

Spent Nuclear Fuel Project

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K East Basins - Fuel Transfer System Operations



K West Basins

Fuel Retrieval System



CSB – MCO Welding



Canister Cleaner Operations

Loading Cask on Trailer at K West

Sludge Transportation System – Test loading LDC into casks at K Basins



CVDF – MCO Processing



OVERVIEW

The Spent Nuclear Fuel (SNF) Project consists of Project Baseline Summary (PBS) RL-RS03, *Spent Nuclear Fuel*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of March 2003.

NOTABLE ACCOMPLISHMENTS

Fuel Movement Activities: The project shipped 14 Multi-Canister Overpacks (MCOs) containing approximately 84.55 Metric Tons of Heavy Metal (MTHM) from the K West Basin to the Cold Vacuum Drying Facility (CVDF). As of April 28, 2003, a cumulative total of 221 MCOs containing approximately 1,167.8 MTHM MTHM have been shipped. The project is three MCO shipments and 30.5 MTHM ahead of schedule. The K West scrap readiness assessment was successfully completed on April 24, 2003.

Fuel Transfer System (FTS): The project completed 23 FTS shipments (230 canisters). As of April 21, 2003 the project has completed a cumulative total of 92 shipments (920 canisters).

MCO Welding at Canister Storage Building (CSB): The project welded 15 MCOs. As of April 21, 2003, the project has welded a cumulative total of 26 MCOs and is ten MCOs ahead of schedule. The project received RL approval and subsequently implemented a more effective method to verify the integrity of welded MCO mechanical seals. The new approach uses a Helium test method as an alternative to the torque-check method previously used, which reduces the time to conduct the test by 75 percent.

Sludge Water System (SWS) – K East: Testing Deficiency Reports identified as a result of the Operational Test Procedures (OTPs) have been closed out. On March 4, 2003 RL approved Construction Completion Document, Section IIa, which signifies completion of the SWS construction Tri-Party Agreement (TPA) target milestone M-34-12-T01. The Large Diameter Container (LDC) Trailer Weighing System has been received. Concrete pours, calibration of the scales and electrical construction have been completed. All three replacement strainers with baskets were installed and tested on March 19, 2003. The system hydro-test was successfully completed on April 5, 2003.

The T Plant Readiness Assessment for K East Sludge Receipt was completed on April 18, 2003. T Plant is addressing one pre-start and one post-start action, which resulted from the readiness assessment.

SWS – K West: The K West SWS Preconceptual team has initiated planning activities. The team is focusing on operability utilizing existing systems, structures and components. Lessons learned from K East SWS design and Sludge Handling System design, fabrication and readiness continue to be incorporated into SWS activities.

A Vendor Forum was conducted to solicit prospective vendors to provide the design, fabrication, testing, delivery and installation for sludge retrieval and storage at K West. Over 60 attendees participated and 22 individual company one-on-one interviews were conducted. There have been 14 responses received from vendors, many expressing interest in the upcoming Request for Proposal. Some responses provided recommendations that will be considered as the project develops the Statement of Work and Functions and Requirements document.

Notable Accomplishments (continued)

Cold Vacuum Drying Facility (CVDF) Initiatives: The CVDF successfully implemented a revised Final Safety Analysis Report (FSAR) 38 days ahead of RL's directed schedule. Fifty-eight procedures were revised, which included the approval to reduce procedure requirements for conducting Technical Safety Requirement (TSR) surveillances during CVDF maintenance outages. This procedure modification results in a 50 percent reduction of time dedicated to performing maintenance outage activities. Early FSAR annual update completion will allow the project to apply modified procedure requirements to the April 2003 CVDF maintenance outage. Estimated cost savings are expected to be about \$14,000 per outage and about \$55,000 annually.

The project implemented a change in scheduling resources for the CVDF procedure to remove the cask lid and leak testing of port connectors. The previous schedule required backshift callout of Nondestructive Examination (NDE) staff to perform leak testing of port connectors, which resulted in overtime and disruption of personnel work schedules. The schedule change allows testing to be completed during regular shift schedules, which has resulted in a total cost reduction of approximately \$50,000 fiscal year to date, and a total estimated savings of \$250,000 for fiscal year (FY) 2003. The project continues to aggressively pursue methods to optimize the use of its resources through effective schedule management.

Canister Cleaning Operations: The project cleaned and removed 449 empty canisters from K West. As of April 21, 2003 the project has cleaned and prepared a total of 2,581 canisters and 917 lids for shipment to the Environmental Restoration Disposal Facility, which is 69 canisters ahead of the baseline schedule.

Deactivation and Decommissioning: A Vendor Forum was conducted on March 25, 2003 to solicit innovative alternative deactivation processes from prospective vendors. These processes support the removal from the basins, and packaging and disposal of empty fuel canisters, fuel racks, debris, and water. Scope requirements and expectations were presented to prospective vendors, questions were addressed and one-on-one interviews were conducted with each vendor.

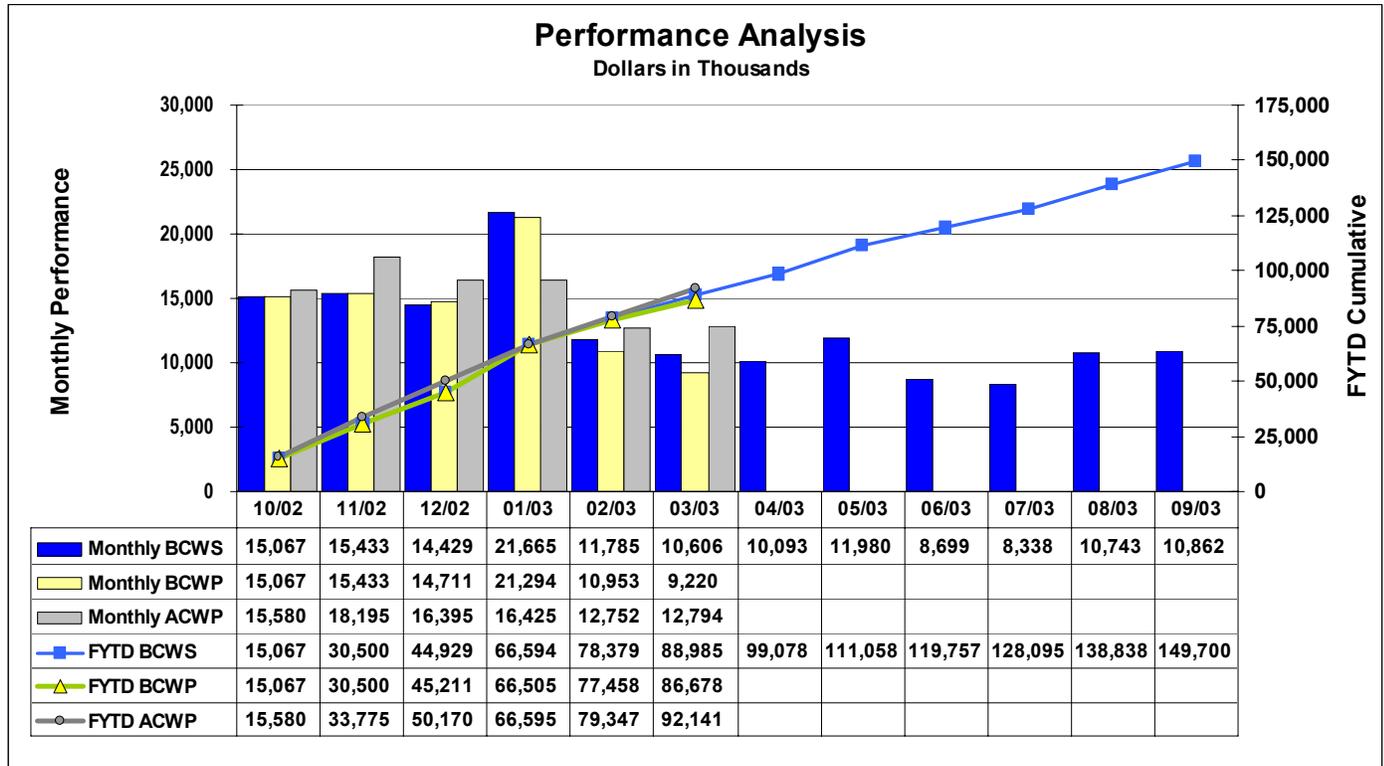
FY 2003 SCHEDULE/COST PERFORMANCE (\$000)

Schedule Variance Analysis (-\$2,307K): The unfavorable three percent schedule variance is due to schedule delays in K East SWS construction completion and Operations startup, MCO moves from K West to CVDF, actions to recover the K West MCO shipment schedule and Canister Cleaner Operations. As of April 21, 2003, K West MCO shipments to the CVDF are on schedule.

Cost Variance Analysis (-\$5,463K): The unfavorable six percent cost variance is due to K East FTS maintenance/repairs, K East SWS construction completion and Operations startup, additional actions to mitigate unforeseen subcontractor issues necessary to begin MCO welding on schedule, impacts from a crane outage at T-Plant, and unplanned overtime and expenses for NDE Quality Assurance.

	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-RS03 Spent Nuclear Fuel	88,985	86,678	92,141	-2,307	-3%	-5,463	-6%	149,700

PERFORMANCE STATUS FYTD AND MONTHLY (\$000)



MILESTONE ACHIEVEMENT

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/Comments
M-34-29 (S15-02-001)	Complete K East Basin and K West Basin facility modifications for Alternate Fuel Transfer System casks transportation system	TPA	3/31/02	9/12/02		Complete
M-34-12-T01 (S15-02-001)	Complete construction of Sludge Water System (SWS) (Construction Completion Document Section IIA.)	TPA	09/30/02	3/4/03		Complete
M-34-17 (S00-02-901)	Initiate K East to K West fuel transfer	TPA/PI	11/30/02	11/25/02		Complete
M-34-18A (S03-03-068)	Complete removal of 957 MTHM of SNF from the K West Basin	TPA/DNFSB/PI	12/31/02	1/7/03		Complete

MILESTONE ACHIEVEMENT (CONTINUED)

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/Comments
M-34-08 (S04-02-205)	Initiate full scale K East basin sludge removal	TPA/DNFSB/PI	12/31/02		TBD	Contractor ORR started 4/23/03; suspended 4/27/03; recovery plans in progress.
M-34-27-T01 (S03-03-069)	Complete removal of 1252 MTHM of SNF from K West Basin	TPA	5/31/03		5/31/03	On schedule*
M-34-28 (S03-03-070)	Complete removal of 1619 MTHM from the K West Basin	TPA	12/31/03		12/31/03	On schedule*
M-34-25-T01 (S03-04-001)	Complete transfer of K East Basin SNF to K West Basin	TPA/PI	5/31/04		5/31/04	On schedule
M-34-18B (S00-00-902)	Complete removal of all K Basin SNF	TPA/DNFSB/PI	7/31/04		7/31/04	On schedule
M-34-10 (S04-01-215)	Complete sludge removal from K Basins	TPA/DNFSB/PI	8/31/04		8/31/04	On schedule*
M-34-23 (S10-99-953)	Start K East water removal	TPA	9/30/04		9/30/04	On schedule*
S07-04-005	Consolidate spent fuel in the 200 Area	PI	9/30/04		9/30/04	On schedule
M-34-09-T01 (S04-05-516)	Complete K Basins rack and canister removal	TPA	1/31/05		1/31/05	On schedule*
M-34-24 (S10-99-954)	Complete K East Basin Water removal	TPA	9/30/05		9/30/05	On schedule
M-34-22 (S10-99-952)	Complete K West Basin water removal	TPA	8/31/06		8/31/06	On schedule
M-34-21-T01 (S10-99-951)	Initiate full-scale K West Basin water removal	TPA	10/31/05		10/31/05	On schedule
S06-06-005	Transfer of K Basins to the River Corridor Contractor	PI	10/30/05		10/30/05	On schedule
M-34-00A (S10-99-955)	Complete removal of K Basin fuel/sludge/debris/water from K Basins	TPA (Major)	7/31/07		7/31/07	On schedule

NOTE: Above data includes all TPA milestones as included in the FH baseline and provides contract-to-date status.

* Working to an agreed path forward with DOE-RL and Environmental Protection Agency (EPA) to provide recommendations by June 30, 2003.

FY 2003 FH FUNDS VS FORECAST (\$000)

	Expected Funds	Spend Forecast	Variance
RL-RS03 Spent Nuclear Fuel	\$ 148,272	\$ 156,136	\$ (7,864)
Project Completion - Operating			

ISSUES

SNF Project SWS – K East: TPA Milestone M-34-08 to begin K East sludge movement by December 31, 2002 is behind schedule. The Environmental Protection Agency recently announced a \$76,000 penalty for missing the milestone. Conclusions from a Senior Management Assessment, initial dry run and operator feedback have resulted in the project working to a revised schedule date of May 12, 2003. The contractor ORR started April 23, 2003, and was suspended on April 27, 2003. Recovery plans are currently being developed to address procedural deficiencies, technical basis deficiencies, and readiness preparation adequacy. The contractor ORR is scheduled to restart on June 2, 2003.

TPA target milestone M-34-12-T01 to complete SWS construction, operational testing and approval of test results by September 30, 2002 was completed March 4, 2003.

Fuel Production – FTS Shipments: Removal of all K Basin fuel by July 31, 2004 from the basins is based upon the completion of FTS shipments by January 31, 2004. As of April 21, 2003, the project is 19 shipments behind schedule. The project continues to focus on resolving equipment failure issues, which are the primary source of FTS shipment delays. Delays resulting from trips to the jack screw continue to be evaluated. Measurements of the backlash associated with the jack screws were completed as part of the April 6-13, 2003 outage. The results required replacement of all eight jack screw traveling nuts. Replacement work is currently in progress and is estimated to be completed May 2, 2003.

K West Fuel Production: As of April 28, 2003, the project is approximately three MCO shipments and 30.5 MTHM ahead of schedule. The combination of equipment availability and additional time to complete fuel inspection requirements for the higher degraded K East fuel have impacted the production rates in K West. Focused monitoring of equipment performance for corrective actions prior to major failures and assessments of current inspection criteria and process alternatives should improve the production rates.

Spending Forecast: Emerging activities and project issues have been identified for inclusion in the SNF Project's spending forecast. These activities represent a potential cost growth of approximately \$7,864K. The SNF Project continues to evaluate and implement cost reduction actions (see CVDF cost savings initiatives shown in "Notable Accomplishments").