

SNF Stabilization and Disposition (RL-0012)

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Panel 300

*Hose-in-Hose
Training*



Panel 100



Status Board at Panel 300



Debris removal in K East Basin

Overview

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

NOTE: Unless otherwise noted, all information contained herein is as of the end of July 2006.

Notable Accomplishments

SNF Stabilization and Disposition (PBS RL-0012)

K Basins Closure Project: The External Independent Review was successfully completed in July, and the baseline was recommended for validation.

Sludge Retrieval and Transfer: K East Basin sludge vacuuming has completed 6,267 cubicles (6,267 of 8,192 cubicles, -453 to the schedule). Vacuuming of the East Bay was completed on August 3, 2006. Preparations for vacuuming in the Tech Viewing Pit (TVP) were completed, as well as preparation for installing the robotic arm in the basin.

K West Basin: Debris removal was completed on July 6, 2006 (914 of 914 debris units completed). K West shipped seven IP2 containers to the Environmental Restoration Disposal Facility (ERDF). Flocculation Construction Acceptance Tests (CATs) were performed for floor and Pit Sludge Retrieval (FPSR), and container dilution components (with the exception of the pipe caps) were installed.

The Hose-in-Hose (HIH) Project: The remaining Integrated Acceptance Tests were completed. Booster station piping was reinsulated, and the suspended solids transmitter and transmitter time delay mod were replaced. The K East loop check CAT was completed, as were the heat trace CATs. Nineteen construction work packages and 11 JCS work packages were closed. The Conditional Release Construction Completion Document (CCD) was completed. Turnover to operations was also completed. An additional two-day HIH training class for Operators was conducted, and operations training runs were started.

Legacy Fuel: Three debris canisters were sorted, and the final PNNL report on KBC Suspect Fuel was issued.

Sludge Treatment Project (STP): The recommendation regarding the need to reevaluate the Cold Vacuum Drying Facility soil column was submitted to RL for concurrence. Initial Mobile Solidification System (MOSS) fabrication submittals were received. The Retrieval & Transfer (R&T) Systems 60% design review was initiated, as was the Contractor Stabilization and Packaging System (CSAPS) 90% design review. The STP Design Acceptance Plan was issued, and processing temperature options were reviewed with RL.

Issues

K East Sludge Vacuuming: Progress in K East sludge vacuuming slowed by small debris entrained in the sludge and a decrease in visibility. Mitigation actions taken include: manufacture and use of different end effectors in areas containing small entrained debris/heavy sludge; consultation and implementation of Water Quality Team recommendations on flocculent injection system usage and sand filter back flush rotations to manage visibility; continued utilization of resources from K West to assist in maneuvering/relocating equipment in basin bays/pits to maximize vacuuming operations time; revision to debris removal strategy; and maintenance of spare parts.

Issues, continued

Sludge Transfer – HIH testing: Construction turnover/Integrated Test Plan (ITP) progress has been slower than planned. Mitigation actions taken include: retention of engineering resources to expedite correction of deficiencies; additional resources to ensure proper work package closeout; second shift and improved coordination of test sequencing (learning curve); plans for conduct of remaining CATs (second shift) in parallel with ITP progress on day shift; Conduct of Operations (ConOps) mentor reviews of planned process and procedure (three-point communication mentors, installed dedicated phone service line); FH HIH support team reviewing readiness preparations and construction acceptance records (and others as identified); daily schedule/status meetings; Emergency Preparedness Drills (with positive results); and judicious use of overtime and second shift coordination.

Sludge Treatment Risk Mitigation: There has been a negative impact resulting from RL's withdrawal of early procurement authority. Mitigating actions taken include: re-planning per RL direction to reduce risk (procurements tied to Preliminary Design Safety Analysis [PDSA] approval) and submittal of Baseline Change Request (BCR) RL-012-016 to RL documenting cost and schedule impacts; submittal of early procurement requests for MOSS (approved) and the Assay system; Drum Handling, and Transfer Pump are in preparation; change to two step PDSA (Rev 0 – for CSAPS and Rev 1 for Handling and R&T systems); refined construction schedule; and continued engagement between FH and DOE senior management.

Delays in the CSAPS design completion have been driven by delayed completion of Hazards Analysis/Control Decisions, their impacts on British Nuclear Group, America (BNGA) design, and the complexity of design. Mitigating actions taken include: Deviation Notice (DN) S-06-066 and BCR RI-012-014 documenting realization of identified risk submitted to FH Change Control Board; continued focus on Integration of BNGA engineering and FH Safety Basis efforts; prompt design issue identification and resolution, and timely FH review of submittals consistent with FH STP design review plans; holding an FH/BNGA engineering focus alignment meeting; and continued engagement between FH and BNGA senior management.

FY 2006 Funds vs. Spend Forecast (\$M)

		Projected FY 2006 Funding	FY 2006 Fiscal Year Spend Forecast	Variance
RL-0012	SNF Stabilization & Disposition	\$ 122.6	\$ 120.5	\$ 2.1
Total		\$ 122.6	\$ 120.5	\$ 2.1

FY 2006 Schedule/Cost Performance (\$M)

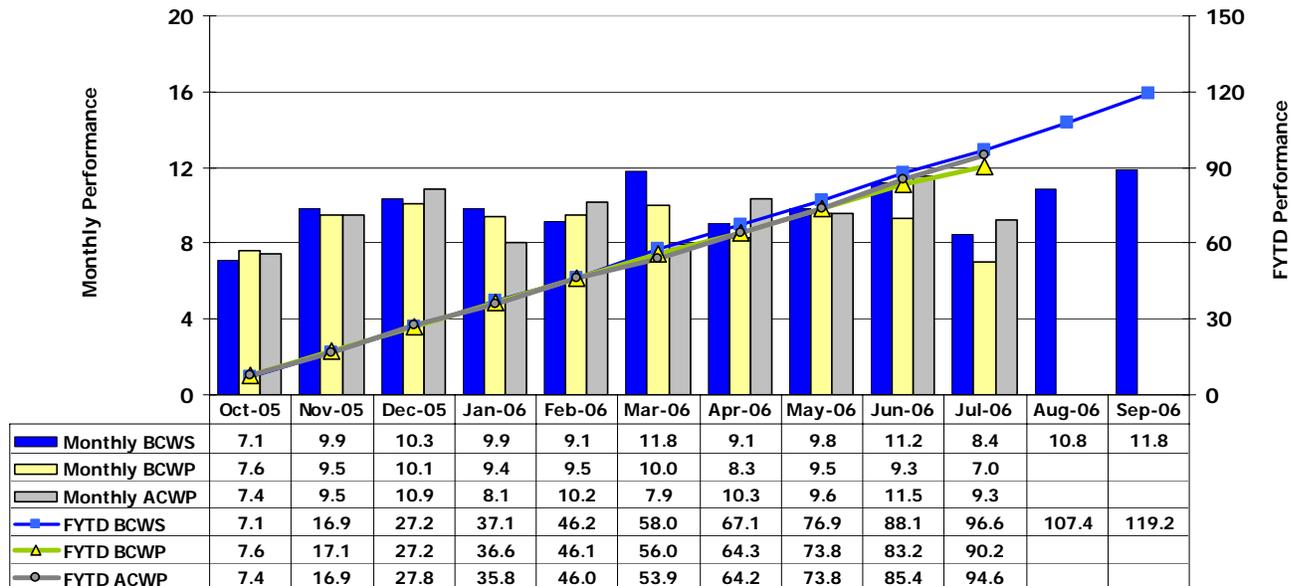
		Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion
RL-0012	SNF Stabilization & Disposition	\$96.6	\$90.2	\$94.6	-\$6.4	-6.6%	-\$4.4	-4.9%	\$119.2
Total		\$96.6	\$90.2	\$94.6	-\$6.4	-7.1%	-\$4.4	-4.9%	\$119.2

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

- **Schedule Performance (-\$6.4M/-7.1%):** Schedule variance is within threshold.
- **Cost Performance (-\$4.4M/-4.9%):** Cost variance is within threshold.

FY 2006 Schedule/Cost Performance (\$M), continued

Performance Analysis
FYTD 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		10/04/06	Behind Schedule: not included in TPA change
RL-12-1.b (S10-99-082)	Transfer K East Sludge to K West Containers	PI	11/30/05		01/11/07	Behind Schedule
RL-12-1.bb (S10-99-963)	Transfer Found Fuel and Fuel Scrap from K East to K West	PI	11/30/05		10/05/06	Behind Schedule
M-034-34 (S10-05-010)	Complete Removal of K East Sludge	TPA	05/31/07		01/11/07	Ahead of Schedule
RL-12-1.ce (S10-99-978)	Complete K East Water Removal	PI	01/31/06		11/02/07	Behind Schedule
RL-12-1.ca (S10-99-967)	Encapsulate 3 K East Bays	PI	02/28/06		11/02/07	Behind Schedule
RL-12-1.cb (S10-99-968)	Remove K East Superstructure	PI	06/30/06		08/14/08	Behind Schedule
M-034-35a (S10-05-011)	Containerize K West Sludge	TPA	07/31/07		05/09/07	Ahead of Schedule
M-034-35b (S10-05-011)	Complete Final Pass	TPA	01/31/08		06/06/07	Ahead of Schedule
RL-12-1.cc (S10-99-969)	Complete First K East Basin Section Disposal	PI	07/31/06		12/12/08	Behind Schedule
RL-12-1.bd (S10-99-965)	Commencement of Floor and Canister Sludge Treatment	PI	07/31/06		02/18/09	Behind Schedule
RL-12-1.ci (S10-99-971)	Decon/Immobilize K West Basin Wall (7600 sq. ft.)	PI	08/31/06		06/22/10	Behind Schedule
RL-12-1.bc (S10-99-081)	Remove Found Fuel and Scrap	PI	09/30/06		07/18/08	Behind Schedule
RL-12-1.cf (S10-99-972)	Complete K East Basin Removal	PI	09/30/06		07/07/09	Behind Schedule
DNFSB 119E (S10-05-014)	Complete K East Sludge Consolidation	DNFSB	10/31/06		10/04/06	Ahead of Schedule
DNFSB 120E (S10-05-015)	Complete K East Basin Sludge Removal	DNFSB	05/31/07		01/11/07	Ahead of Schedule
DNFSB 122E	K East Final Pass Sludge Removed	DNFSB	05/31/07		01/11/07	Ahead of Schedule
DNFSB 119W (S10-05-016)	Complete K West Sludge Containerization	DNFSB	07/31/07		06/06/07	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.