

SNF Stabilization and Disposition (RL-0012)

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*PAS-1 cask used to transport Washington
Closure Hanford fuel to K Basins*

Overview

This section addresses work in Project Baseline Summary (PBS) RL-0012, *Spent Nuclear Fuel (SNF) Stabilization and Disposition*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of September 2007.

Top FY 2007 Accomplishments

SNF Stabilization and Disposition (PBS RL-0012):

- **K East Containerization**
 - Completed containerization of K East Bulk Sludge on October 20, 2006; milestones M-034-33B (Complete K East Sludge Containerization), and DNFSB 119E (Complete K East Bulk Sludge Consolidation).
 - Completed K East Final Pass Sludge Vacuuming on May 31, 2007; milestone DNFSB 122E (K East Final Pass Sludge Removed).
- **Hose In Hose (HIH) Transfer –**
 - Completed transfer of sludge from K East Basin to K West Basin on May 31, 2007; milestones M34-34 (Complete Removal of K East Sludge), and DNFSB 120E (Complete K East Containerized Sludge Removed).
- **K West Floor and Pit Sludge Retrieval (FPSR)**
 - Completed K West Basin Bulk Sludge Containerization on July 3, 2007; milestones M-034-35a (Containerize K West Bulk Sludge), and DNFSB 119W (Complete K West Bulk Sludge Containerization).

Notable September Accomplishments

SNF Stabilization and Disposition (PBS RL-0012):

- **K East D&D Project**
 - Delivered all liquid and sludge samples to 222-S laboratory.
 - Majority of liquid composite analysis complete.
 - Initiated sludge sample analysis.
- **Hose In Hose (HIH) Transfer**
 - Conducted Hazard Analysis for deactivated outside HIH equipment.
- **K West**
 - Completed final pass vacuuming of 1295 cubic feet (40 percent complete).
 - Issued revised Final Pass Endpoint Criteria letter incorporating EPA comments.
 - Transferred 12,000 gallons of water from K West to K East through basin water return line.
- **Legacy Fuel**
 - Completed 36 percent of Cold Vacuum Drying Facility (CVDF) Preventive Maintenance activities in preparation for restart.
 - Weighed and vented knockout pots and weighed Integrated Water Treatment System (IWTS) strainer canisters for Safeguards action commitment.

Notable September Accomplishments, continued

- **Sludge Treatment Project (STP)**
 - Submitted interim Baseline Change Request (BCR) to start FY 2008 STP activities
 - Submitted Pre-Conceptual Safety Design Strategy (SDS) to DOE for review.
 - Continued Conceptual Design activities.
 - Continued Mission Statement/Transition Plan development, including Waste Management on Waste Isolation Pilot Plant (WIPP) criteria.
 - Performed Ultrasonic (UT) and Boroscope mockup testing.
 - Supported RL meeting with Carlsbad Field Office.

Issues

SNF Stabilization and Disposition (PBS RL-0012)

- **K Basins Closure Project**
 - Personnel Transfers: potential impacts to remaining work through loss of qualified personnel.
 - K Basin operators who are qualified in fuel transfer/processing equipment continue to LAMP to other projects.
 - K Basin Field Work Supervisor (FWS) and Shift Manager transfers to meet other site priorities have a potential to impact field execution of near-term scheduled work.
 - Evaluating transfer requests; submitting requests to backfill and train.
 - Additional debris sorting required in K West: the amount of “hot” debris at K East and K West that requires sorting and segregation is adding to work scope and resource requirements.
 - Conducting re-inventory and prioritizing the need to examine the materials.
 - Measuring potential impact to achieving Final Pass criteria and number of scrap baskets required for Multi-Canister Overpacks (MCOs).
 - K East - Incorporation of Value Engineering results to baseline activities taking longer than planned: progress reporting requires “interpretation” and downgrade documentation preparations are lagging.
 - Baseline planning efforts receiving full attention; credible effort to incorporate all options and potential mitigations; internal management review and discussion of changed approach and estimate are ongoing.
 - Completion of “debris management” activities are later than planned; current schedule is being maintained with opportunities to improve being implemented.
 - K East - Revision of Sludge Transfer System Safety Analysis Report for Packaging (SARP) (supporting removal of sand from K East sand filter) will not be approved in time for baseline shipment date to T Plant.
 - Close coordination for comment resolution.
 - Storage of sand media cask at K West until SARP is complete mitigates the issue.
- **STP received a draft letter from RL providing additional direction for the disposition of knockout pot (KOP) sludge, to be handled as spent nuclear fuel.**
 - CCP contracted with WIPP, liaison impacts design.
 - Establishing a WIPP certified lab at Hanford.
 - Addressing potential for new remote-handled transuranic waste (RH-TRU) storage facility.

FY 2007 Funds vs. Spend Forecast (\$M)

	September 2007 Actual Funding	FY 2007 Actual Costs	Delta
SNF Stabilization & Disposition	\$ 137.5	\$ 128.2	\$ 9.2

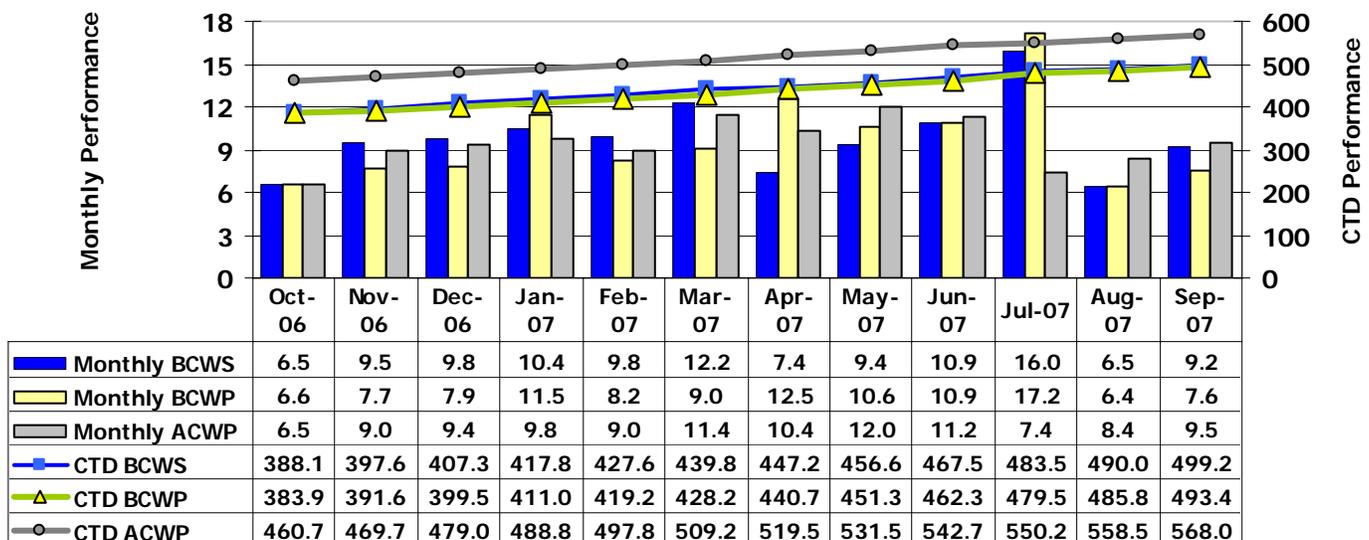
Schedule/Cost Performance (\$M)

SNF Stabilization & Disposition	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 (FY07/CTD)
Current Period (Month)	\$9.2	\$7.6	\$9.5	-\$1.6	-17.3%	-\$1.9	-24.8%	\$117.6
Cumulative-to-Date (FY 2004 - Present)	\$499.1	\$493.4	\$568.0	-\$5.7	-1.1%	-\$74.6	-15.1%	\$576.5

Numbers are rounded to the nearest \$0.1M and include the closure services allocation.

- CTD Schedule Performance (-\$5.7M/-1.1%):** Unfavorable SV is due to delays in Legacy Fuel work scope and K East D&D activities; delays in Legacy are due to allocation of resources to higher priority work scope and implementation of value engineering session findings into D&D baseline. Delays in completing the Safeguards sampling activities (non-critical activity) caused variance.
- CTD Cost Performance (-\$74.6M/-15.1%):** The unfavorable CV is primarily due to problems encountered in design, implementation, startup, and operation of spent fuel removal, sludge containerization, transfer, and treatment systems. System complexity and requirements were underestimated. Most of the cost variances were incurred prior to FY 2006.

Performance Analysis CTD and Monthly (\$M)



Milestone Achievement

Number	Milestone Title	Type (TPA/PI/ DNFSB)	Due Date *	Actual Date	Forecast Date	Status / Comments
M-034-33B (S10-05-018)	Complete K East Sludge Containerization	TPA	03/01/05	10/20/06		Complete
DNFSB 119E (S10-05-014)	Complete K East Bulk Sludge Consolidation	DNFSB	10/31/06	10/20/06		Complete
M-034-34 (S10-05-010)	Complete Removal of K East Sludge	TPA	05/31/07	05/31/07		Complete
DNFSB 120E (S10-05-015)	Complete K East Basin Containerized Sludge Removal	DNFSB	05/31/07	05/31/07		Complete
DNFSB 122E	K East Final Pass Sludge Removed	DNFSB	05/31/07	05/31/07		Complete
M-034-35a (S10-05-011)	Containerize K West Bulk Sludge	TPA	07/31/07	07/03/07		Complete
DNFSB 119W (S10-05-016)	Complete K West Bulk Sludge Containerization	DNFSB	07/31/07	07/03/07		Complete
M-034-35b (S10-05-011)	Complete K West Final Pass	TPA	01/31/08		12/31/07	Ahead of Schedule

* DNFSB dates reflect Implementation Plan update, TPA dates reflect change package M-34-05-04, forecast dates are current working level schedules.