Section F

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, all information contained herein is as of the end of November 2002.

One EA milestone has been due to date this fiscal year (FY), and was completed five days ahead of schedule.

NOTABLE ACCOMPLISHMENTS

Fuel Movement Activities - The project continues to realize substantial productivity improvement as a result of steps taken to improve equipment reliability, processing times and process management. Efforts continue to focus on the 13 Plant Improvement Initiatives; three of those initiatives have been implemented as of November 30, 2002. During the reporting period, the project shipped 17 Multi-Canister Overpacks (MCOs) containing 119.07 Metric Tons of Heavy Metal (MTHM) from K West (KW) to the Cold Vacuum Drying Facility (CVDF). Cumulatively, a total of 155 MCOs containing 835.31 MTHM have been shipped.

Fuel Transfer System (FTS) – The project commenced FTS Operations on November 25, 2002, five days ahead of schedule. During November, the project successfully completed shipping the scheduled three canister shipments. The first MCO (MCO 162) containing KE fuel is scheduled for shipment on December 11, 2002.

MCO Basket Fabrication Shop — The SNF Project MCO Basket Fabrication Shop successfully completed fabrication of all 2,209 MCO baskets. Baskets were completed on schedule and met all Quality Assurance requirements.

Site-Wide Activities — The project continues to make progress toward consolidating non-production SNF on the central plateau. The following activities were completed in November:

- Received one additional shipment of Light Water Reactor (LWR) fuel from the 324 Building during the reporting period. All six of the LWR shipments have been received.
- Received one additional shipment of Shippingport Reactor SNF from T-Plant. A total of 6 of 18 shipments have been received.

Sludge Water System (SWS) — Activities included:

- Sludge Retrieval System (SRS) construction activities are continuing: installation of in-basin pipe/electrical and mechanical equipment; installation of specialty sections pipe shielding; and modifications to HECO crane.
- The project received the first Sludge Transportation System (STS) and preliminary system dry runs and testing have been performed at T-Plant. The project continues to work with the subcontractor to expedite delivery of the second system.

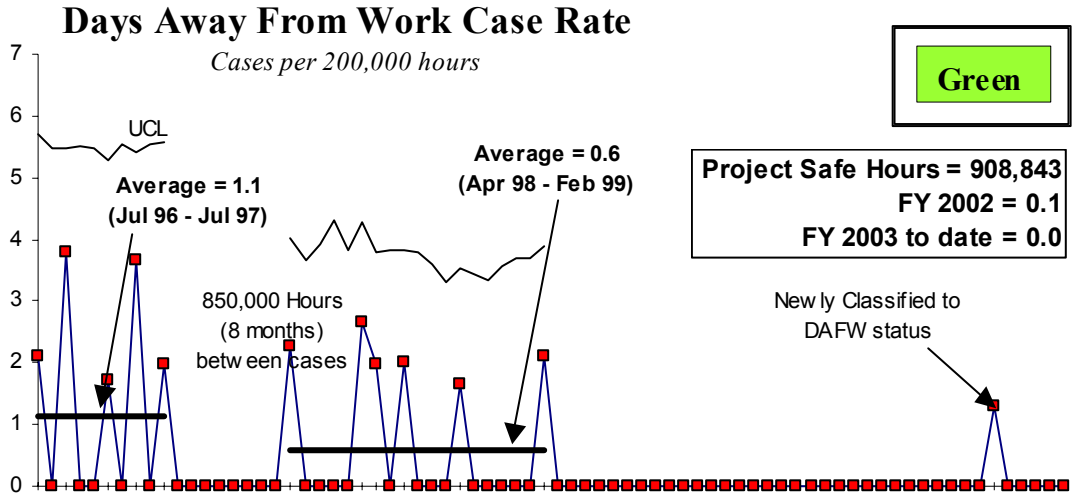
Canister Cleaner Operations — A cumulative total of 1,137 canisters and 883 lids have been cleaned, and 1,052 canisters have been shipped to the Environmental Restoration Disposal Facility (ERDF). The SNF project is 13 canisters ahead of schedule as of December 1, 2002.

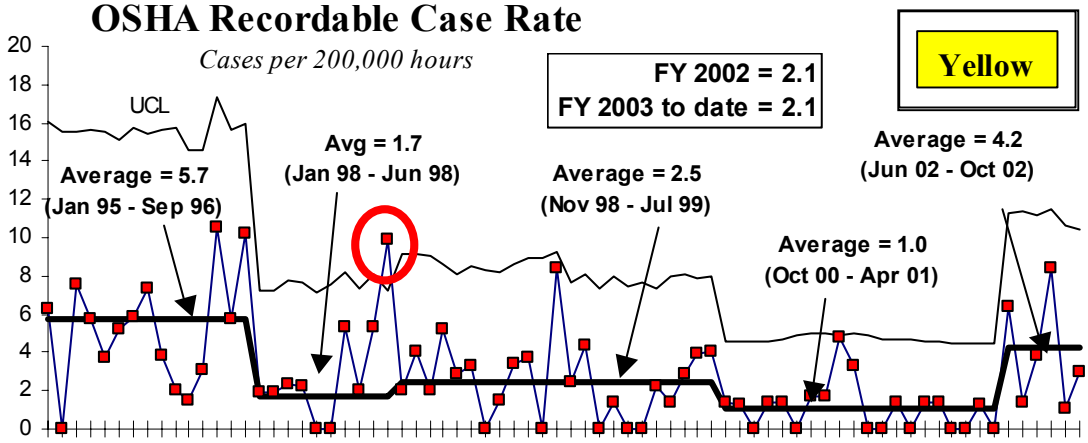
SAFETY

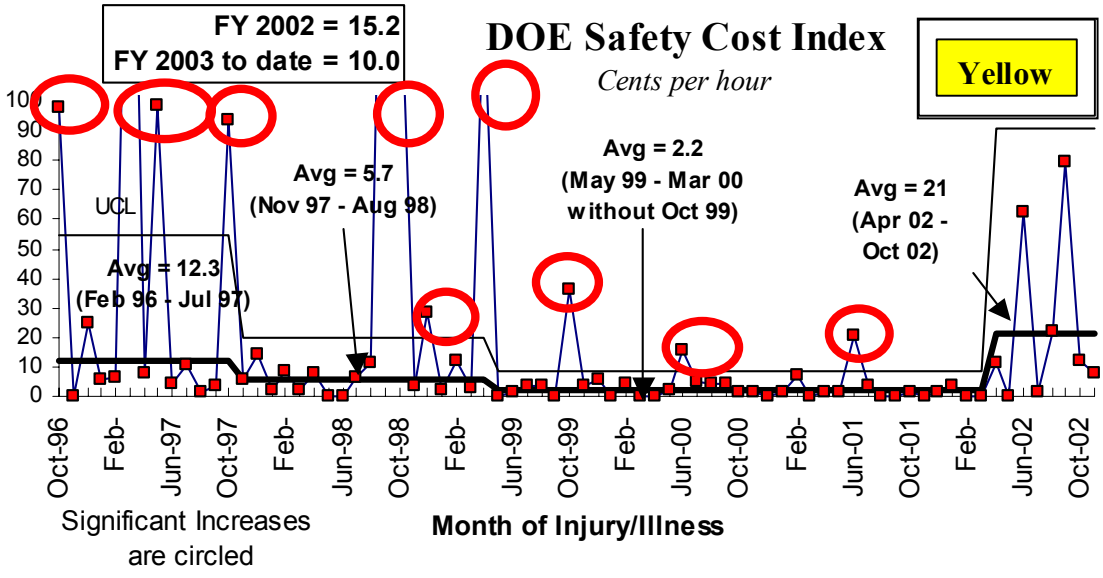
No Lost Away Workday injuries were reported within the SNF Project, thus allowing an achievement of over 908.8 thousand safe work hours by the end of November 2002. Efforts continue to improve safety performance within the Project. Working groups are underway to develop a project-wide Safety Improvement Plan (SIP) targeted for issuance in December 2002.

The KW Focus Plan team has been established and is concentrating on non-Days Away from Work injury reductions (e.g., soft tissue injury reductions). Implementation of all recommended actions is targeted for March 31, 2003. Emphasis continues to be placed on management commitment and worker involvement utilizing the Integrated Safety Management (ISM) System.

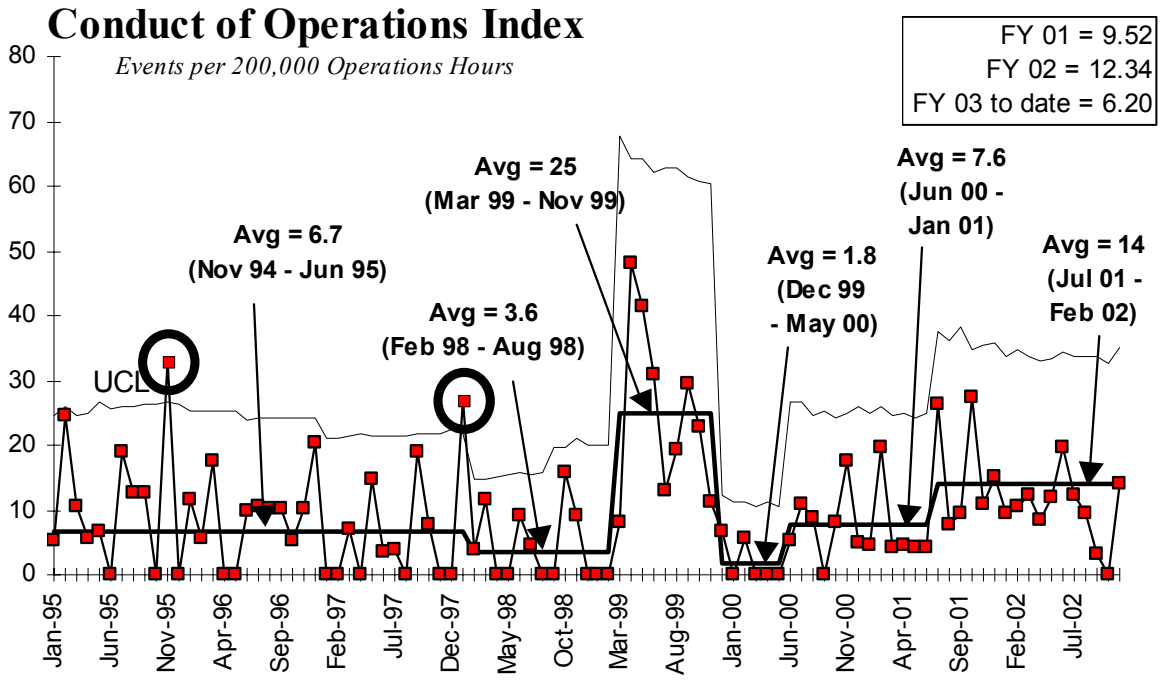
Safety (Continued)







Conduct of Operations



The SNF Project has completed all actions identified in the CONOPs Improvement Plan. The project will conduct a quarterly CONOPs review. The manager-in-the-field activities will focus on radiological controls, FTS operations, and employee feedback.

Breakthroughs / Opportunities for Improvement

Breakthroughs

Nondestructive Examination (NDE) of Contamination in the KE Basin Walls and Floors — A significant activity necessary to deactivate the 100 Area KE Basin is to characterize the level of contamination in the basin's unsealed concrete walls and floor. This characterization data will be used as part of the technical basis to determine the methods to be applied in completing the deactivation of the basin, once the fuel and sludge have been removed.

The SNF Project will be using nondestructive (gamma scanning) techniques and detector systems, developed by the Pacific Northwest National Laboratory, to acquire data on the depth of radionuclide penetration in the basin's concrete walls and floors. This is the first time the NDE technique will be used to obtain characterization data with the facility in normal operation, with its full inventory of fuel, sludge and contaminated water. If successful, the data will be used, in conjunction with other information, to determine which deactivation methods can realistically be used to remove/reduce the radiological dose/contamination, as well as to determine which basin areas are in the greatest need of mitigation. After initial deployment in the KE Basin, the wall detector system received basin water contamination, which must be resolved before data gathering can resume. Recovery efforts have been postponed due to other KE Basin priority work.

Opportunities for Improvement

Fuel Transfer System (FTS) — The SNF Project brought the FTS online November 25, 2002 and made three cask shipments as of November 30, 2002. The challenge is to attain a production level of ten cask shipments per week.

UPCOMING ACTIVITIES

Fuel Removal — Complete removal of 957 MTHM by December 31, 2002 (M-34-18A).

Sludge Water System (SWS) — Receive second STS system in January 2003.

SWS — Install all basin systems [includes: Mechanical, electrical, crane, Closed Circuit Television (CCTV), etc.; CCTV will be last] in December 2002.

SWS — Basin Systems Construction Acceptance of Beneficial Use in January 2003.

Fuel Retrieval System (FRS) — Complete construction activities for KW Basins SNF scrap removal system in February 2003.

MCO Welding — Begin welding of MCOs at the Canister Storage Building (CSB) in February 2003.

SWS — Contractor and DOE Operational Readiness Reviews (ORRs) in February/March 2003.

Fuel Removal — Complete removal of 1252 MTHM by May 31, 2002 (Target Milestone M-34-27-T01).

MILESTONE ACHIEVEMENT

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
M-34-06-T01	Initiate K West (KW) Basin Spent Nuclear Fuel (SNF) Canister Cleaning Operations	TPA	08/31/01	3/15/02		Complete
M-34-29	Complete K East (KE) Basin and KW Basin facility modifications for AFTS casks transportation system	TPA	3/31/02	9/12/02		Complete
M-34-12-T01	Complete construction of Sludge Water System (SWS) (Construction Completion Document Section IIA.)	TPA	09/30/02		2/28/03	Behind schedule due to delayed subcontractor delivery dates. Complete construction forecast 2/28/03.
M-34-17	Initiate KE to KW fuel transfer	TPA / PI	11/30/02	11/25/02		Completed five days ahead of schedule.
M-34-18A	Complete removal of 957 Metric Tons of Heavy Metal (MTHM) of SNF from the KW Basin	All 3	12/31/02		12/31/02	Working recovery schedule; Currently 39.13 MTHM or 9 MCOs behind recovery plan.
M-34-08	Initiate full scale KE basin sludge removal	TPA/DNFSB	12/31/02		5/28/03	Behind schedule. Forecast for TPA milestone is 5/28/03. Target is 3/24/03.

MILESTONE ACHIEVEMENT (CONTINUED)

Number	Milestone Title	Type (TPA/DNFSB/PI)	Due Date	Actual Date	Forecast Date	Status/ Comments
M-34-27-T01	Complete removal of 1252 MTHM of SNF from KW Basin	TPA	5/31/03		5/31/03	On schedule
S09-03-010	Decide treatment path for sodium removal from FFTF.	TIP	09/30/03		09/30/03	On schedule
M-34-28	Complete removal of 1619 MTHM from the KW Basin	TPA	12/31/03		12/31/03	On schedule
M-34-25-T01	Complete transfer of KE Basin SNF to KW Basin	TPA	5/31/04		5/31/04	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	TPA / 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
M-34-21-T01	Initiate full-scale KW Basin water removal	PI	10/31/05		10/31/05	On Schedule
S06-06-006	Complete K Basin water removal	PI (Stretch)	4/30/06		4/30/06	On schedule
M-34-22	Complete KW Basin water removal	TPA / PI	8/31/06		8/31/06	On schedule
S06-06-004	Complete transition activities for CVDF 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 (Stretch)	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 957 Metric Tons Heavy Metal from KW Basin by December 31, 2002

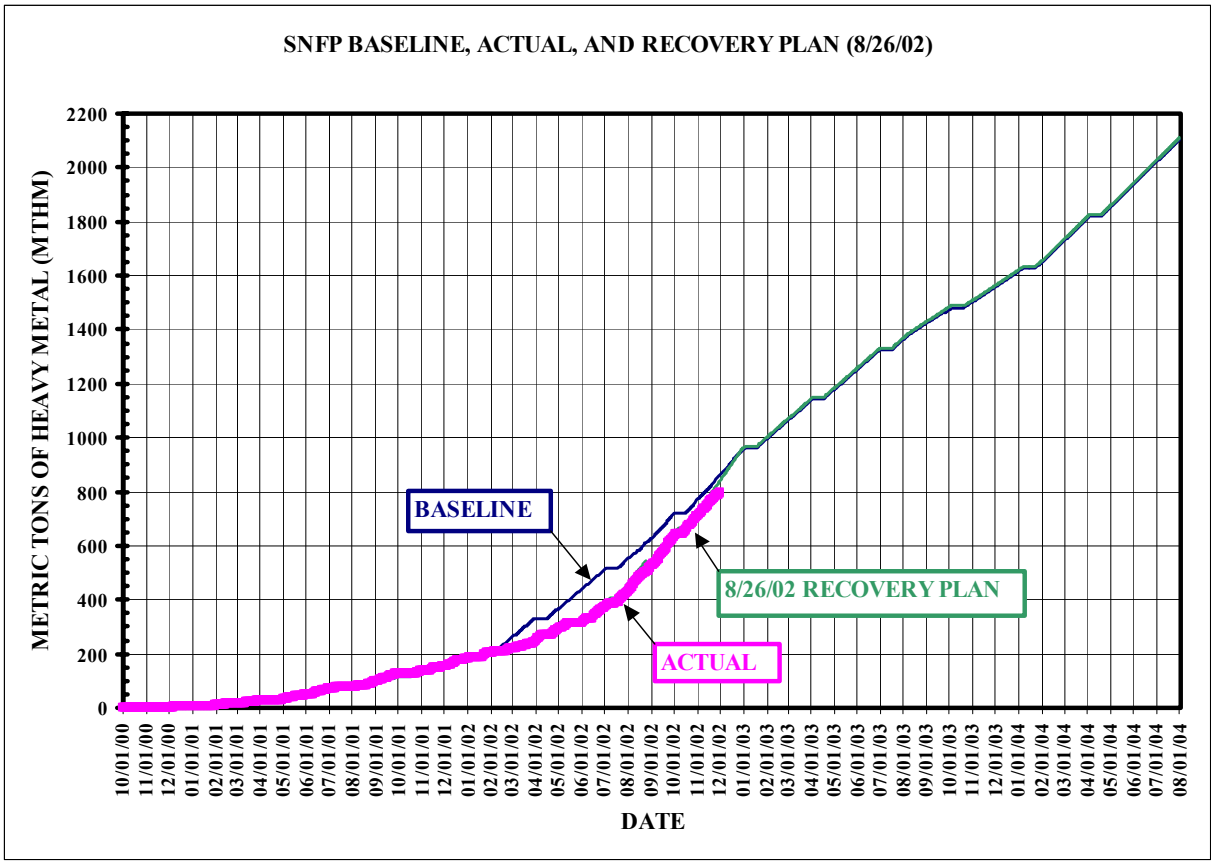
Status: Cumulatively, a total of 155 MCOs containing 835.31 MTHM have been shipped as of December 1, 2002. Efforts continue to focus on the 13 Plant Improvement Initiatives identified by the Requirements Improvement Team. Three of those initiatives have been implemented to date. The project has made up 34 days against the baseline schedule in the last 133 days of operation; however, it has slipped three days in the past seven days of operation.

Complete construction on Fuel Transfer System by March 31, 2002

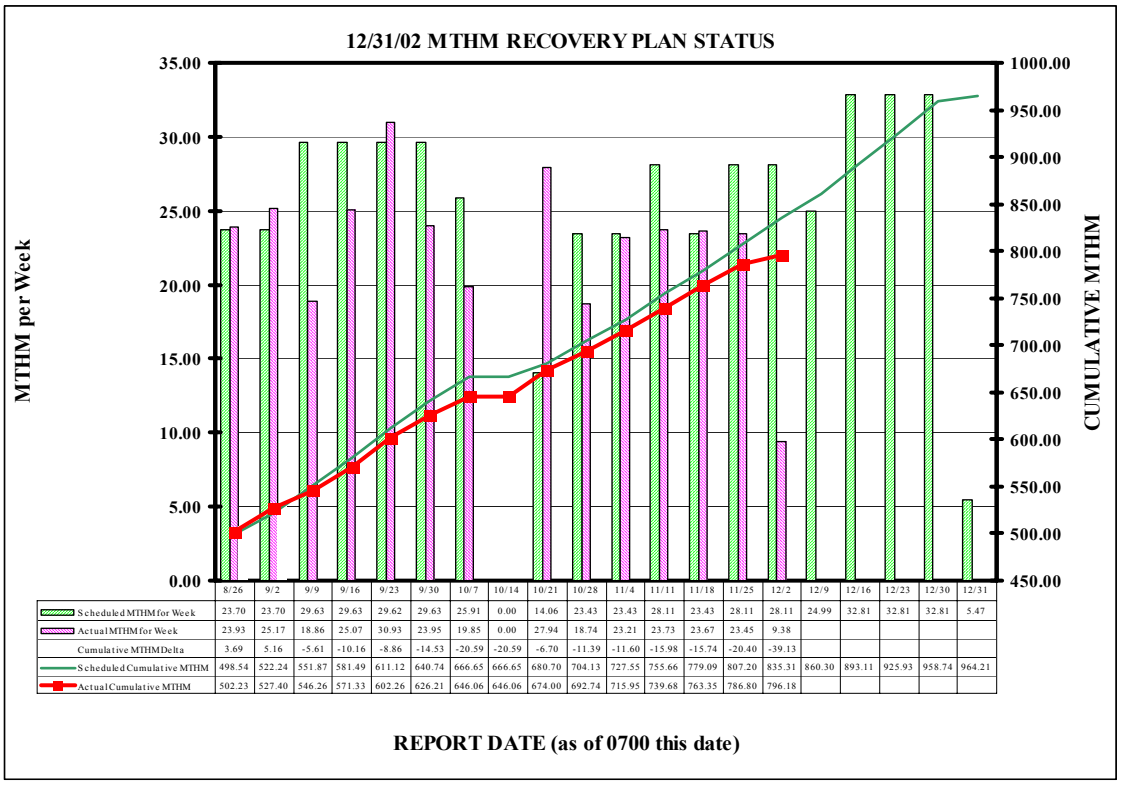
Status: Complete. Section 1B of the Construction Completion Document was signed off as complete September 12, 2002.

Commence KE to KW Fuel Transfer by November 30, 2002

Status: Complete. FTS Operations commenced November 25, 2002, five days ahead of schedule.



PERFORMANCE OBJECTIVES (CONTINUED)



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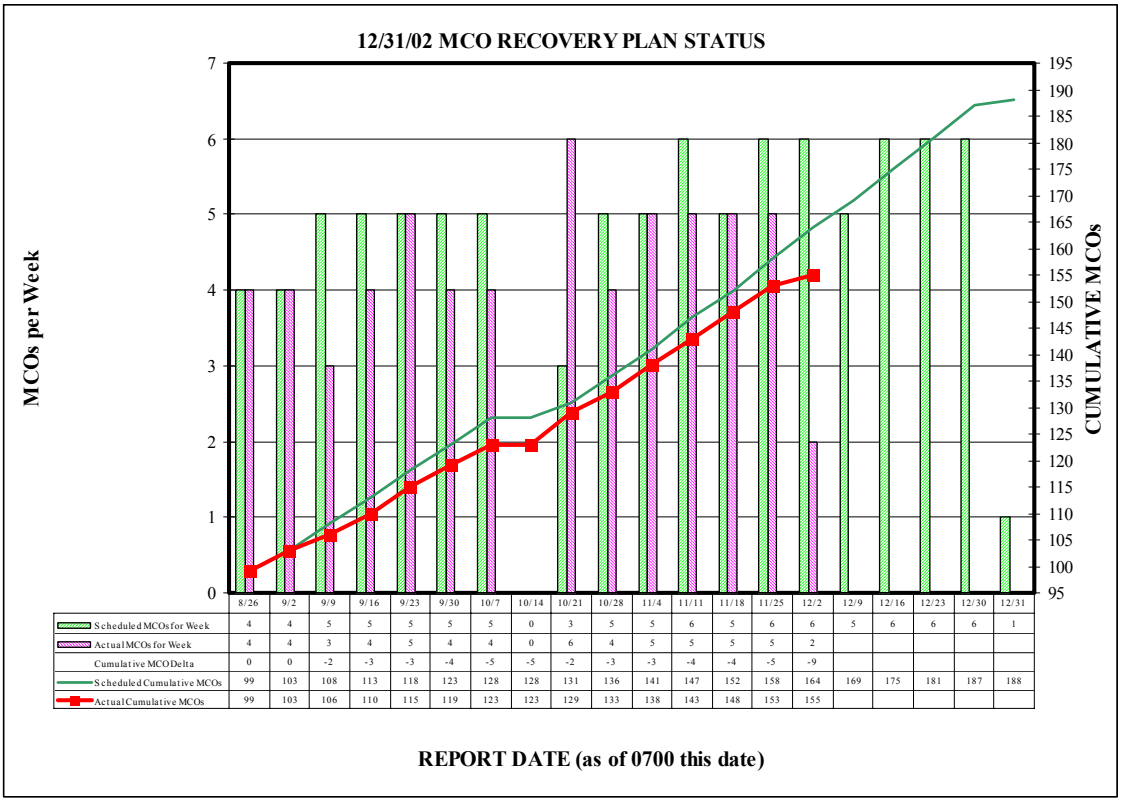
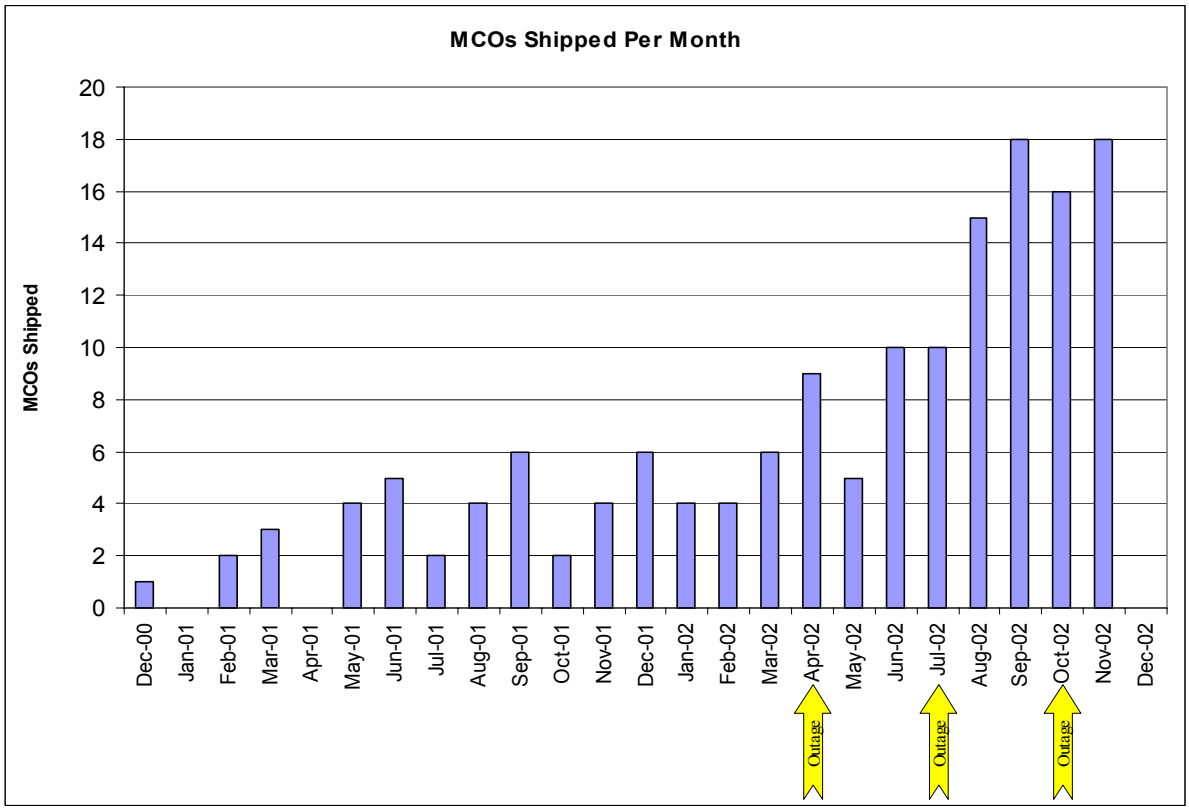
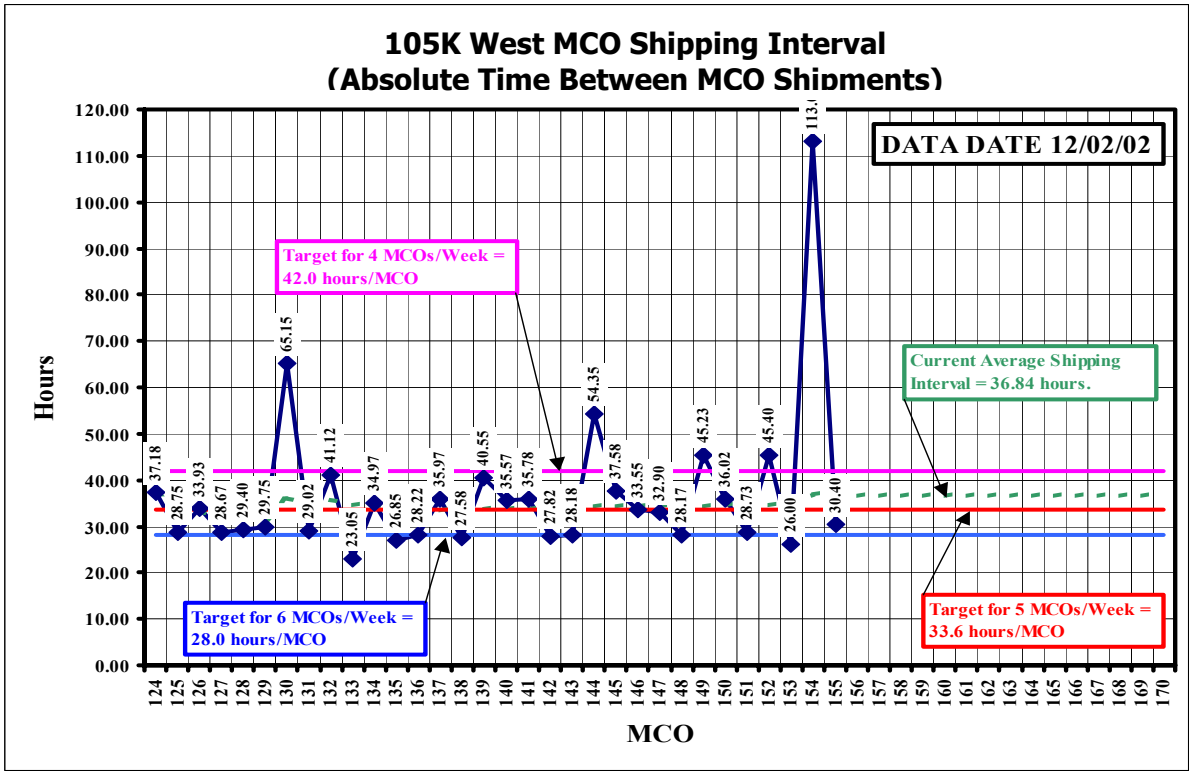
Scheduled MTHM for Week	23.70	23.70	29.63	29.63	29.62	29.63	25.91	0.00	14.06	23.43	23.43	28.11	23.43	28.11	28.11	24.99	32.81	32.81	32.81	5.47
Actual MTHM for Week	23.93	25.17	18.86	25.07	30.93	23.95	19.85	0.00	27.94	18.74	23.21	23.73	23.67	23.45	9.38					
Cumulative MTHM Delta	3.69	5.16	-5.61	-10.16	-8.86	-14.53	-20.59	-20.59	-6.70	-11.39	-11.60	-15.98	-15.74	-20.40	-39.13					
Scheduled Cumulative MTHM	498.54	522.24	551.87	581.49	611.12	640.74	666.65	666.65	680.70	704.13	727.55	755.66	779.09	807.20	835.31	860.30	893.11	925.93	958.74	964.21
Actual Cumulative MTHM	502.23	527.40	546.26	571.33	602.26	626.21	646.06	646.06	674.00	692.74	715.95	739.68	763.35	786.80	796.18					



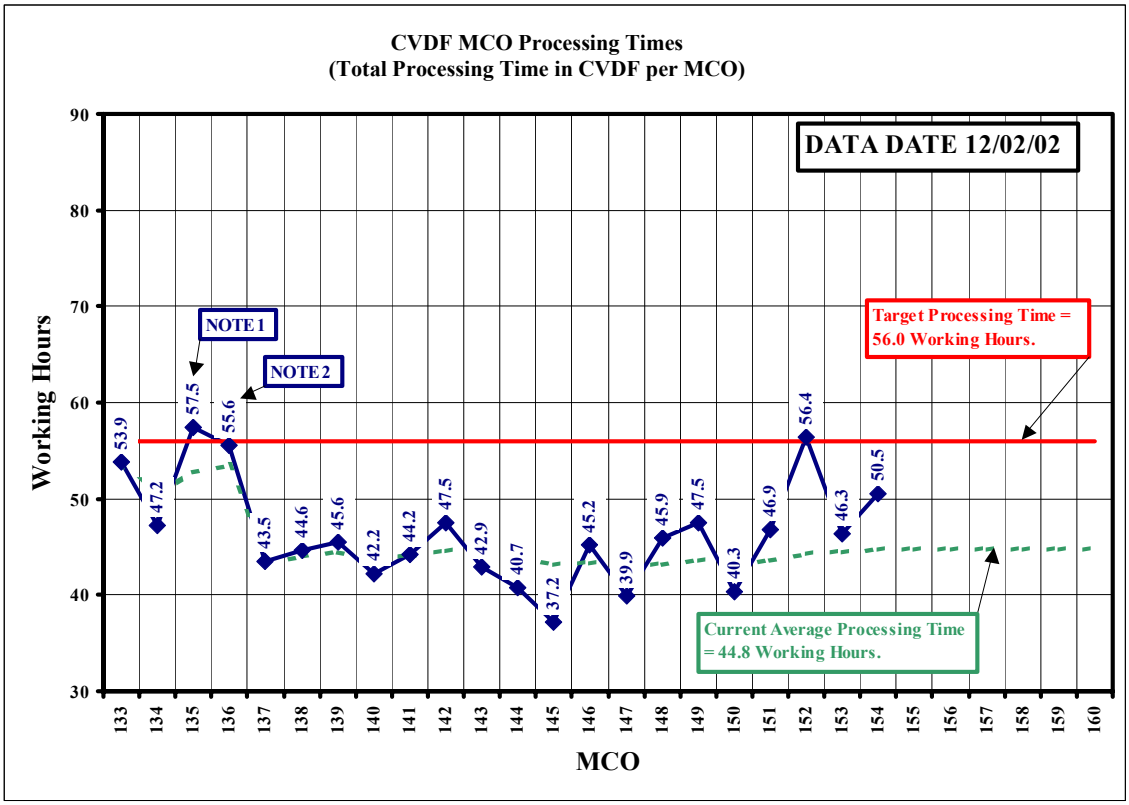
	8/26	9/2	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/23	12/30	12/31
Scheduled MCOs for Week	4	4	5	5	5	5	5	0	3	5	5	6	5	6	6	5	6	6	6	1
Actual MCOs for Week	4	4	3	4	5	4	4	0	6	4	5	5	5	5	2					
Cumulative MCO Delta	0	0	-2	-3	-3	-4	-5	-5	-2	-3	-3	-4	-4	-5	-9					
Scheduled Cumulative MCOs	99	103	108	113	118	123	128	128	131	136	141	147	152	158	164	169	175	181	187	188
Actual Cumulative MCOs	99	103	106	110	115	119	123	123	129	133	138	143	148	153	155					

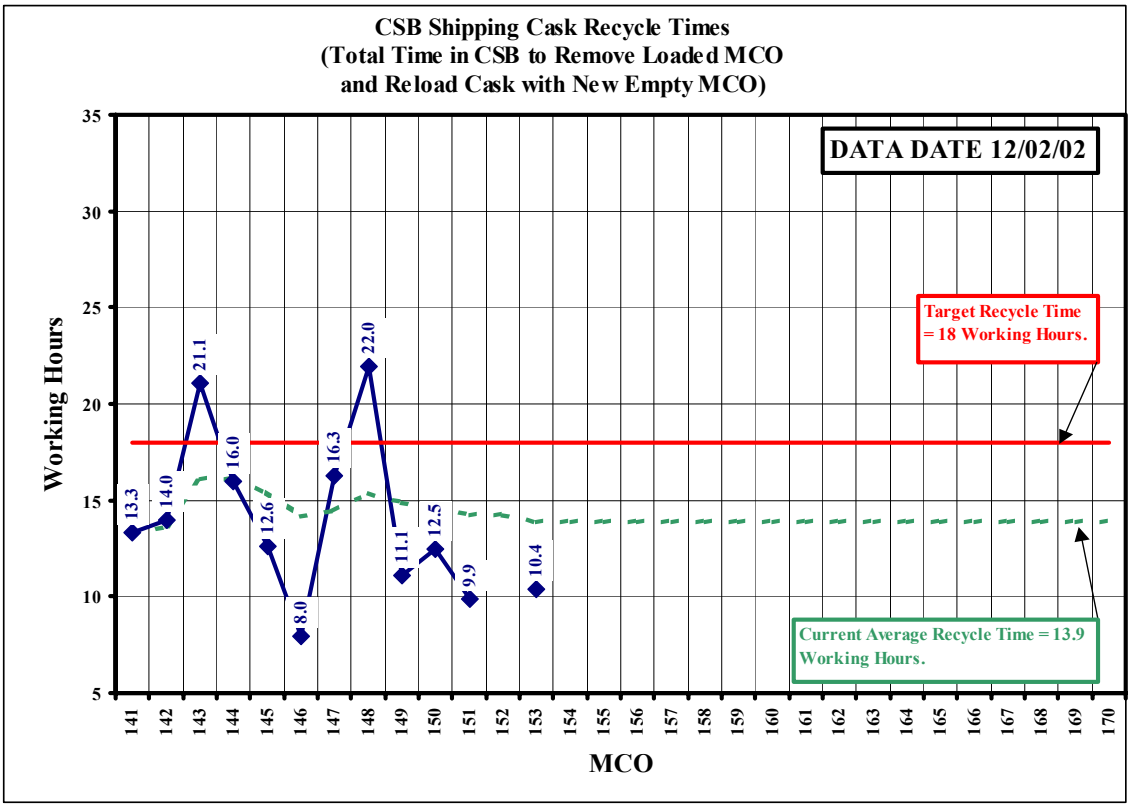
PERFORMANCE OBJECTIVES (CONTINUED)





PERFORMANCE OBJECTIVES (CONTINUED)





PERFORMANCE OBJECTIVES (CONTINUED)

EXPECTATION: Move Sludge and Water from K Basins

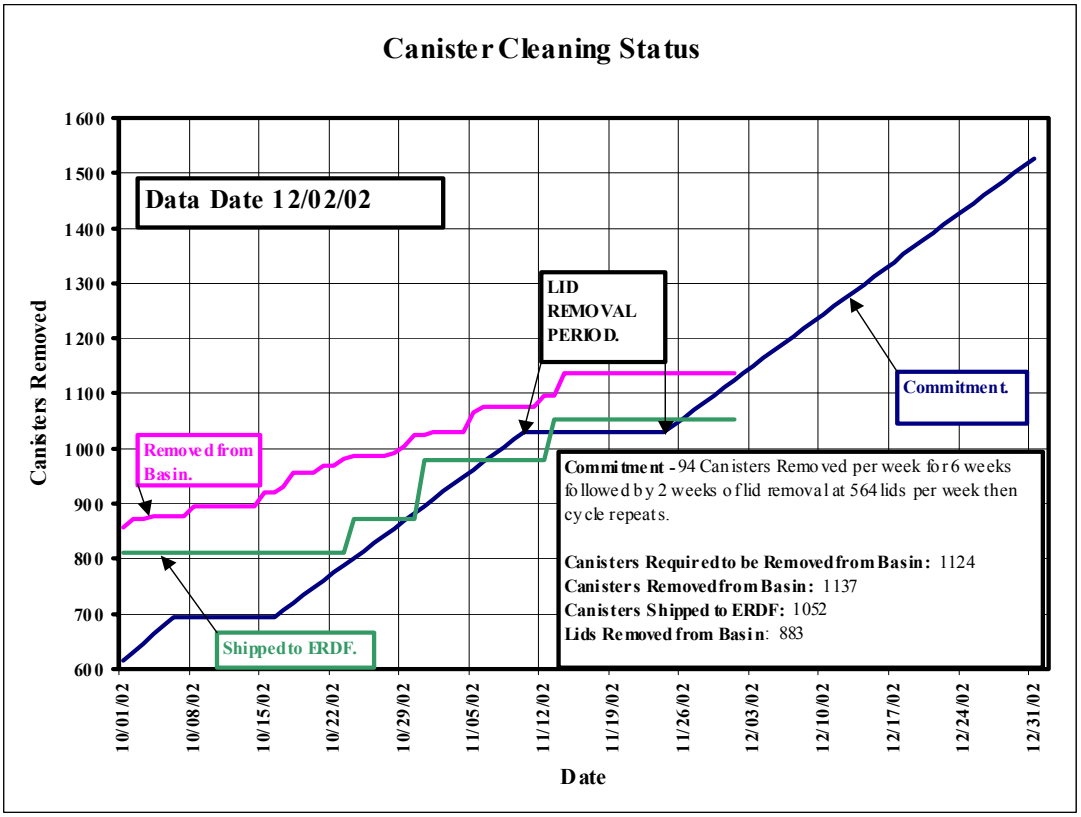
Initiate Sludge Movement by December 31, 2002.

Status: Submitted revised project completion schedule on October 31, 2002. Tri-Party Agreement (TPA) milestone forecast is May 28, 2003. Target is March 24, 2003. First STS (LDC, Cask and Trailer) was delivered November 5, 2002. Continue to work with subcontractors to expedite delivery of second system.

EXPECTATION: Remove canisters from K Basins

Remove 600 canisters from KW by fiscal year end.

Status: The project has cumulatively removed a total of 1,124 canisters and 883 lids from the K Basins. A total of 1,052 canisters have been shipped to Environmental Restoration Disposal Facility.



Consolidate Non-Production Reactor Fuel

EXPECTATION: Consolidate site-wide non-production reactor fuel in 200 Area

Move .02 MTHM in fiscal year 2002.

Status: During November 2002, the project received one additional shipment of LWR fuel from the 324 Building (all six shipments have now been received). The project also received an additional shipment of Shippingport Reactor SNF from T-Plant (6 of a total of 18 shipments have now been received).

ISSUES

Technical Issues

Issue: Equipment reliability continues to be a major focus for sustaining fuel movement.
Corrective Actions: A number of Fluor consultant recommendations have been incorporated into the KW manipulator repair program, and have resulted in maintenance staff-hour savings. A Reliability, Availability, Maintainability (RAM) Engineering Group has been formed that continues focus on the reliability of the project's high-priority equipment.
Impact: Continued equipment failures may negatively impact meeting fuel movement commitments.

Issue: Production schedule improvement.
Corrective Actions: Continue to work with RL to gain approval to implement breakthrough initiatives identified by the Requirements Improvement Team. Three of the issues have been approved by RL and are completed.
Impact: The SNF Project's production rate must continue to increase in order to meet the December 31, 2002 fuel movement milestone date.

Issue: FTS construction completion and initiate fuel transfer.
Corrective Actions: FTS operations commenced on November 25, 2002, five days ahead of schedule.
Impact: FTS milestone scheduled for completion March 31, 2002, was completed September 12, 2002. Milestone to begin FTS operations by November 30, 2002 was completed five days early. This issue is complete.

Issue: SWS Schedule Delays.
Corrective Actions: The first Sludge Transportation System (STS) has been received. Preliminary system dryruns and testing have been performed at T-Plant. Delivery of the second system is scheduled for January 7, 2003. Installation of basin systems continues and acceptance for beneficial use is forecast by January 8, 2003.
Impact: Due date to begin sludge removal for TPA milestone M-34-08 is December 31, 2002; forecast for completion TPA milestone is by May 28, 2003; project target for completion is March 24, 2003.

Regulatory, External, and DOE Issues and DOE Requests

None to report.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

None to report.