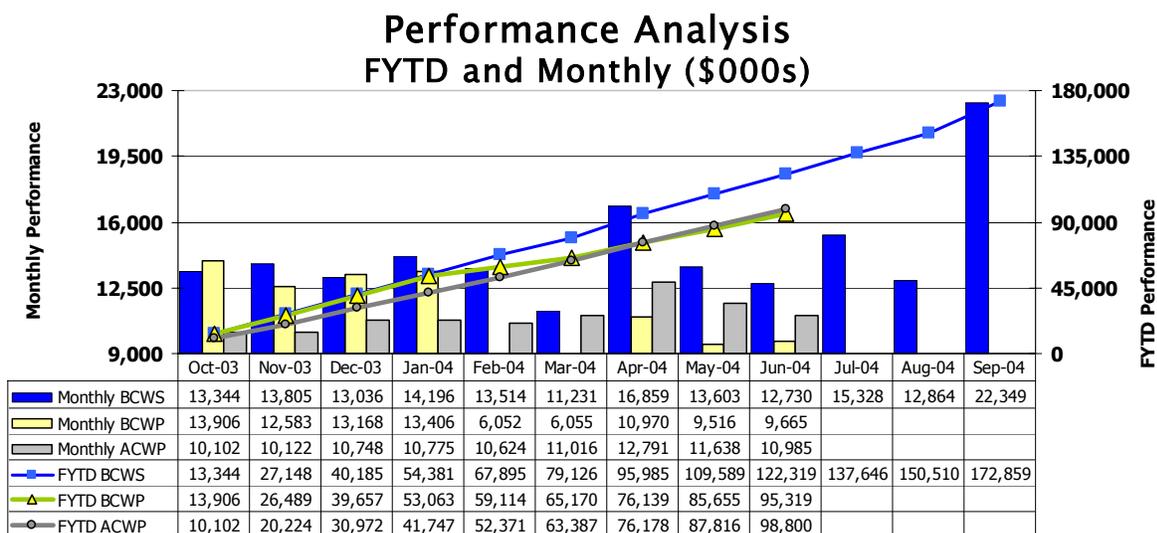
The baseline adjustment is currently being prepared to revise the baseline consistent with the now-directed one-year delay in SNM de-inventory, which also includes use of commercial shipments for de-inventory and changes in the fuel de-inventory path forward, overall staffing ramp up delays, and directed funding adjustments.

## FY 2004 Schedule/Cost Performance, continued

### Cost Variance (-\$3,481K/-4%):

The unfavorable cost variance is the result of several favorable variances offset by a noted unfavorable variance in D&D work. Specifically, favorable variances occurred from the early completion of the plutonium stabilization activities (\$2.6M); efficiencies in surveillance and maintenance (\$1.4M); reduced dosimetry and medical costs due to delay in staff ramp-up (\$.4M); and revenue and work transfers in closure services (\$.6M). These favorable variances were off-set by increased costs associated with plutonium shipping operations (-\$2.4M); apportioned-effort work scope in D&D project management, and increased D&D costs resulting from portable NDA plutonium holdup measurement issues and (DSA) implementation impacting D&D progress (-\$6.1M) at PFP.

Improvements in plutonium shipping operations and packaging shipping containers are expected as routine packaging operations are established and once authorization to ship is obtained. Slowed progress in D&D activities will recover upon resolution of the portable NDA plutonium holdup measurement issue and DSA implementation.



## Milestone Achievement

Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comments
Complete Stabilization and Packaging of Polycubes	DNFSB	3/31/2003	2/28/2003		Complete
Submit Facility End Point Criteria Document to Ecology	TPA	9/30/2003	9/30/2003		Complete
Submit to Ecology a PFP Residual Chemical Hazards Assessment	TPA	12/31/2002	12/27/2002		Complete
Submit Closure Plan for 241-Z Waste Treatment Facility TSD Unit to Ecology	TPA	7/31/2003	7/25/2003		Complete
Completion of all Plutonium (Pu) Stabilization & Packaging	PI	2/18/2004	2/12/2004		Complete
Complete Repackaging of PFP Residues and Ship to Central Waste Complex (CWC)	TPA	4/30/2004	3/11/2004		Complete
Discontinue Waste Discharges from the 241-Z Tanks to Tank Farms	TPA	6/30/2005		6/30/2005	On Schedule
Special Nuclear Material Transferred to Savannah River Site or DOE Approved Interim Storage	PI	9/30/2005		9/30/2006	DOE has notified FH that the current shipping schedule will not be met.
Legacy Pu Holdup Removed & Dispositioned	PI	9/30/2005		7/31/2005	Ahead of Schedule
Complete 100% of Legacy Pu Holdup Removal & Disposition	TPA	9/30/2006		7/31/2005	Ahead of Schedule
Complete Transition & Dismantlement of the 232-Z Bldg Incinerator	TPA	9/30/2006		3/31/2006	Ahead of Schedule
Protected Area Eliminated	PI	12/31/2005		12/31/2006	Protected Area elimination will not be met due to delayed de-inventory
PFP Facilities (61 Buildings) Ready For Demolition	PI	9/30/2006		TBD	Demo ready of 61 buildings will not be met. One year SNM de-inventory delay, and funding reduction has necessitated a re-sequencing of D&D work scope.