

SNF Stabilization and Disposition (RL-0012)

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Debris sorting and cutting in K West Basin



Debris removal K West Basin



New Hose-in-Hose transfer system



New IP-2 container with fabricated liner, ready for loading

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 January 2006.

Notable Accomplishments

SNF Stabilization and Disposition (PBS RL-0012)

Sludge Retrieval and Transfer: Progress continued ahead of schedule in the K East Basin. K East debris unit removal is 354 units ahead of plan (87 percent, 1394 of 1594). K East sludge containerization resumed sludge pumping one month early (January 10 versus February 9, 2006) and sludge vacuuming is 1019 cubic feet ahead of schedule (18 percent, 1641 of 8925).

Four IP-2 containers and three roll-off boxes were shipped to the Environmental Restoration Disposal Facility (ERDF).

K West Basin progress for debris and canister lid removal also continues ahead of schedule. K West debris removal is 112 units ahead of schedule (53 percent, 482 of 914), and K West canister lid removal continues on an as found/needed basis and will be tracked as an accumulated total (currently 75 percent, 5732 of 7636).

The number of identified discrepancies associated with drawings and equipment, as well as the number of change notices required to correct the deficiencies has continued a downward trend, thereby taking the engineering effort off the critical path. This progress is reflected in the number of construction installation work package completions and the commencement of acceptance testing. This progress has allowed the project team to focus on the installation schedule and preparations for testing and readiness self assessments. The project is forecasting the start of sludge transfers on June 22, 2006, six days later than the baseline activity start milestone. Completion of the bulk sludge transfer is currently 188 days ahead of the Defense Nuclear Facilities Safety Board (DNFSB) milestone 120E, "Complete K East Basin Sludge Removal," due May 31, 2007.

Sludge Treatment: The Corrosion System 60 percent design review was conducted, and Review Comment Records were informally delivered to British Nuclear Group of America (BNGA) on December 29, 2005.

Issues

Sludge Treatment Project - 100K Area Seismic Analysis and Treatment System Design: FH will provide a recommendation to RL in March on changes that may or may not be required to the treatment system design/facility modifications based on analysis that is ongoing. Actions in progress include a review of the existing facility (Cold Vacuum Drying Facility [CVDF]) seismic analysis and design margin; comparison and evaluation of the Waste Treatment Plant relative amplification factors on existing CVDF design margin; and evaluation/comparison of 100 Area and 200 Area soil column information. Ultimately, changes in this criteria will have an impact on cost and schedule for the treatment system design and facility installation.

Tri Party Agreement Change Order: The milestone dates for Tri-Party Agreement milestones listed in this report have been updated to reflect Change Order M-34-05-04, and are consistent with the updated baseline for the K Basins Closure (KBC) Project of November 7, 2005.

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

| | | Projected FY 2006 Funding | FY 2006 Fiscal Year Spend Forecast | Variance |
|--------------|---------------------------------|------------------------------|---------------------------------------|----------------|
| RL-0012 | SNF Stabilization & Disposition | \$ 122.8 | \$ 124.3 | \$ -1.5 |
| Total | | \$ 122.8 | \$ 124.3 | \$ -1.5 |

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 | \$37.1 | \$36.6 | \$35.8 | -\$0.5 | -1.4% | \$0.7 | 2.0% | \$119.9 |
| Total | | \$37.1 | \$36.6 | \$35.8 | -\$0.5 | -1.5% | \$0.7 | 2.0% | \$119.9 |

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

Schedule Performance (-\$0.5M/-1.5%):

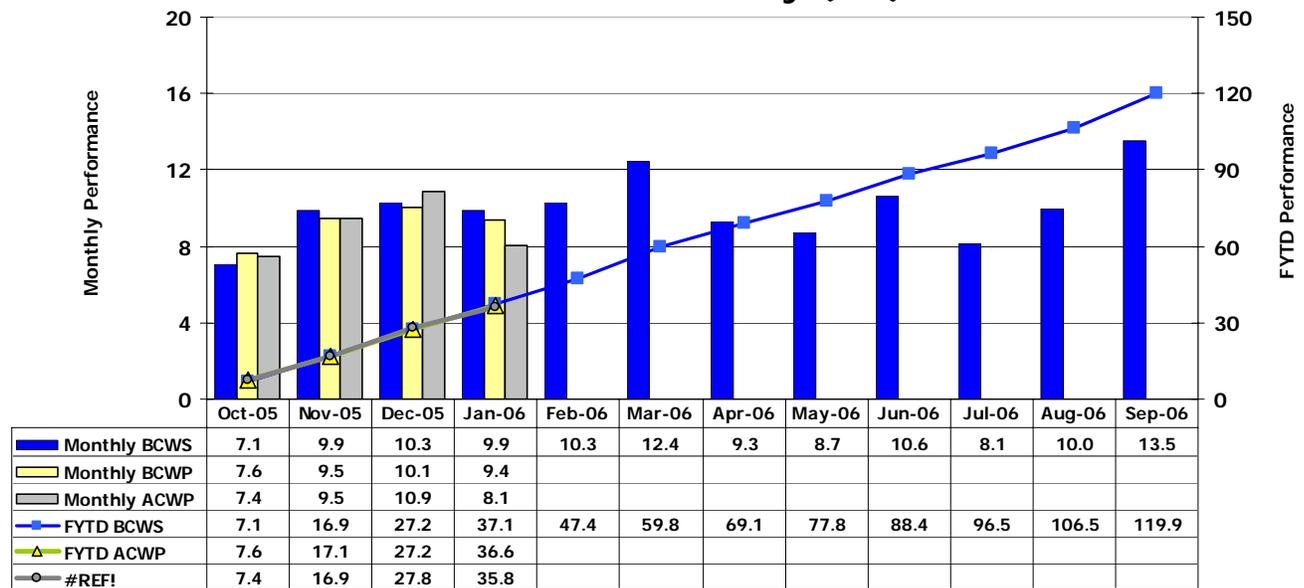
- The variance is due to:
- K East and K West Rack and Debris removal ahead of plan (+\$0.3M).
 - Deactivation and Decommissioning (D&D) Ion Exchange Module (IXM) procurement completed earlier than planned and One-Time Request for Shipment (OTRS) activities ahead of schedule (+\$0.1M).
 - Final Pass Sludge Retrieval (FPSR) Construction activities (-\$0.1M).
 - Hose-in-Hose (HIH) system return water line installation (-\$0.2M).
 - Sludge Treatment Mobilization Solidification System (MOSS) and Imaging Passive-Action Neutron (IPAN) procurement (-\$0.5M).
 - Sludge Treatment design and engineering (+\$0.2M).
 - Legacy Fuel – CVD/suspect fuel activities (-\$0.3M).

Cost Performance (+\$0.7M/+2.0%):

- The variance is due to:
- Labor overruns in Safe and Compliant (S&C) as a result of incorrect charging; revised charging authorization have been distributed (-\$0.6M).
 - K East and K West Rack and Debris removal costing less than plan (+\$0.9M).
 - Sludge Treatment BNGA and PNNL/Nuclear Safety (+\$0.5M).
 - HIH/K West Retrieval engineering and construction activities (-\$0.3M).
 - HIH Operations Management and Support (+\$0.8M)
 - Sludge Management – K East rack removal, crane and rigging, and PNNL Nuclear Safety cost incorrectly charged to sludge management, will be corrected (-\$1.4M).
 - D&D resources utilized in other KBC subprojects (+\$0.8M).
 - Closure Services (+\$0.1M).
 - Miscellaneous (-\$0.1M)

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 | | 08/16/06 | 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 | ** | 12/27/06 | 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 | | 09/21/06 | Behind Schedule |
| M-034-34 (S10-05-010) | Complete Removal of K East Sludge | TPA | 05/31/07 | | 12/27/06 | 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 | | 07/07/09 | 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 | | 02/20/07 | Ahead of Schedule |
| M-034-35b (S10-05-011) | Complete Final Pass | TPA | 01/31/08 | | 02/20/07 | 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 | | 06/19/08 | Behind Schedule |
| RL-12-1.ci (S10-99-971) | Decon/Immobilize K West Basin Wall (7600 sq. ft.) | PI | 08/31/06 | | 12/28/09 | Behind Schedule |
| RL-12-1.bc (S10-99-081) | Remove Found Fuel and Scrap | PI | 09/30/06 | | 04/15/08 | 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 | | 08/16/06 | Ahead of Schedule |
| DNFSB 120E (S10-05-015) | Complete K East Basin Sludge Removal | DNFSB | 05/31/07 | | 12/27/06 | Ahead of Schedule |
| DNFSB 122E | K East Final Pass Sludge Removed | DNFSB | 05/31/07 | | 03/23/07 | Ahead of Schedule |
| DNFSB 119W (S10-05-016) | Complete K West Sludge Containerization | DNFSB | 07/31/07 | | 02/20/07 | 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.

** Final Pass (Fifth Container) transfer