

SNF Stabilization and Disposition (RL-0012)

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***K West Bulk Sludge
Containerization Complete!***

Overview

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

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

Notable Accomplishments

SNF Stabilization and Disposition (PBS RL-0012)

K East Containerization:

- Completed Final Pass vacuuming on May 28, 2007.
- Completed trans-loading of 4.5 debris bins.

Hose In Hose (HIH) Transfer:

- Completed HIH transfers on May 31, 2007.
 - DNFSB 120E/122E and TPA M-034-34.
- Completed Fuel Transfer System (FTS) transfer of HIH duplex strainer material to K West.
- Completed final flush of HIH line, removed booster station mobile light plants, and reduced posted HIH radiological area boundaries to small areas around booster pump stations.

K West Containerization:

- Completed bulk sludge vacuuming on July 3, 2007.
 - TPA M-034-35A; DNFSB IP-2001-1 milestone 119W

Sludge Treatment Project (STP):

Project

- Initiated Technology Readiness Assessment (TRA) process co-led by RL and FH. Developed details of TRA process to identify critical technology elements and lines of inquiry to establish respective technology readiness values.
- Initiated settler tube mock-up at 200 Area Maintenance and Storage Facility (MASF), awaiting several procurement items (Boroscope, Ultrasonic Transducers [UT], and drums for storing mixed simulant).
- Pacific Northwest National Laboratory (PNNL) completed 170+ hours of shakedown testing of vessels.
- Depleted uranium metal turnings were generated in Oak Ridge and shipped to PNNL.
- PNNL completed oxidation of U Metal beads under anaerobic conditions.

Equipment:

- Drum Loadout System Design
 - 60 percent design (60 percent design ready for review – placed on hold pending alternative path requirement evaluation).
- Control Systems
 - Placed on hold pending alternative path requirement evaluation.
- Equipment Installation Packages Design
 - Placed on hold pending alternative path requirement evaluation.

Issues

SNF Stabilization and Disposition (PBS RL-0012)

- **Personnel Transfers: potential impacts to remaining work through loss of qualified people**
 - Maximum opportunity being provided to KBC employees to move to other projects.
 - Close contact with Human Resources and other projects points of contact.
 - Optimize use of subcontracted resources.
- **Impact of July 3, 2007 DOE letter 07-KBC-0048, RL agreement to re-establish STP between Critical Decision (CD)-0 and CD-1**
 - Mitigation In Progress:
 - o Subcontracting/procurement strategy.
 - o TRA/CD integrated review strategy.
 - o Gap analysis between CD-0 and CD-1.
 - o Development of detailed scope and planned activities required for RL CD-1 review.

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

		Projected FY 2007 Funding	FY 2007 Fiscal Year Spend Forecast	Variance
RL-0012	SNF Stabilization & Disposition	\$ 137.5	\$ 131.0	\$ 6.5

Schedule/Cost Performance (\$M)

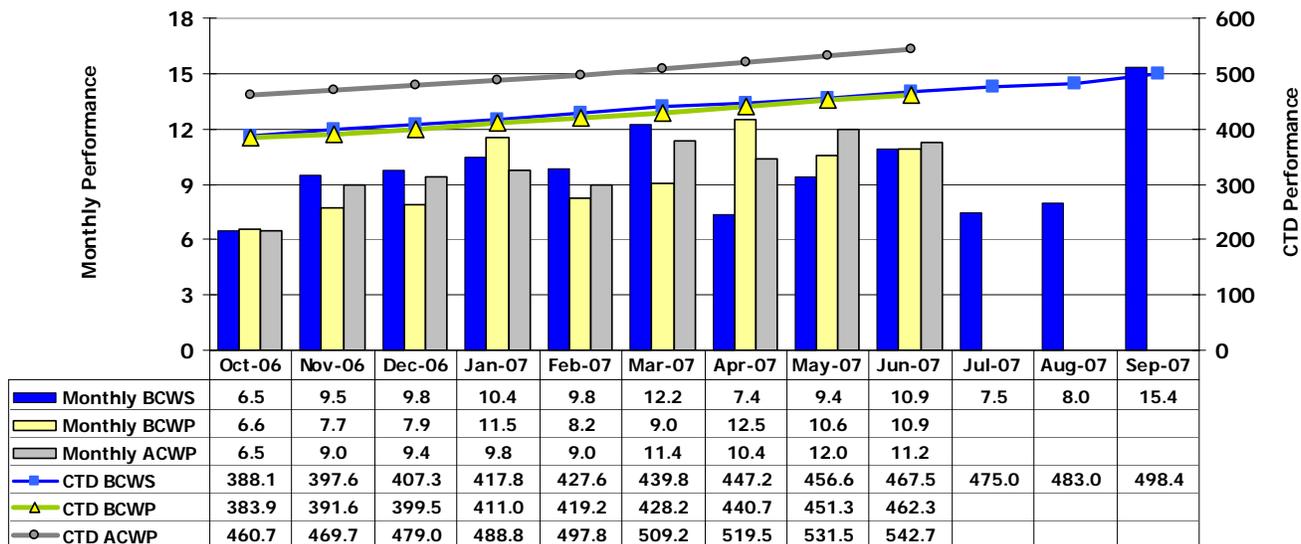
SNF Stabilization & Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion (FY07/CTD)
Current Period (Month)	\$10.9	\$10.9	\$11.2	\$0.0	0.2%	-\$0.3	-2.8%	\$116.8
Cumulative-to-Date (FY 2004 - Present)	\$467.5	\$462.3	\$542.7	-\$5.2	-1.1%	-\$80.5	-17.4%	\$567.0

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

- **CTD Schedule Performance (-\$5.2M/-1.1%):** Delays occurred in the following activities: K East final pass vacuuming activities due to water clarity, clogging, and debris issues; K East – K West sludge transfer system due to construction, startup and operational issues; K West sludge containerization due to debris removal issues and availability of resources (shifted to higher priority work scope); Legacy fuel canister sorting due to availability of resources (shifted to higher priority work scope); sludge treatment design review, procurement and construction activities due to decision to implement the Critical Decision process into design requirements; and D&D hydrolasing activities due to late turnover of the basin.
- **CTD Cost Performance (-\$80.5M/-17.4%):** The unfavorable CV is primarily due to problems encountered in design, implementation, startup, and operation of fuel removal, sludge containerization, transfer, and treatment systems. System complexity and requirements were underestimated.

Schedule/Cost Performance (\$M)

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		12/21/07	On Schedule

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