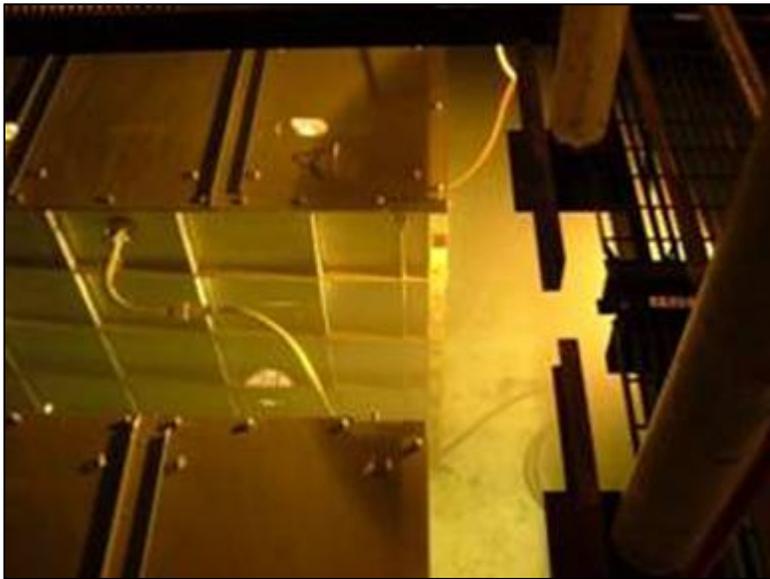


Spent Nuclear Fuel (SNF) Stabilization and Disposition Storage Operations (HQ-0012X); and SNF Stabilization and Disposition (RL-0012)

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Center bay sludge container installed in 105KW Basin

Booster Pump Station on the pump pad for the hose-in-hose sludge transfer system (one of four stations)



Overview

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

NOTE: Unless otherwise noted, all information contained herein is as of the end of July 2005.

Notable Accomplishments

SNF Stabilization and Disposition (PBS RL-0012)

Sludge Retrieval and Treatment: Eighty-one percent (34m³ of 42m³) containerization was reached in K East Basin, and installation of all containers required for sludge transfer operation (six of six) was completed. Sixty percent of container lids (4622 of 7592) have been removed from K West Basin. One-hundred percent of hose-in-hose sludge transfer equipment completed fabrication and delivery to 100K Area and three of four booster pump stations were installed. Revision 2 of the Statement of Work for Sludge Treatment was approved and transmitted to British Nuclear Group America for estimate of cost and schedule. The Functional Design Criteria for sludge treatment was approved.

Legacy Fuel: Readiness assessment and the successful transfer of found fuel and scrap utilizing the Fuel Transfer System were completed. This was significant in that the system had been in a lay-up status since completion of fuel removal in FY 2004.

Decontamination and Demolition: The Sampling and Analysis Plan for K East Basin was approved by RL/EPA.

Issues

Sludge Containerization: The shift to a bay-to-bay Clear and Clean approach in the K East basin yielded steady progress, but overall the sludge collection task continues to delay subsequent containerization and transfer tasks. In-basin components of the new debris load-out station were installed, but pending approval and implementation of safety basis controls regarding the load-out from the basin has slowed significant debris load out. The rate of progress achieved in the Center Bay has been incorporated into revised working schedule estimates that show forecast completion moving into the second quarter of FY 2006. Impacts to sludge transfer, K West sludge consolidation, and K East demolition have resulted from the K East delays, as reported in the milestone summary for this report. Completion of TPA M-34-33B, "*Complete K East Sludge Containerization*," due March 1, 2005, is projected for mid-January 2006.

Sludge Transfer: Run-in testing of one of four booster pump stations at the equipment fabricator's facility has identified high vibration at the motor to pump shaft bearing and seal, requiring modification actions. The modifications, once successfully tested, will be made in the field at 100K. DNFSB milestone 2001-1-CN-120E, "*Complete K East Sludge to K West Containers*," (due July 31, 2005 – missed), and TPA milestone M-34-34, "*Complete Removal of K East Sludge*," (due January 31, 2006), are projected to complete in March 2006 and are dependent upon completion of K East Containerization activities.

2005/2006 Budget/Funding: KBC is re-estimating the life cycle completion cost and schedule for both the sludge disposition and decontamination and demolition of the K Basins. Preliminary estimates of funding requirements for FY 2006 show significant growth in the 2012 funding control point requiring close coordination of priorities to maintain sufficient progress on TPA and DNFSB milestones. FH will complete the life-cycle estimate for delivery to RL on September 30, 2005.

FY 2005 Funds vs. Spend Forecast (\$M)

		Projected FY 2005 Funding	FY 2005 Fiscal Year Spend Forecast	Variance
HQ-0012X	SNF Stabilization and Disposition Storage Ops	\$ 0.9	\$ 0.9	\$ 0.0
RL-0012	SNF Stabilization & Disposition	\$ 149.6	\$ 144.9	\$ 4.8
Total		\$ 150.5	\$ 145.7	\$ 4.8

FY 2005 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
HQ-0012X	SNF Stabilization and	\$0.8	\$0.8	\$0.8	\$0.0	0.0%	\$0.0	-2.2%	\$0.9
RL-0012	SNF Stabilization & Disposition	\$86.9	\$84.8	\$120.9	-\$2.1	-2.4%	-\$36.1	-42.6%	\$106.2
Total		\$87.7	\$85.6	\$121.7	-\$2.1	-2.5%	-\$36.1	-42.2%	\$107.0

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

Schedule Performance (-\$2.1M/-2.5 %): The variance is due to:

- North Loadout Pit sludge collection and treatment (-\$0.2M).
- Delays in K East Basin sludge containerization (-\$0.5M).
- Delays in K East to K West Transfer System and Fuel Retrieval (BNGA) (-\$5.3M).
- Delayed hydrolasing, KW Discharge Chute, KE Grout and Dewater and KE Superstructure (-\$3.3M).

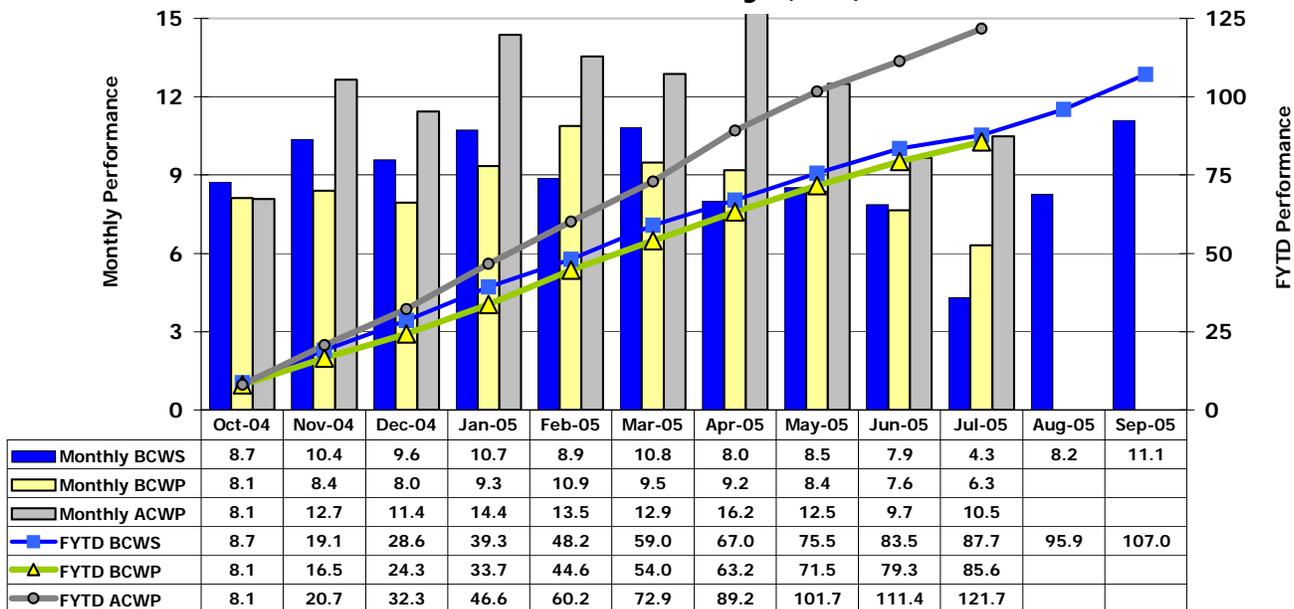
The unfavorable schedule variance is partially offset by a favorable schedule variance for completing MCO movement activities that were budgeted to be completed in FY 2004 (+\$1.6M), completing sludge carryover activities (\$+3.1M), MCO welding ahead of schedule (+\$0.2M), and Sludge Treatment acceleration from FY 2006 (+\$2.3M).

Cost Performance (-\$36.1M/-42.2%): The variance is due to:

- Overruns developed in completion of fuel movement (-\$1.5M).
- Unplanned Ion Exchange Module procurement required due to water clarity issues requiring increased replacement frequency (-\$0.6M).
- Labor/material overruns in Safe and Compliant activities due to underestimated requirements and the delay in ramp-down from fuel removal activities (-\$3.7M).
- Increased cost in Sludge Retrieval activities (K East Containerization, Sludge Transfer System, K West Retrieval, etc.) due to slower progress resulting in higher labor costs for the work being completed. Procurement of additional materials such as cameras, tools, and filters to resolve water visibility problems (-\$32.7M), and D&D labor rates and technical requirements (-\$3.0M).
- Offset by efficiencies at CSB (+\$1.3M) & Closure Services (+\$0.3M), and under runs in NLOP due to savings by moving treatment from 325 Bldg to T-Plant (+\$3.8M).

FY 2005 Schedule/Cost Performance, 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-034-18B (S00-00-902) (S10-05-012)	Complete removal of all K Basin SNF	TPA/DNFSB/ PI	07/31/04	10/15/04		Complete
DNFSB 2001-1 (S10-05-012)	Remove SNF from K Basins	DNFSB	07/31/04	10/12/04		Complete
RL-12-1.aa (S10-99-960)	Complete SNF Removal from K West	PI	08/31/04	10/15/04		Complete
RL12-1.cd (S10-99-977)	Initiate Full Scale K East Water Removal	PI	09/30/04	09/19/04		Complete
M-034-33A (S10-05-009)	Initiate Sludge Containerization	TPA	10/31/04	10/31/04		Complete
DNFSB 121 (S10-05-013)	Select Sludge Treatment Method	DNFSB	11/30/04	11/15/04		Complete
RL-12-1.c (S10-99-966)	Complete K East Discharge Chute Immobilization	PI	12/30/04	08/20/04		Complete
DNFSB 119E (S10-05-014)	Complete K East Sludge Consolidation	DNFSB	12/31/04		01/05/06	Behind Schedule
RL-12-1.ba (S10-99-083)	Treat 1 Cubic Meter of Sludge	PI	09/30/05		11/30/05	Behind Schedule
M-034-33B (S10-05-018)	Complete K East Sludge Containerization	TPA	03/01/05		12/19/05	Behind Schedule
S10-99-80	Complete MCO Welding	PI	06/30/05	06/16/05		Complete
DNFSB 120E (S10-05-015)	Complete K East Basin Sludge Removal	DNFSB	07/31/05		03/23/06	Behind Schedule
RL-12-1.b (S10-99-082)	Transfer K East Sludge to K West Containers	PI	07/31/05		03/13/06	Behind Schedule
RL-12-1.bb (S10-99-963)	Transfer Found Fuel and Fuel Scrap from K East to K West	PI	07/31/05		12/13/05	Behind Schedule
M34-21-T1 (S10-99-951)	Initiate Full Scale K West Basin Water Removal	TPA	12/31/05		10/30/05	Ahead of Schedule
RL-12-1.cg (S10-99-973)	Immobilize K West Discharge Chute	PI	12/31/05		11/30/05	Ahead of Schedule
M-034-34 (S10-05-010)	Complete Removal of K East Sludge	TPA	01/31/06		03/23/06	At Risk
RL-12-1.ch (S10-99-976)	Complete Removal of Contaminated Fuel Canisters	PI	01/31/06	06/21/05		Complete
RL-12-1.ce (S10-99-978)	Complete K East Water Removal	PI	01/31/06		08/18/06	Behind Schedule
DNFSB 119W (S10-05-016)	Complete K West Sludge Containerization	DNFSB	02/28/06		05/18/06	Behind Schedule
RL-12-1.ca (S10-99-967)	Encapsulate 3 K East Bays	PI	02/28/06		08/18/06	Behind Schedule
RL-12-1.bd (S10-99-965)	Commencement of Floor and Canister Sludge Treatment	PI	03/30/06		09/30/07	Behind Schedule
RL-12-1.cb (S10-99-968)	Remove K East Superstructure	PI	06/30/06		12/08/06	Behind Schedule
M-034-35 (S10-05-011)	Containerize K West Sludge	TPA	06/30/06		05/18/06	On Schedule
RL-12-1.cc (S10-99-969)	Complete First K East Basin Section Disposal	PI	07/31/06		04/16/07	Behind Schedule
RL-12-1.ci (S10-99-971)	Decon/Immobilize K West Basin Wall (7600 sq. ft.)	PI	08/31/06			On Schedule
RL-12-1.bc (S10-99-081)	Remove Found Fuel and Scrap	PI	09/30/06			On Schedule
RL-12-1.cf (S10-99-972)	Complete K East Basin Removal	PI	09/30/06		10/19/07	Behind Schedule

NOTE: HQ-0012X has no milestones.