



Section G

Spent Nuclear Fuel

PROJECT MANAGERS

S.J. Veitenheimer, RL
(509) 373-9725

R.B. Heck, FH
(509) 373-0500

INTRODUCTION

The Spent Nuclear Fuel (SNF) Project consists of Project Baseline Summary (PBS) RL-RS03, Work Breakdown Structure (WBS) 3.2.3.

NOTE: Unless otherwise noted, all information contained herein is as of the end of February 2002.

Fiscal Year (FY) to date milestone performance (EA, HQ, and RL) shows no milestones due, one milestone on schedule, and one milestone forecasted late.

NOTABLE ACCOMPLISHMENTS

Fuel Movement Activities — During this reporting period, four Multi-Canister Overpacks (MCOs) containing 18.48 Metric Tons of Heavy Metal (MTHM) were shipped from K West (KW). Cumulatively to date, 47 MCOs containing 220.55 MTHMs have been shipped. The SNF Project is currently fifteen days behind schedule to move 720.1 MTHMs by the end of FY 2002.

Facility Activities — Activities included:

- The Cold Vacuum Drying Facility (CVDF) has completed and implemented a Safety Analysis Report (SAR) change addressing a low wattage MCO issue. The change was completed and implemented in only five days.

K Basins Construction Projects — Activities conducted during this reporting period included:

- Continue fabrication of the Fuel Transfer System (FTS) lift tables, straddle carriers, and rails.
- Erected annex structural steel at K East (KE).
- Continued work to erect of annex structural steel at KW.
- Continued progress of KE and KW facility modifications.
- Completed Sludge Water in-basin 60 percent design review.
- Received FTS cask trailers.

Sludge Handling Modification Activities — Activities included:

- Received the first set of secondary containment/rack system and leveling frame, work platform, sump pump supports, leak detector supports, work platform, load cell lifting device and support from Monarch Machine.
- Completed modifications to the auxiliary 10-ton crane at T Plant, which is needed to support construction activities. Successfully performed load test of the crane.
- Issued a draft Waste Acceptance Criteria for the Storage of KE Basin Sludge at T Plant for review.

Site-Wide Activities — Activities included:

- Implemented 200 Area Interim Storage Area (ISA) authorization basis.
- Conducted initial Neutron Radiography Facility (NRF) Training, Research and Isotope Production, General Atomics (TRIGA) receipt of fuel dry run at 200 Area ISA. Modified the work package to incorporate feedback from the dry run.
- RL Issued Safety Evaluations Reports for NRF TRIGA Cask Analysis Report for Packaging (SARP) and NAC-1 Cask Safety SARP.

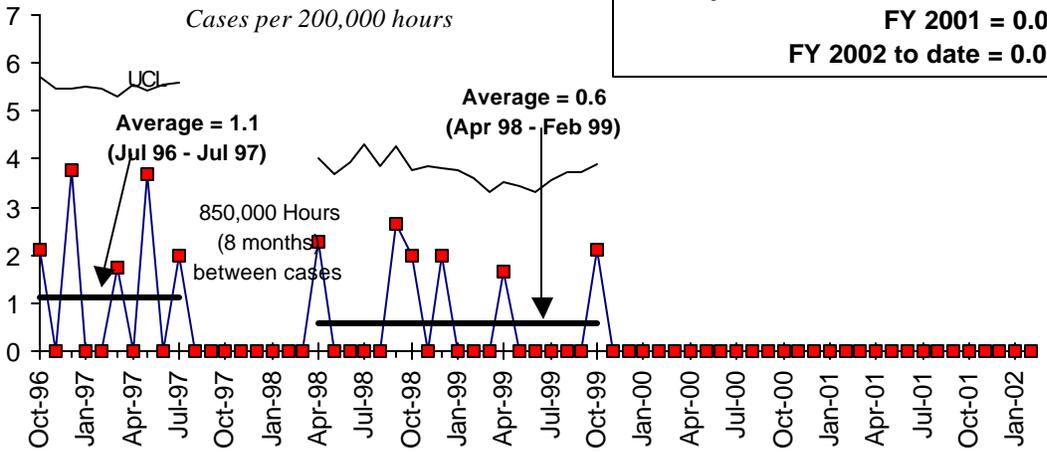
100K Deactivation — Placed contract with Pacific Northwest National Laboratory (PNNL) for development of Non-Destructive Examination equipment for KE Basin wall dose data.

SAFETY

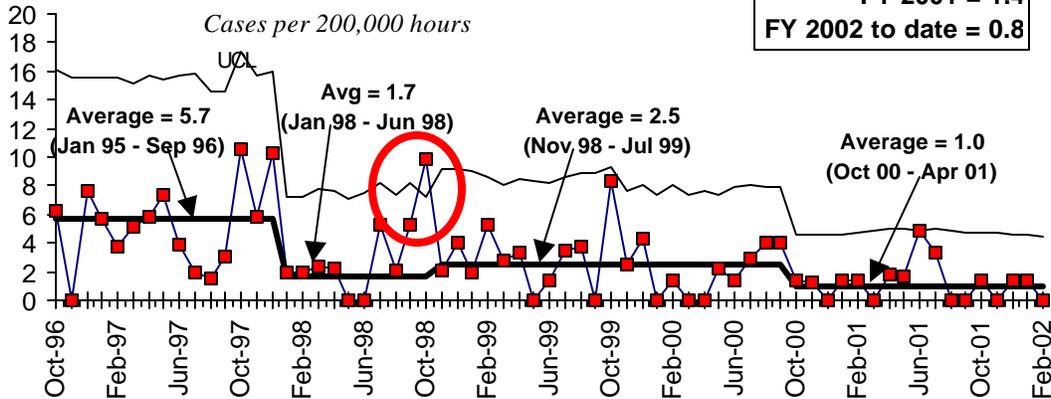
The SNF Project achieved four million safe work hours without a lost time injury on February 6, 2002. This achievement represents approximately 22 months of sustained safe work and can be attributed to the effective implementation of the Integrated Safety Management System (ISMS) core functions of management commitment and worker involvement. Safe hours without a lost time injury as of February 28, 2002 are 4.147 Million.

SAFETY (CONTINUED)

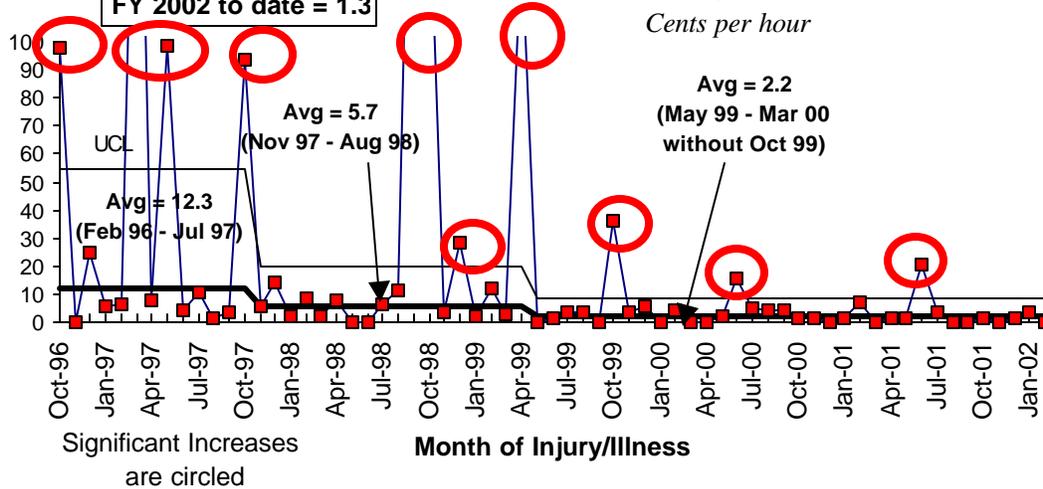
Lost Away Workday Case Rate



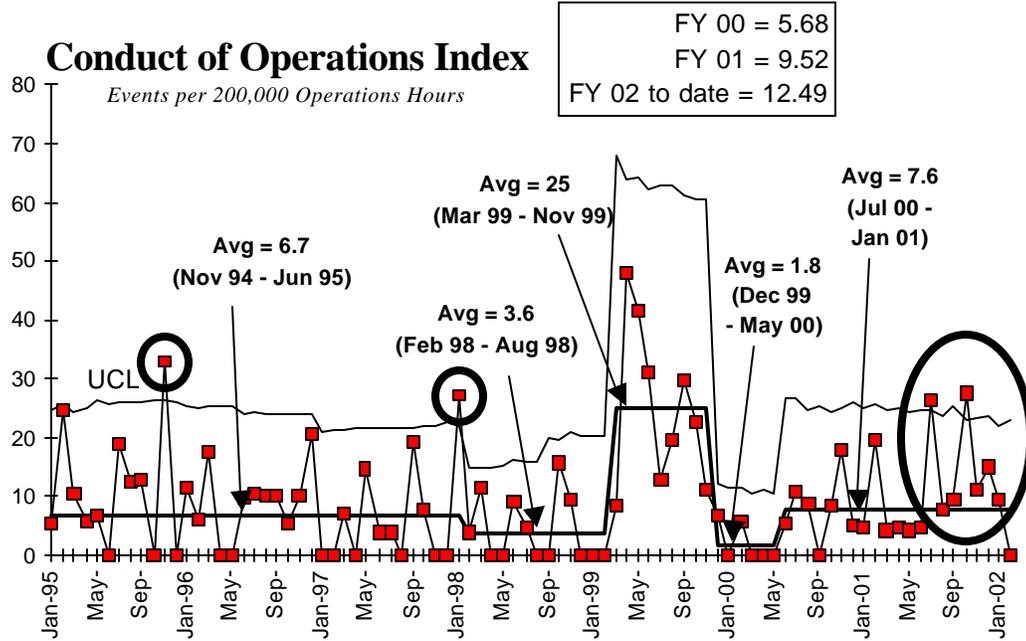
OSHA Recordable Case Rate



DOE Safety Cost Index



CONDUCT OF OPERATIONS



In an effort to raise the Project's focus on worker safety and conduct of operations, a weekly review of lessons learned and occurrence reports is conducted at the opening of the SNF Project senior staff meeting. The project continues to emphasize worker safety and conduct of operations with all project personnel. The SNF Project is updating the Conduct of Operations Applicability Matrix. Two additional assessments are underway: the first is on Interlocks and their potential impact, and the second on Conops. Both are being performed with off-project personnel. Corrective actions will be developed as appropriate.

BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

Breakthroughs

Cold Vacuum Drying Facility (CVDF) Fuel Processing / Production Improvements — The CVDF continues to assess and implement processing and production improvements. A SAR change addressing a low wattage MCO issue was completed and implemented in only five days. The average processing time for the past four MCOs is 63.9 hours, 26.1 working hours under the 90 working hour target.

Opportunities for Improvement

SNF Project Equipment Reliability / KW Fuel Production — Equipment reliability continues to be a major factor in the production and processing of fuel at KW. The current average processing time is 64.1 working hours, 19.1 working hours over the required target processing time of 45 working hours. The equipment reliability issue is being addressed through the SNF Project Availability Assessment Document (SNF-9273). This assessment plan was presented to DOE-HQ EM-40 representatives and provides a plan of action to solving the equipment reliability. Weekly follow-up meetings for equipment reliability continue to address these issues.

UPCOMING ACTIVITIES

Site-wide Activities — Complete 200 Area ISA Readiness Assessments, Dry Runs/Operations Drills by March 2002.

KE and KW FTS Facility Modifications — Complete KE and KW facility modifications for the FTS System by April 4, 2002. (March 15, 2002 expected completion date identified during the previous reporting period was extended due to the FMP and work package approval processes taking longer than planned).

Sludge Water System (SWS) — Complete KE in-basin equipment design 90 percent submittal by April 8, 2002.

KE and KW Fuel Transfer System (FTS) Annexes — Substantially complete by April 10, 2002. (April 1, 2002 expected completion date identified during the previous reporting period, was extended due to weather delays and final subcontractor negotiations.)

T Plant Fuel Shipment — Ship first T Plant fuel to Canister Storage Building (CSB) in May 2002.

FTS Construction — Complete construction of the FTS by June 1, 2002.

100K Deactivation — Complete walkdown and establish end point criteria for all SNF 100K Area facilities by June 30, 2002.

200 Area ISA Pad Readiness Status — Receive initial Light Water Reactor fuel in August 2002.

MILESTONE ACHIEVEMENT FH Contract Milestones

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/Comments
M-34-06-T01	"Initiate K West Basin Spent Nuclear Fuel Canister Cleaning Operations"	TPA	08/31/01		3/15/02	Will complete March 15
M-34-16	Initiate Removal of K West Basin Spent Nuclear Fuel	ALL	11/30/00	12/7/00		Complete
M-34-29	Complete KE Basin and KW Basin Facility Modifications for AFTS Casks Transportation System	TPA	3/31/02		06/01/02	Late delivery of transfer system design and equipment, and unforeseen underground conditions at both basins.
M-34-12-T1	Complete Construction of SWS	TPA	09/30/02		09/30/02	On Schedule
M-34-17	Initiate KE to KW Fuel Transfer	TPA	11/30/02		11/30/02	On Schedule
M-34-18A	Complete Removal of 190 MCOs of SNF from the KW Basin.	TPA/DNFSB	12/31/02		12/31/02	On Schedule
M-34-08	Initiate Full Scale KE Basin Sludge Removal	TPA/DNFSB	12/31/02		12/31/02	On Schedule
M-34-28	Complete Removal of 311 MCOs from the KW Basin	TPA	12/31/03		12/31/03	On Schedule
M-34-18B	Complete Removal of all K Basin SNF	ALL 3	7/31/04		7/31/04	On Schedule
M-34-10	Complete Sludge Removal from K Basins	ALL 3	8/31/04		8/31/04	On Schedule
M-34-23	Start KE Water Removal	TPA	9/30/04		9/30/04	On Schedule
M-34-09-T01	Complete K Basins Rack & Canister Removal	PI	1/31/05		1/31/05	On Schedule
M-34-24	Complete KE Basin Water Removal	TPA	9/30/05		9/30/05	On Schedule
S06-06-006	Complete K Basin Water Removal	PI	4/30/06		4/30/06	On Schedule
M-34-22	Complete KW Basin Water Removal	TPA	8/31/06		8/31/06	On Schedule
S06-06-004	Complete Transition Activities for CVD and Other Facilities	PI	9/30/06		9/30/06	On Schedule
S06-06-005	Transfer of K Basins to the River Corridor Contractor	PI	9/30/06		9/30/06	On Schedule

NOTE: Above data includes all TPA/DNFSB/Performance Incentive milestones as included in the FH baseline, and provides Contract-to Date status.

PERFORMANCE OBJECTIVES

Move Fuel Away from the River

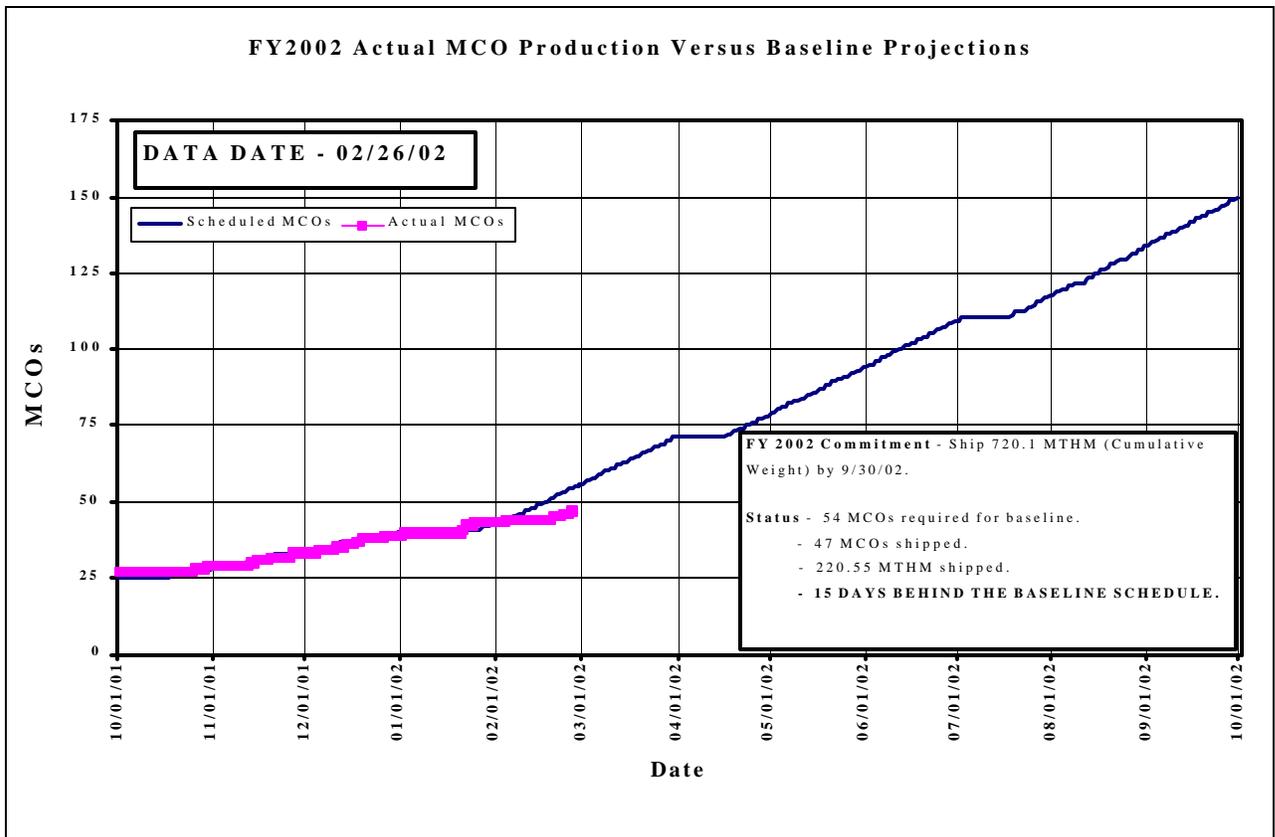
EXPECTATION: Remove spent fuel from K Basins

Move 720.1 Metric Tons Heavy Metal from KW Basin by end of FY 2002

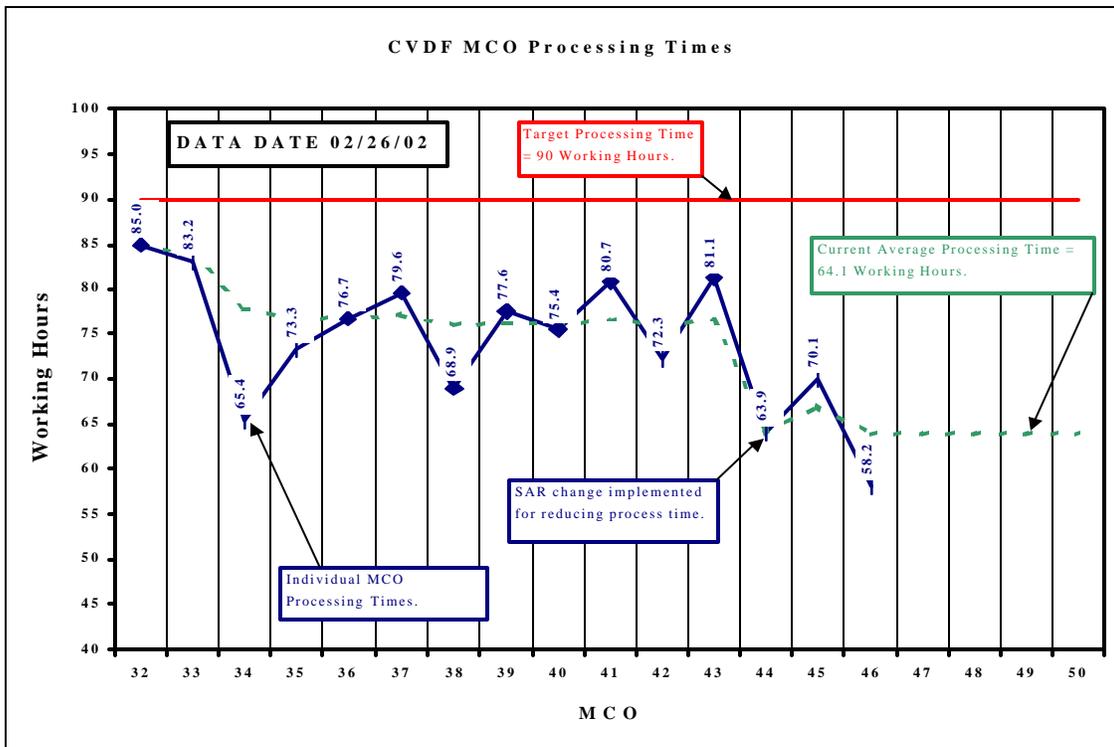
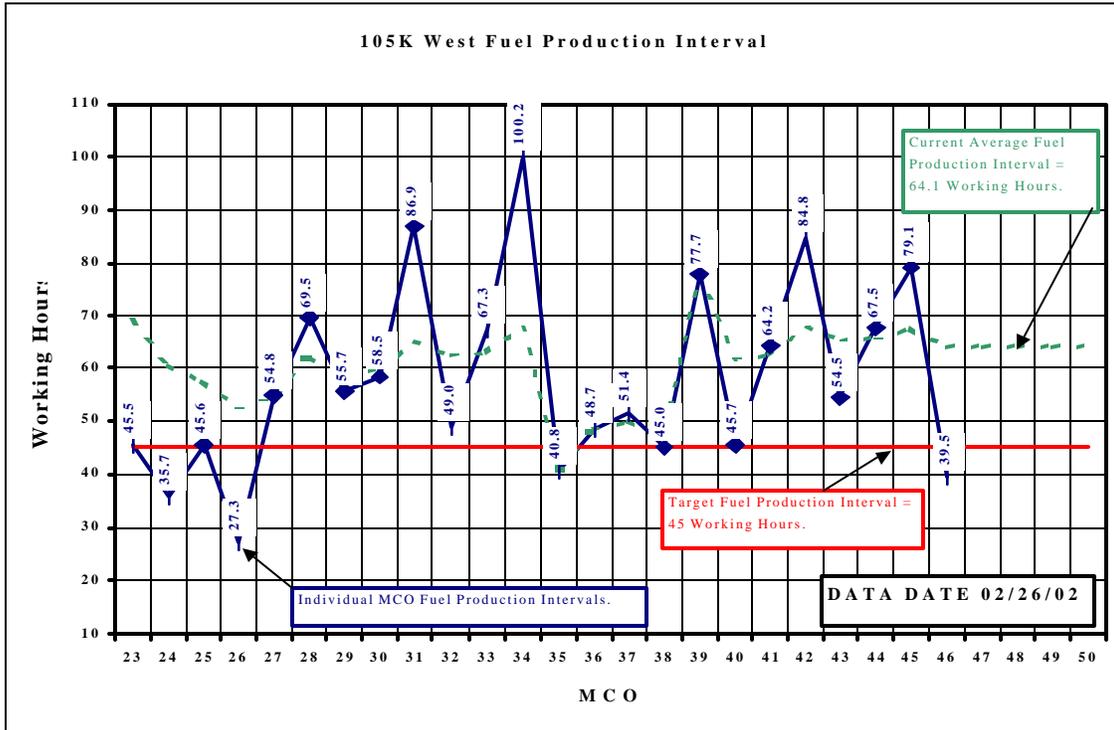
Status: A cumulative total of 47 MCOs containing 220.55 MTHM have been shipped. Currently fifteen days (7 MCOs, 32.44 MTHM) behind the baseline schedule.

Complete construction on Fuel Transfer System (FTS) by March 30, 2002

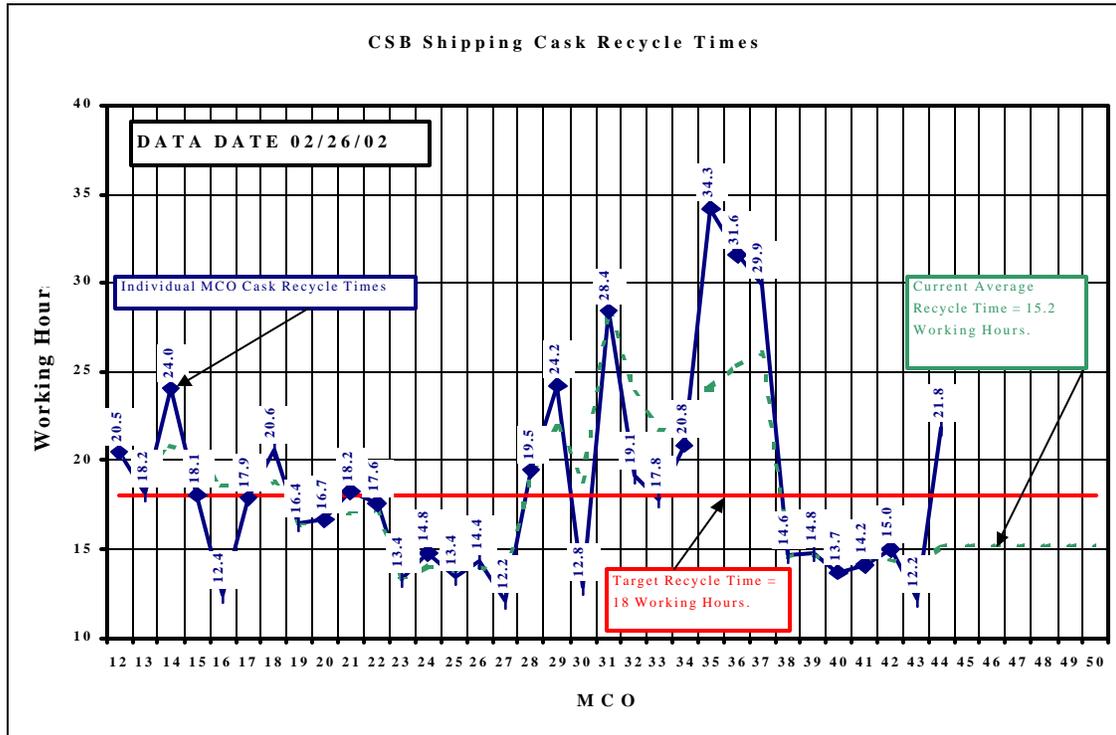
Status: Forecast completion of June 1, 2002 due to late delivery of transfer system design and equipment, and unforeseen underground conditions at both basins.



PERFORMANCE OBJECTIVES (CONTINUED)



PERFORMANCE OBJECTIVES (CONTINUED)



SCHEDULE / COST PERFORMANCE – ALL FUND TYPES FY TO DATE STATUS (\$000)

		FYTD							
By PBS		BCWS	BCWP	ACWP	SV	%	CV	%	BAC
PBS RS03 WBS 3.2.3.1	SNF Project, 100 K Basins	\$ 47,565	47102	\$ 48,466	\$ (463)	-1%	\$ (1,364)	-3%	\$ 117,249
PBS RS03 WBS 3.2.3.2	Canister Storage Building (to2004)	\$ 4,225	\$ 4,332	\$ 3,768	\$ 107	3%	\$ 564	13%	\$ 10,016
PBS RS03 WBS 3.2.3.3	200 Intrim Storage Area (to2004)	\$ 870	\$ 739	\$ 593	\$ (131)	-15%	\$ 146	20%	\$ 2,935
PBS RS03 WBS 3.2.3.4	SNF Project Management and Support	\$ 16,125	\$ 16,077	\$ 15,497	\$ (48)	0%	\$ 580	4%	\$ 41,200
Total		\$ 68,785	\$ 68,250	\$ 68,324	\$ (535)	-1%	\$ (74)	0%	\$ 171,400

FY TO DATE SCHEDULE / COST PERFORMANCE

The SNF Project FYTD unfavorable schedule variance is primarily driven by FTS construction, SWS engineering, canister cleaning and fuel removal. The unfavorable cost variance is primarily due to work delays and additional scope in FTS construction/engineering, SWS engineering and procurement, canister cleaning, and facility maintenance and operations.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, FYTD Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

Schedule Variance Analysis: (-\$0.5M)

3.2.3.3 200 Area Intrim Storage (-\$0.1M)

Description /Cause: The unfavorable 15 percent schedule variance is primarily due to delays in the transfer of PWR Core.

Impact: None to report.

Corrective Action: None required.

Cost Variance Analysis: (+\$0.1M)

3.2.3.1 SNF Project, 100K Area (-\$1.4M)

Description /Cause: The unfavorable 3 percent schedule variance is primarily due to emergent work in FTS and SWS.

Impact: None to report.

Corrective Action: None required.

3.2.3.2 Canister Storage Building (+\$0.6M)

Description/Cause: The favorable 13 percent cost variance is primarily due to underruns for good performance.

Impact: None to report.

Corrective Action: None required.

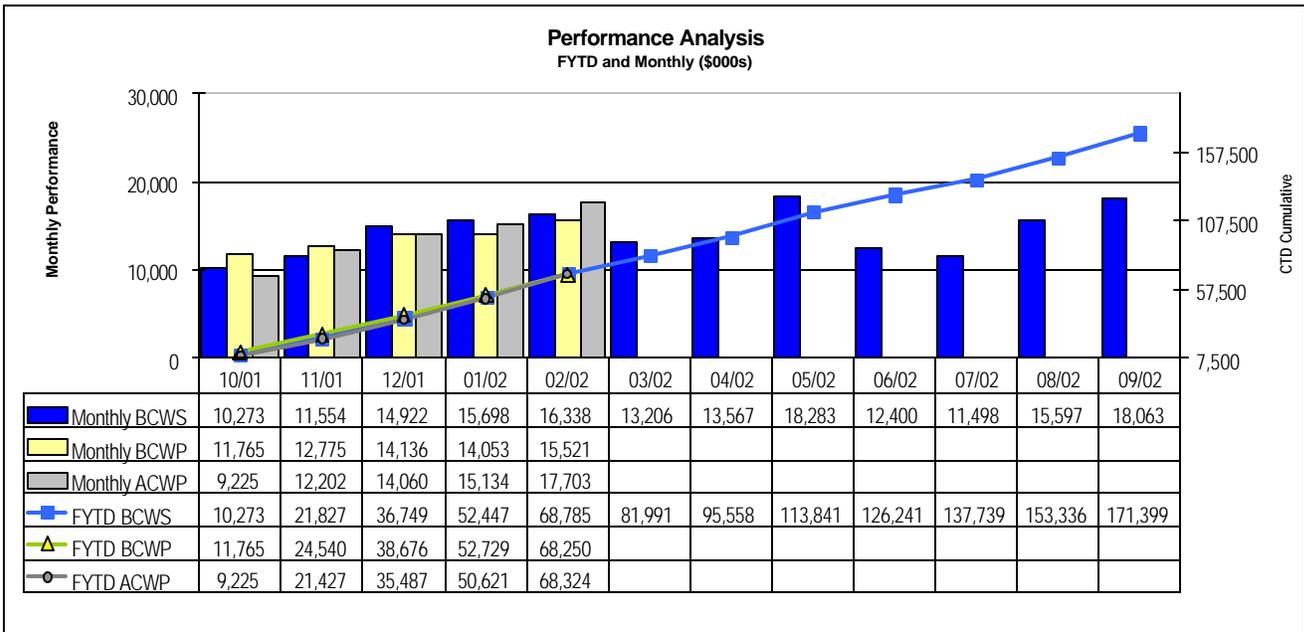
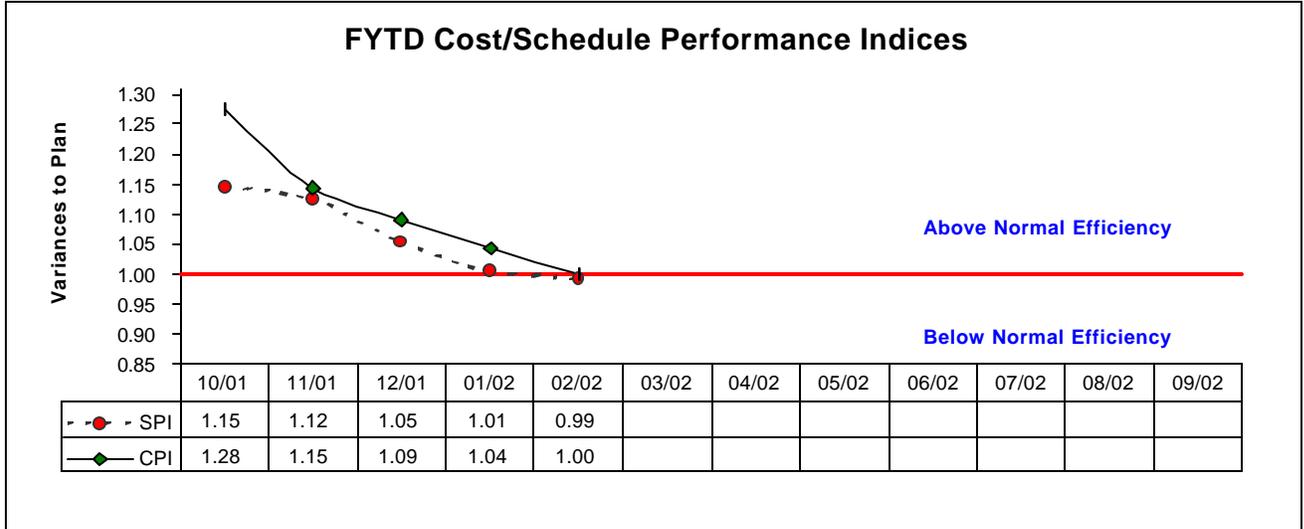
3.2.3.3 200 Intrim Storage Area (+\$0.1M)

Description/Cause: The favorable 20 percent cost variance is primarily due to underruns for good performance.

Impact: None to report.

Corrective Action: None required.

Schedule / Cost Performance (Fiscal Year to Date and Monthly)



FUNDS MANAGEMENT – FY 2002 TO DATE FUNDS VS SPENDING FORECAST (\$000)

	FH Funds Reallocation	FYSF	Variance
3.2.3 Spent Nuclear Fuel			
RS03			
Project Completion - Operating	\$ 177,894	\$ 181,333	\$ (3,439)
Total	\$ 177,894	\$ 181,333	\$ (3,439)

ISSUES

Technical Issues

Issue: Pre-existing conditions and equipment fabrication at KE and KW have held up design and construction at the annexes.

Impact: Potential impact to Milestone M34-29, due March 31, 2002, and project cost.

Corrective Action: Completed vendor evaluations and selected vendor. At this time, there is a high probability of meeting April 30, 2002. Have incentivized vendor. Current date for receipt of equipment is April 17, 2002.

Issue: Nuclear Safety review of SWS.

Impact: KE canisters sludge cask, container and transporter fabrication.

Corrective Actions: Plan developed to meet project needs for fabrication of cask, container and transporter, as well as a plan for in basin design support to be reviewed and agreed with RL for path forward. Additional project management support has been added from the FH Project Operations Center and Nuclear Safety functions. This action is nearly complete and agreement on a path forward is agreed to with RL. No impact is expected on construction completion scheduled for September 30, 2002.

Issue: Equipment reliability continues to be a major concern for sustaining fuel movement.

Impact: Continued equipment failures may negatively impact meeting fuel movement commitments.

Corrective Actions:

- Developed detailed schedules and scopes for 99 percent of items requiring upgrades, re-design work.
- 85 percent of the management assessment action items that require spares have been integrated into SNF spares program.
- 52 percent of the management assessment action items are complete with the recommendations having been implemented.

Regulatory, External, and DOE Issues and DOE Requests

None to report.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

None to report.