



Section G

Spent Nuclear Fuel

PROJECT MANAGERS

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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, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of November 30, 2001. All other information is as of December 18, 2001, unless otherwise noted.

Fiscal Year (FY) to date milestone performance (EA, HQ, and RL) shows two milestones due during FY 2002.

NOTABLE ACCOMPLISHMENTS

Fuel Movement Activities — As of December 18, 2001, 37 Multi-Canister Overpacks (MCOs) containing 174.02 Metric Tons of Heavy Metal (MTHM) have been removed from K West (KW) Basin (five MCOs, 23.48 MTHM this reporting period).

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

- Awarded the contract for the fabrication of the Fuel Transfer System (FTS) lift tables, straddle carriers and rails.
- Mobilized and began FTS annex construction.
- Completed excavation at K East (KE) and KW annex areas.
- Awarded a contract for the fabrication of the FTS transport trailers.
- Awarded a contract for the road work from KE to KW. Execution of the work is pending good weather.
- Completed Sludge Water System "Proof of Performance Test" successfully.
- Completed Sludge Water 30 percent design.

Site-Wide SNF Project Activities — Activities included:

- Readiness to receive Shippingport fuel at the Canister Storage Building (CSB) formally demonstrated.
- SNF Project corrective actions associated with T Plant fuel removal ORR completed and submitted to Waste Management Project.
- 200 Area Interim Storage Area (ISA) operations and emergency response procedures approved.
- Safety Evaluation Report (SER) for 200 Area ISA annual update issued by RL.
- Informal RL comments incorporated on Neutron Radiography Facility (NRF) Training, Research and Isotope Production, General Atomics (TRIGA) Cask Safety Analysis Report for Packaging (SARP) RadVault for NRF TRIGA fuel shipped from General Technical Services (GTS) Duratek in South Carolina.

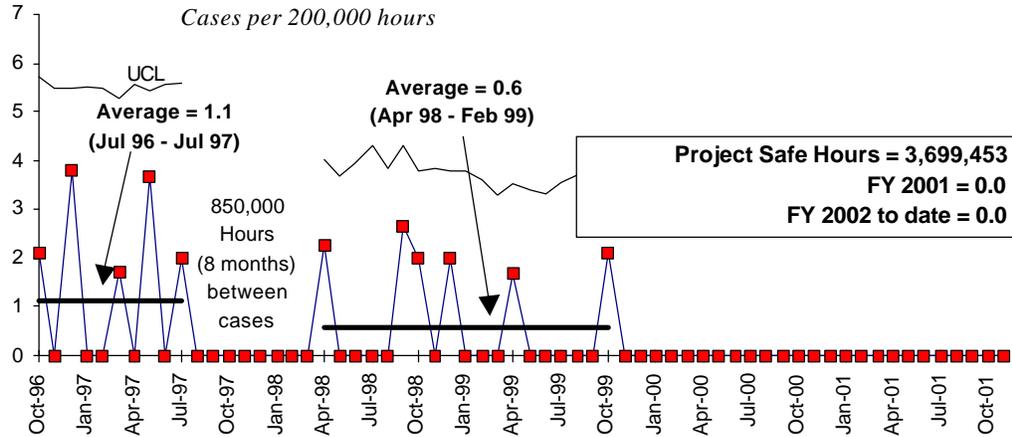
SAFETY



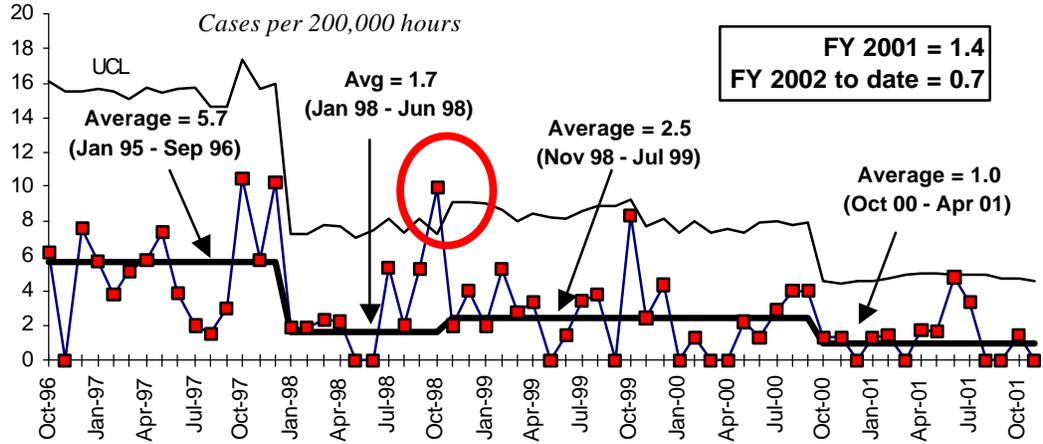
No Lost Away Workday injuries were reported within the SNF Project, thus allowing an achievement of 3.7 million safe work hours by the end of November. This performance can be attributed to the effective implementation of the Integrated Safety Management (ISM) System core functions of management commitment and worker involvement.

SAFETY (CONTINUED)

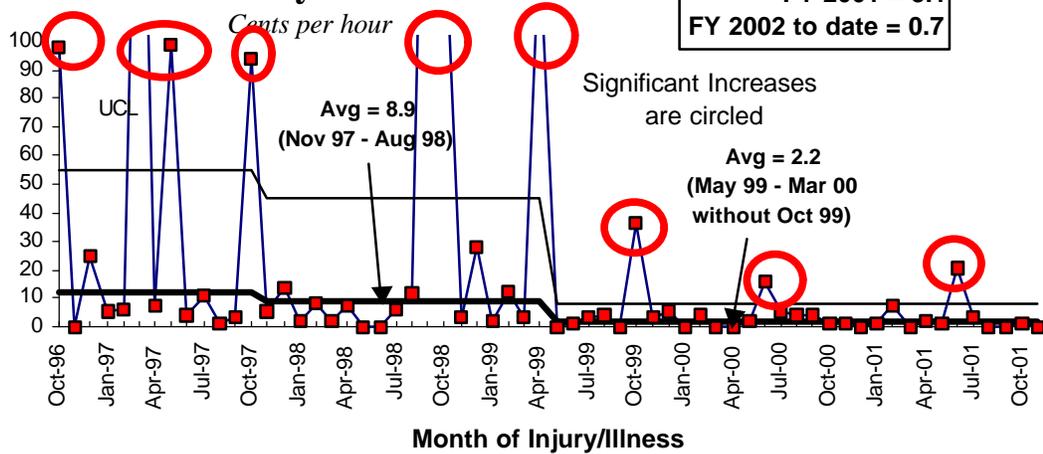
Lost Away Workday Case Rate



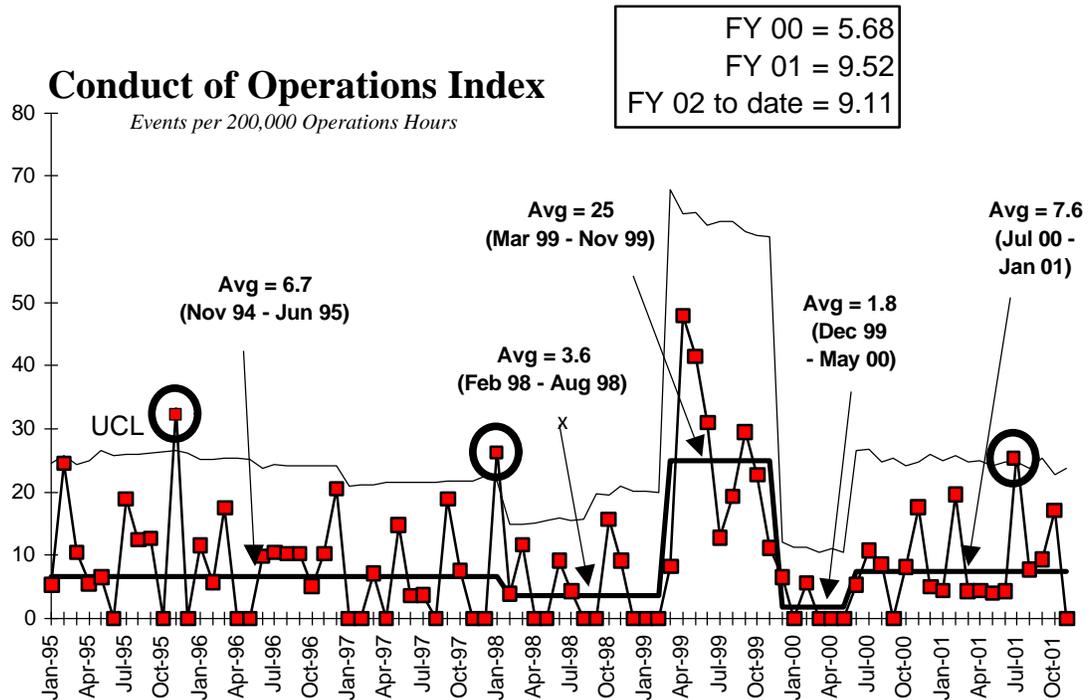
OSHA Recordable Case Rate



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.

BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

Breakthroughs

SNF Equipment Reliability — The SNF Project Availability Assessment Document (SNF-9273) was approved and issued. This assessment plan was presented to HQ EM-40 representatives for their review. The consensus of the HQ team was that it would provide a major step forward in solving the SNF equipment reliability if it was properly implemented. The first weekly implementation status meeting was held on December 19, 2001 with the Design Authorities to evaluate, progress and issues in acquiring identified spares.

Opportunities for Improvement

Modify Cold Vacuum Drying Facility (CVDF) Process — Modify the CVDF process to reduce the number of thermal resets and relax the criteria to enter "Proof of Dryness" testing.

UPCOMING ACTIVITIES

NRF TRIGA RadVault — Receive NRF TRIGA RadVault by December 2001.

Canister Cleaning Testing — Complete canister cleaner start-up testing by December 21, 2001.

KW Outage — Perform KW Maintenance Outage in January 2002.

Canister Cleaning Operations — Initiate canister removal by January 7, 2002.

KW 24/7 Shift — Implement KW 24/7 Shift Implementation by January 14, 2002.

200 Area ISA Authorization Basis — Implement 200 Area ISA Authorization Basis in February 2002.

MCO Shipments — Continue MCO shipments through FY 2002.

MILESTONE ACHIEVEMENT

Green

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/Comments
M-34-06-T01	Initiate KW Basin SNF Canister Cleaning Operations.	RL	12/31/00		1/7/01	Delays resulted from design process improvements. No impact to operations.
M-34-16	Initiate Removal of KW Basin SNF.	TPA	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		3/31/02	Unforeseen underground conditions at both basins. Work-arounds are being discussed with the subcontractor to meet the milestone.
M-34-12-T01	Complete construction of KE Basin Sludge and Water System to support SNF removal.	RL	9/30/02		9/30/02	On Schedule

MILESTONE ACHIEVEMENT (CONTINUED)

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/Comments
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 and 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.

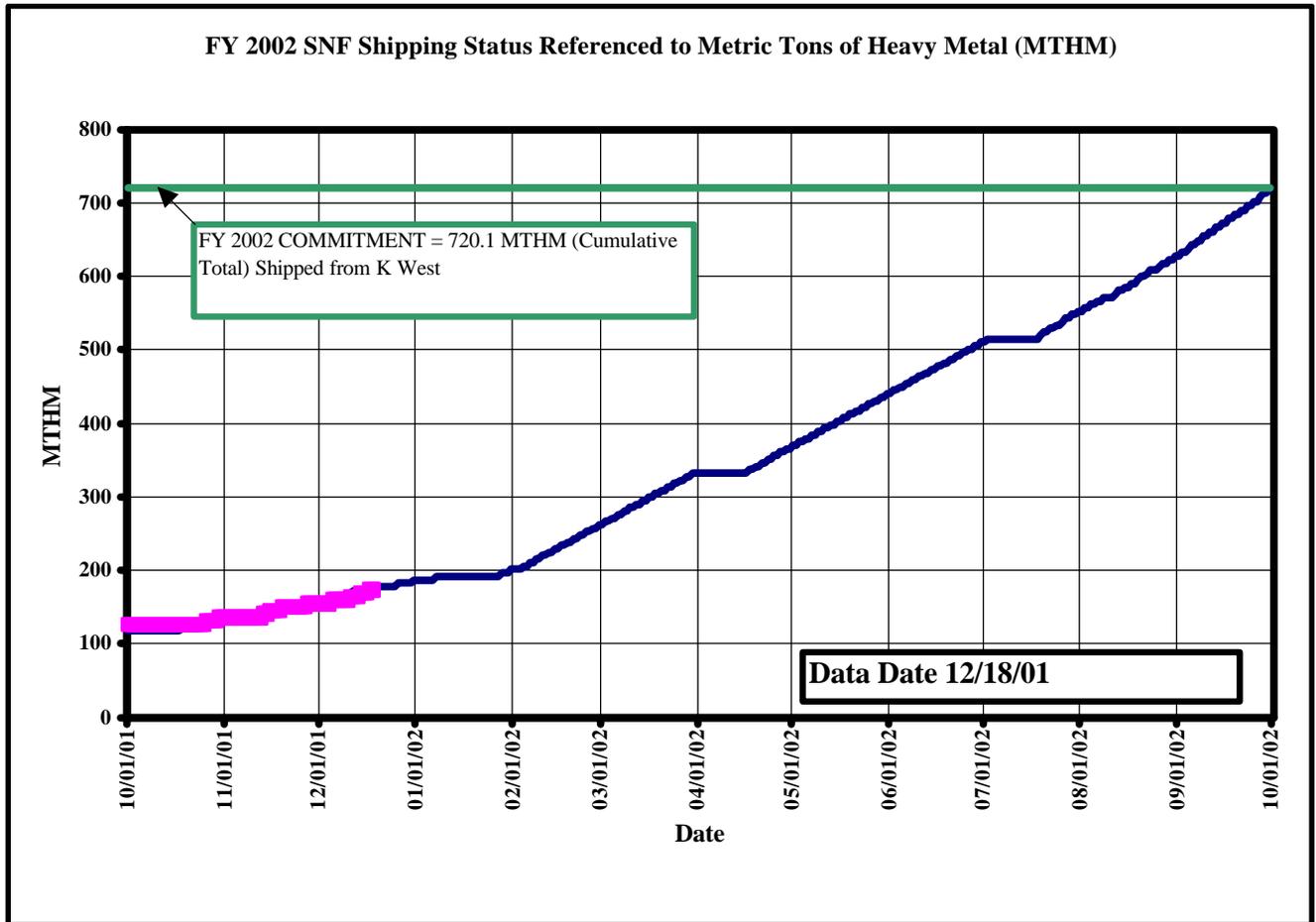
Performance Objectives

Move Fuel Away from the River

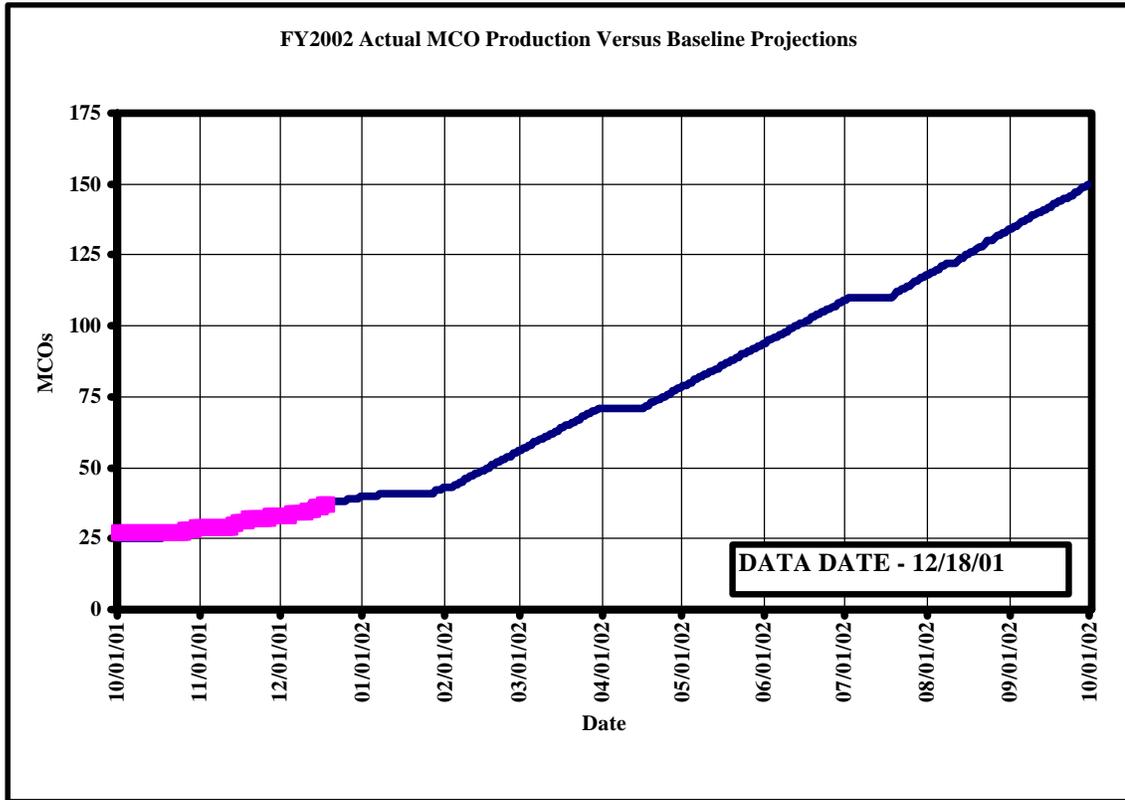
EXPECTATION: Remove spent fuel from K Basins

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

Status: A cumulative total of 37 MCOS containing 174.02 MTHM have been shipped. Currently three working days (one MCO, 4.01 MTHM) behind the baseline schedule.

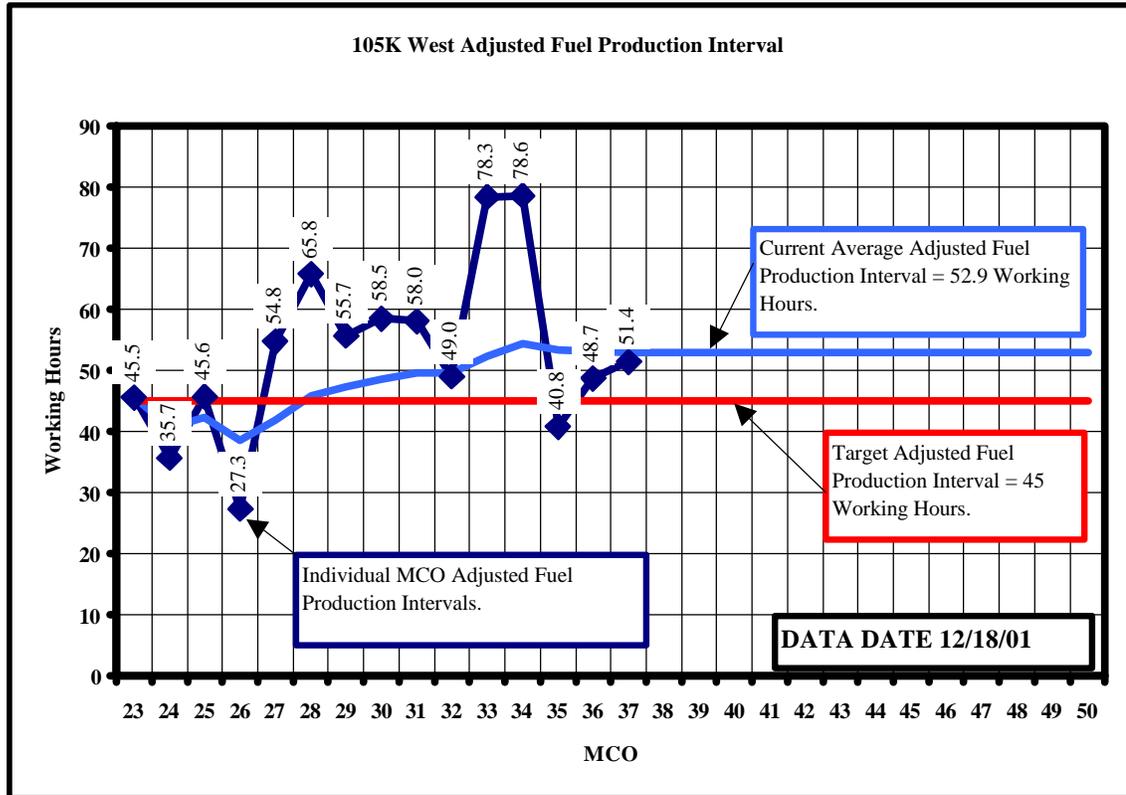


Performance Objectives (Continued)



Baseline requirements for 12/18/01: 38 MCOs, 178.03 MTHM.
SNF Project Status as of 12/18/01: 37 MCOs, 174.02 MTHM.

Performance Objectives (Continued)

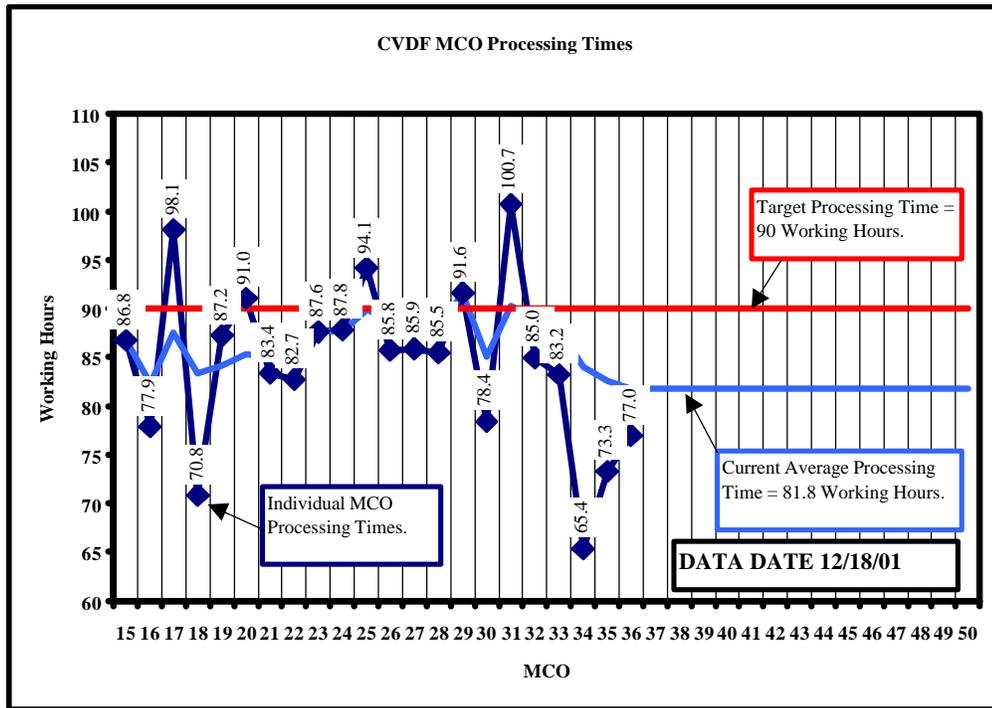


The current adjusted fuel production interval for 105 KW is 52.9 working hours. This fuel production interval has been adjusted by removing production time lost as a result of equipment failures caused by non-repetitive design errors/issues.

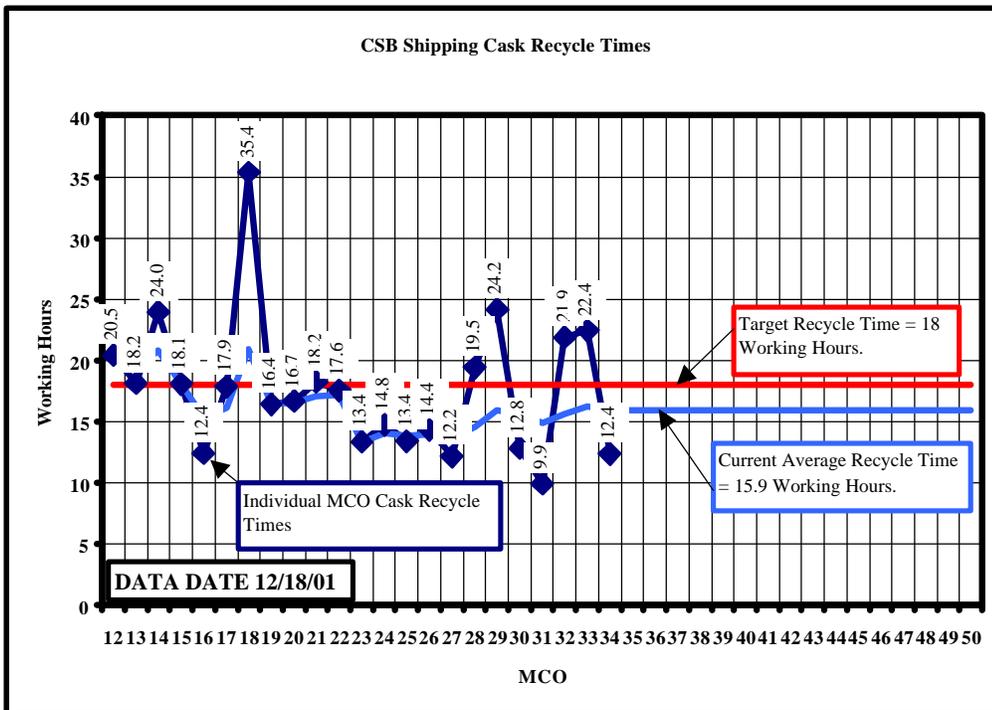
The adjusted production interval of 52.9 working hours is 7.9 working hours greater than the desired target interval of 45 working hours. This higher than normal average was primarily caused by a number of reasons:

- MCOs 28 through 34 - For the production period including these MCOs, a large number (>32) of new Operators were being qualified for MCO production through the On-The-Job Training process.
- MCO 33 and 34 – These MCOs contained fuel that was badly broken and required many assemblies to be pieced together in the fuel basket.

Performance Objectives (Continued)



The current average CVDF MCO Processing Time is 81.8 working hours, 8.2 working hours under the desired target time of 90 working hours.



The current average cask cycle time for CSB is 15.9 working hours, 2.1 working hours under the desired target time of 18 working hours. The peak time that occurred for MCO 18 was caused by a malfunction of a limit switch in the MCO Handling Machine.

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

		FYTD									
By PBS		BCWS	BCWP	ACWP	SV	%	CV	%	BAC	EAC	
PBS RS03 WBS 3.2.3.1	SNF Project, 100 K Basins	\$ 13,733	16088	\$ 14,285	\$ 2,355	17%	\$ 1,803	11%	\$ 113,474	\$ 113,474	
PBS RS03 WBS 3.2.3.2	Canister Storage Building (to2004)	\$ 1,539	\$ 1,710	\$ 1,470	\$ 170	11%	\$ 240	14%	\$ 9,867	\$ 9,867	
PBS RS03 WBS 3.2.3.3	200 Intrim Storage Area (to2004)	\$ 220	\$ 381	\$ 219	\$ 162	74%	\$ 162	43%	\$ 2,935	\$ 2,935	
PBS RS03 WBS 3.2.3.4	SNF Project Management and Support	\$ 6,335	\$ 6,361	\$ 5,453	\$ 26	0%	\$ 908	14%	\$ 42,162	\$ 42,162	
Total		\$ 21,827	\$ 24,540	\$ 21,427	\$ 2,713	12%	\$ 3,113	13%	\$ 168,439	\$ 168,439	

FY TO DATE SCHEDULE / COST PERFORMANCE

The SNF FYTD favorable schedule variance is primarily driven by making up progress on items that were behind schedule at the close of FY 2001. The favorable cost variance is primarily driven by under runs associated with new hires and under runs in the project direction account. Overall the trend is not expected to continue as SNF continues to ramp up for 24/7 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: (+\$2.7M)

3.2.3.1 100 K Basins (+\$2.4M)

Description /Cause: The favorable 17 percent schedule variance is primarily due to making up progress on items that were behind schedule at the close of FY 2001.

Impact: None to report.

Corrective Action: None required.

3.2.3.2 Canister Storage Building (+\$0.2M)

Description /Cause: The favorable 11 percent schedule variance is primarily due to making up progress on items that were behind schedule at the close of FY 2001.

Impact: None to report.

Corrective Action: None required.

3.2.3.3 200 Area Interim Storage (+\$0.2M)

Description /Cause: The favorable 74 percent schedule variance is primarily due to making up progress on items that were behind schedule at the close of FY 2001.

Impact: None to report.

Corrective Action: None required.

Cost Variance Analysis: (+\$3.1M)

3.2.3.1 100 K Basins (+\$1.8)

Description/Cause: The favorable 11 percent cost variance is primarily due to under runs associated with new hires for 24/7 operations.

Impact: None to report.

Corrective Action: None required.

3.2.3.2 Canister Storage Building (+\$0.2)

Description/Cause: The favorable 14 percent cost variance is primarily due to under runs associated with new hires for 24/7 operations.

Impact: None to report.

Corrective Action: None required.

3.2.3.3 200 ISA (+\$0.2M)

Description/Cause: The favorable 43 percent cost variance is primarily due to under runs associated with new hires for 24/7 operations.

Impact: None to report.

Corrective Action: None required.

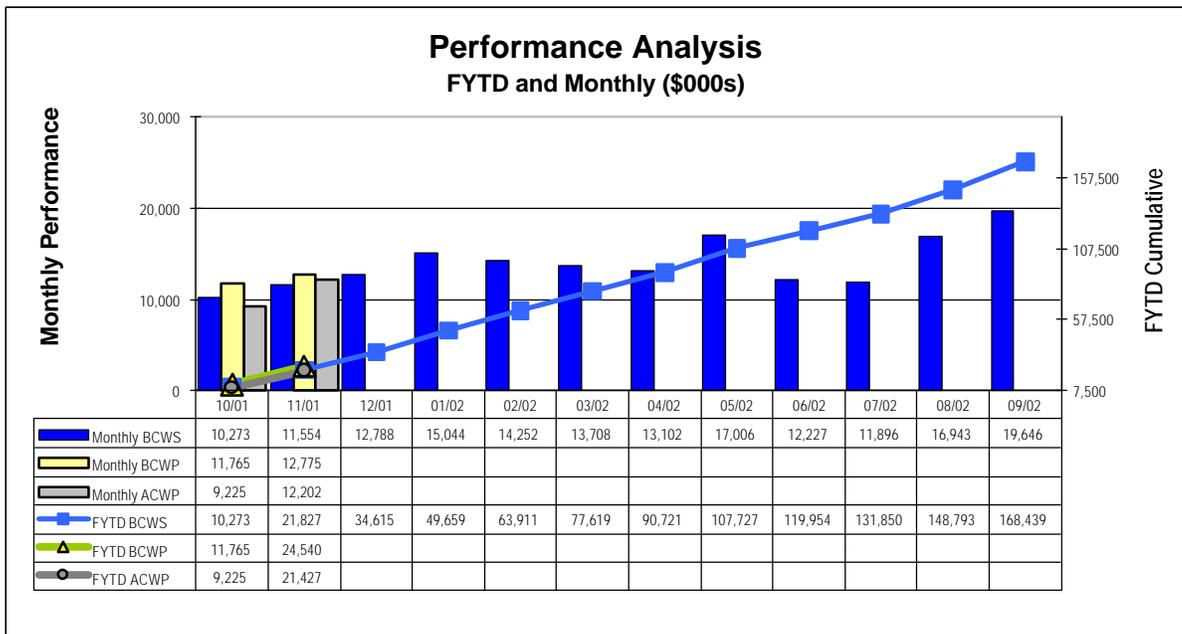
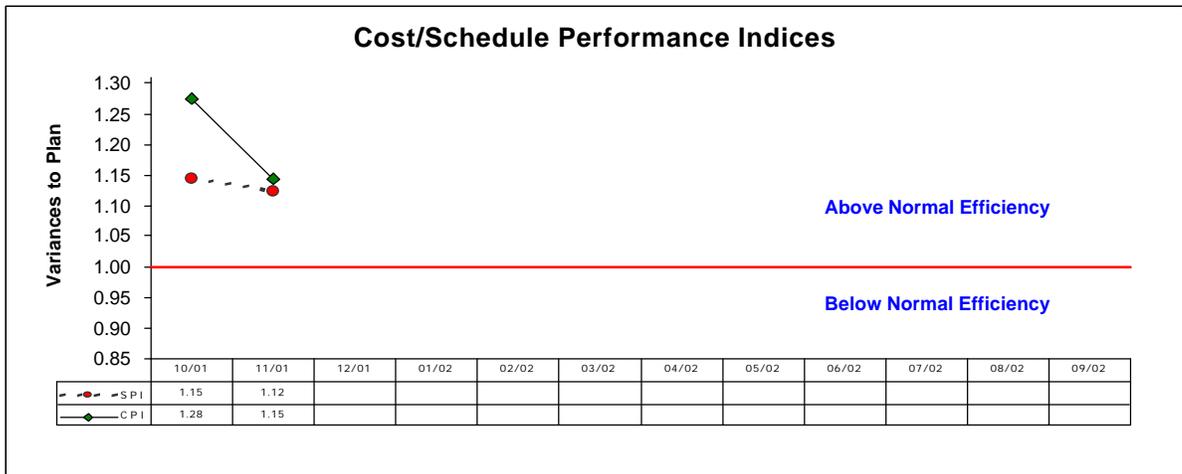
3.2.3.4 SNF Project Management and Support (+\$0.9M)

Description/Cause: The favorable 14 percent cost variance is primarily due to under runs in the project direction account.

Impact: None to report.

Corrective Action: None required.

SCHEDULE / COST PERFORMANCE (FISCAL YEAR TO DATE AND MONTHLY)



ISSUES

Technical Issues

Issue: Operations ramp-up for full scale fuel movement continues to be a challenge.

Impact: Hiring and retention of key resources at SNF are a concern given competing demands at Hanford.

Corrective Action: The SNF Project plans to go to 24/7 schedule on January 14, 2002. The recruitment of key personnel critical to meeting the fuel production schedule continues, and the resource candidate pool appears to be sufficient. Efforts to interview, hire, train and qualify Nuclear Process Operators, and identify and select Operating Engineers is near complete.

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 Action: Reliability Evaluation is complete. Actions are being taken to implement recommendations. Examples: 1) Knock-Out Pot (KOP) on order; 2) Stingers on order; and 3) replacement pump should be received before January 1, 2002.

Issue: Pre-existing conditions at KE and KW are holding up design and construction at annexes.

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

Corrective Action: Evaluations are being finalized to assess potential impacts to Milestone M34-29. Work-arounds are being discussed with the subcontractor to make every effort to meet the milestone.

Issue: Lift table and straddle carrier delivery date.

Impact: Potential Impact to Milestone M34-29 March 31, 2002.

Corrective Action: Vendor selected, and incentivized to support Project needs.

Regulatory, External, and DOE Issues and DOE Requests

None to report.

Baseline Change Requests Currently in Progress

None to report.