

## **SUMMARY**

The Spent Nuclear Fuel (SNF) mission consists of the Spent Nuclear Fuel Project WBS 1.3.1.1 (Project Baseline Summary [PBS] WM01) and the subsequent Canister Storage Building (CSB) Operations Project WBS 1.3.2.1 (PBS WM02), which doesn't start until FY 2004.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, and Cost/Schedule data contained herein is as of January 31, 2000. All other information is as of March 1, 2000.

The Canister Storage Building (CSB) is 95 percent complete, compared to 95 percent planned. The Cold Vacuum Drying (CVD) Facility is 89 percent complete compared to 91 percent planned. The percentages declined from last month due to approved workscope changes which resulted in increases to the BCWS.

The SNF Project continued testing of energized components (i.e., calibration, loop tests, equipment approach) at the Cold Vacuum Drying (CVD) Facility. RL issued the Safety Evaluation Report for the CVD Annex to SNF Project FSAR with conditions for approval.

Fabrication of production Multi-Canister Overpacks (MCO) and MCO baskets continued at Joseph Oat, Inc. and the Hanford Site respectively.

Preparations were completed for cold testing of the K West Basin Fuel Retrieval System and Integrated Water Treatment System in January.

Fiscal year-to-date milestone performance (EA, DOE-HQ, and RL) shows that there are no milestone exceptions. The Milestone Achievement details, found following cost and schedule variance analysis, provide further information on all milestone types.

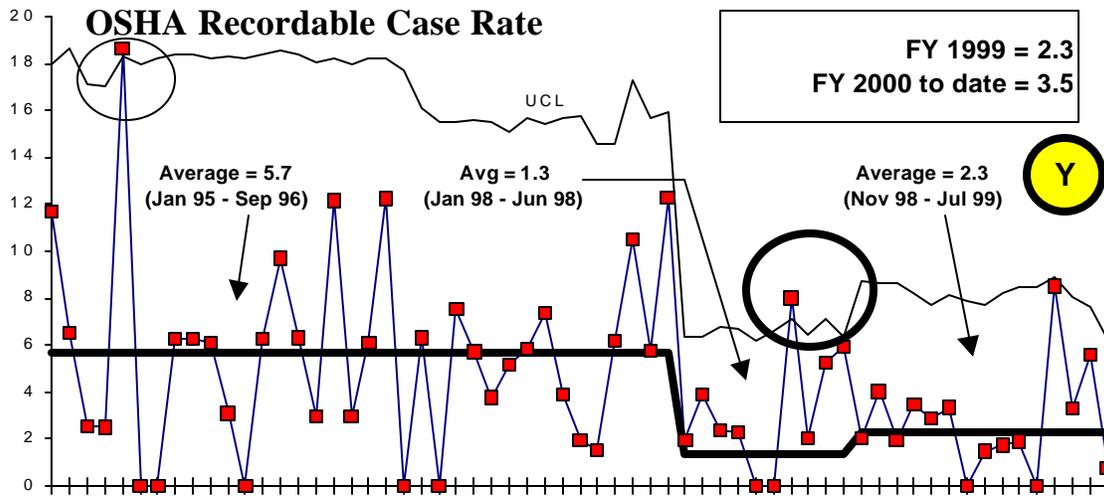
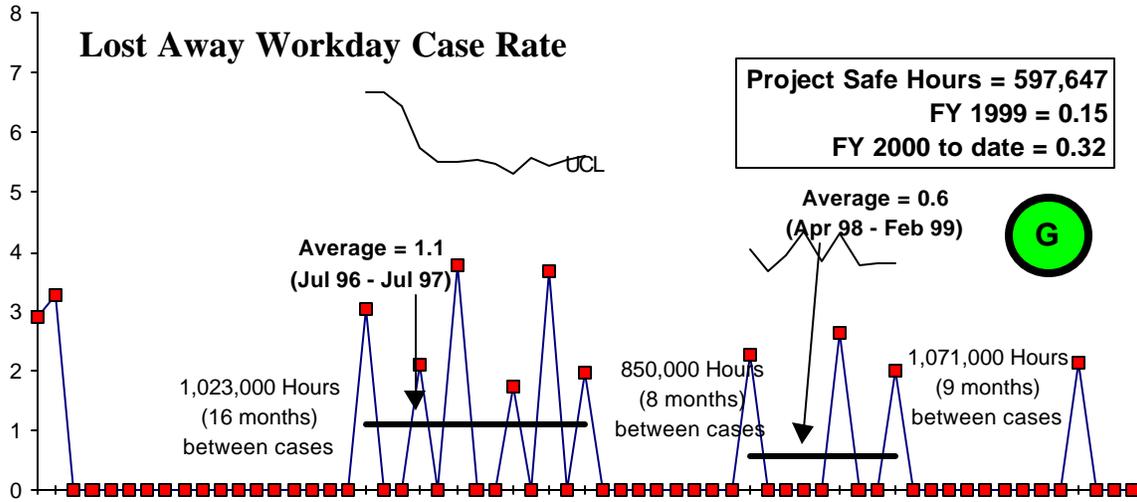
## **ACCOMPLISHMENTS**

- CSB project is 95 percent complete vs. 95 percent planned.
- CVD Facility is 89 percent complete vs. 91 percent planned.
- Submitted K Basin Safety Analysis Report (SAR), Revision 4 and Technical Safety Report (TSR) to RL on January 24, 2000. Also, submitted draft of Canister Storage Building Final Safety Analysis Report (FSAR) and TSR to RL on January 31, 2000.
- Closed last major technical issue on fuel crumbling and issued closure package.
- Phased Startup Initiative (PSI) Phase 1 testing commenced January 27, 2000. Results have produced many benefits including correction of material problems, procedure verification, organizational alignment, and improved operational readiness many months ahead of the baseline schedule.

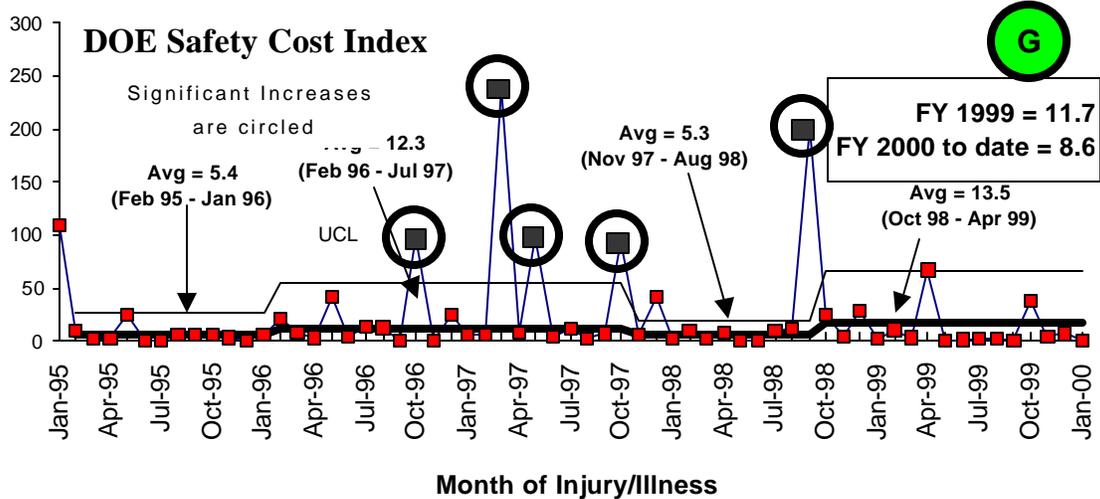
- Completed installation of the K West MCO Loading System (MLS) gantry as part of the Cask Loadout System (CLS). This completes all major construction activities in K West Basin in preparation for fuel movement.
- Completed final welding on all of the Canister Storage Building storage tubes. This completes all major construction activities required for receipt of fuel from the CVD Facility.
- Completed M-34-04 “Submit Remedial Design Report/Remedial Action Work Plan for K Basins” ahead of schedule. Completed M-34-14A, “Complete K West Basin Cask Facility Modifications” on schedule.
- The Baseline Change Request (BCR) for the sludge acceleration strategy was submitted to RL for review and approval. This strategy will accelerate completion of sludge removal from the K Basins by one year, while reducing the SNF Project total project cost by approximately \$16 million.
- The SNF Project Organization was revised this week to align the organization for support of operations. Testing and turnover of systems and facilities is well underway and the revised organization will support efforts to achieve readiness for an Operational Readiness Review.

## **SAFETY**

Although the SNF Project experienced some safety performance degradations with the start of FY 2000, performance appears to be recovering. October 1999 had 2 Restricted Workday Cases, and 1 Lost Away Workday Case. This was a nearly significant increase (close to but not above the UCL) on the OSHA Recordable Case Rate, and a significant increase (above the UCL) on the Lost / Restricted Workday Case Rate (which is a supplemental graph).



Increased management and worker attention have been provided

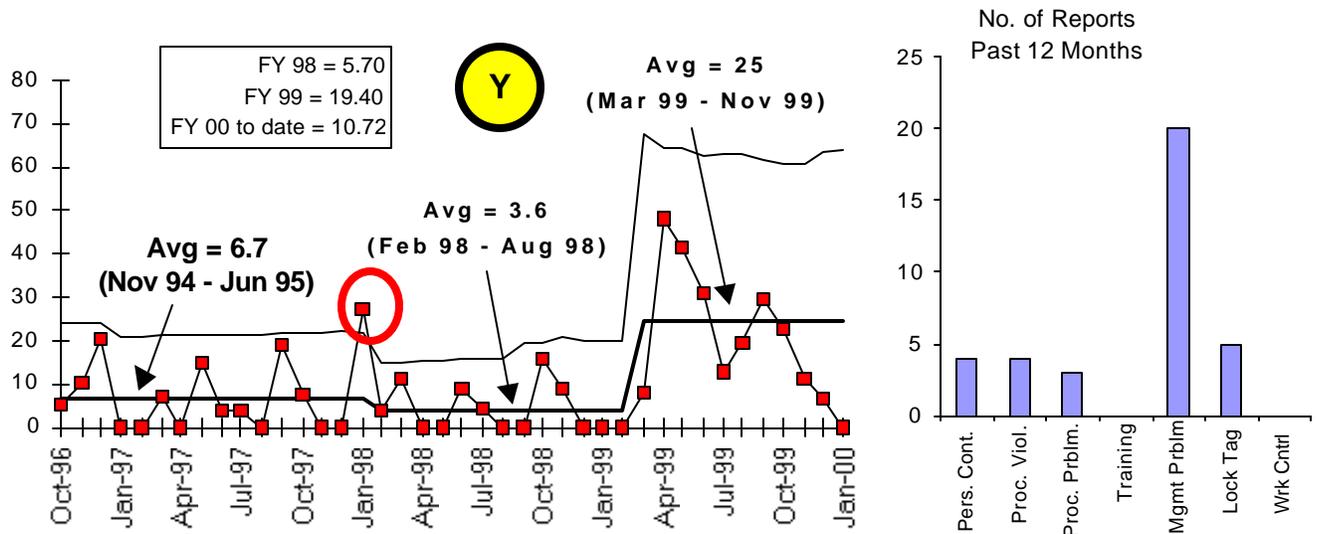


Trend is improving.

## CONDUCT OF OPERATIONS / ISMS STATUS

### CONDUCT OF OPERATIONS

Events per 200,000 hours



Trend is improving.

### ISMS STATUS

- The ISMS Phase I/II verification for the SNF Project was completed on November 19, 1999
- The Corrective Action Plans for the “Opportunities for Improvement” were developed and transmitted to RL on January 10, 2000
  - The actions required to enable ISMS implementation to be declared March 31, 2000 are on schedule.

**Green**

## BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

### Breakthroughs

SNF Project has submitted a Baseline Change Request which implements a strategy to accelerate sludge removal by one year and reduce total project cost.

**Green**

### Opportunities for Improvement

**Phased Startup Initiative (PSI)** -- Results from the PSI are expected to improve the fuel production rates by approximately one month in FY 2001.

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## UPCOMING ACTIVITIES

**Phased Startup Initiative** -- Complete PSI Phases 1 & 2 by mid-April 2000. Complete Phases 3 & 4 by mid-August 2000.

**Storage Projects** -- Deliver first shipment of Multi-Canister Overpacks (MCOs) and baskets by June 1, 2000.

**Fuel Removal Activities** -- Begin DOE Operational Readiness Review by mid September 2000. Begin K West Basin fuel removal, drying & storage operations by November 30, 2000.

**Sludge Removal Activities** -- Baseline Change Request due to be submitted February 2000 will affect a one year acceleration of the completion of K Basin sludge removal.

### COST PERFORMANCE (\$M):

	BCWP	ACWP	VARIANCE
<b>Waste Management</b>	\$47.0	\$62.4	- \$15.4

The unfavorable cost variance of \$15.4 million (32.8 percent) is primarily due to startup and testing activities; Cold Vacuum Drying engineering and construction costs and Safety Analysis Reports (SARs) not budgeted in FY 2000.

### SCHEDULE PERFORMANCE (\$M):

	BCWP	BCWS	VARIANCE
<b>Waste Management</b>	\$47.0	\$55.5	- \$8.5

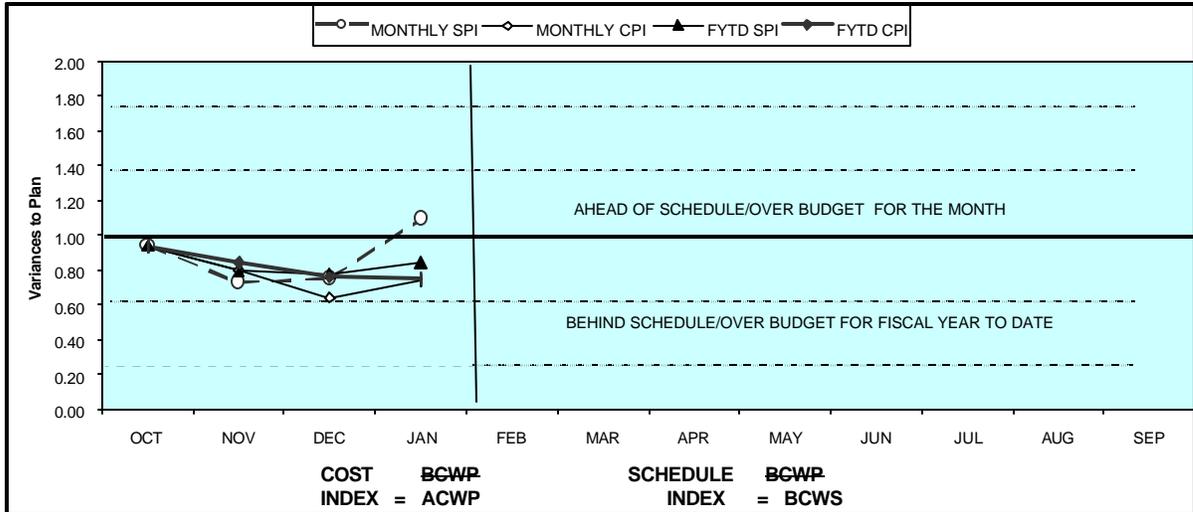
The unfavorable schedule variance of \$8.5 million (15.4 percent) is primarily due to Facility Modifications K East Basin construction behind schedule.

## SPENT NUCLEAR FUEL PROJECT STATUS WBS 1.3

<b>Yellow</b>
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		FYTD								
Bv PBS		BCWS	BCWP	ACWP	SV	%	CV	%	Auth Bsln	PTS BCWS
RL-WM01	Spent Nuclear	\$ 55,545	\$ 47,007	\$ 62,408	\$ (8,538)	-15%	\$ (15,401)	-33%	\$ 195,100	\$ 195,074
WBS 1.3	Fuel Project									
	<b>Total</b>	\$ 55,545	\$ 47,007	\$ 62,408	\$ (8,538)	-15%	\$ (15,401)	-33%	\$ 195,100	\$ 195,074

## COST/SCHEDULE PERFORMANCE INDICES (JANUARY 2000 AND FYTD)



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.94	0.73	0.75	1.09								
MONTHLY CPI	0.93	0.79	0.64	0.74								
FYTD SPI	0.94	0.79	0.78	0.85								
FYTD CPI	0.93	0.84	0.76	0.75								
MONTHLY BCWS	\$8,574	\$19,209	\$15,681	\$12,081								
MONTHLY BCWP	\$8,049	\$13,968	\$11,769	\$13,221								
MONTHLY ACWP	\$8,626	\$17,581	\$18,361	\$17,840								
FYTD BCWS	\$8,574	\$27,783	\$43,464	\$55,545								
FYTD BCWP	\$8,049	\$22,017	\$33,786	\$47,007								
FYTD ACWP	\$8,626	\$26,207	\$44,568	\$62,408								

## ISSUES

### Technical Issues

Nothing to report.

### DOE/Regulator/External Issues

Nothing to report.

## COST VARIANCE ANALYSIS: (- \$15.4)

**WBS/PBS**

**Title**

**1.3.1/WM01**

**Spent Nuclear Fuel Project**

**Description/Cause:** The unfavorable cost variance of \$15.4M (32.8 percent) is due to startup and testing activities (30%); Cold Vacuum Drying (CVD) engineering and construction support were underestimated (21%) and Safety Analysis Reports not budgeted in FY 2000 (14%).

**Impact:** These overruns were anticipated changes foreseen during the contingency analysis and will be allocated through change control. Additional unanticipated cost impacts, i.e., rate increases, Corrective Action Management, Hanford Security, fee allocation, are likely to have an adverse impact unless outside funding sources are made available. In addition, CR's have been developed and reviewed and are on hold pending source availability for engineering, testing and administrative support.

**Corrective Action:** The Spent Nuclear Fuel Project has approved Change Requests (CR's) for the Safety Analysis Reports, CVD engineering and construction support and Startup and Testing activities. These CR's will be implemented for February reporting.

## SCHEDULE VARIANCE ANALYSIS: (- \$8.5)

**WBS/PBS**

**Title**

**1.3.1/ WM01**

**Spent Nuclear Fuel Project**

**Description /Cause:** The unfavorable schedule variance of \$8.5M (15.4 percent) is due to Facility Modifications K East Basin construction behind schedule due to resequencing of work (BCR in process). 58%; Integrated Water Treatment System K East Basin system design award delayed due to Request for Proposal (RFP) schedule change (10%); Common operations not progressed as scheduled (LOE) (10%).

**Impact:** All projects continue to support the fuel move date of November 30, 2000.

**Corrective Action:** The Spent Nuclear Fuel Project baseline will be modified to reflect proper scope and sequencing of work.

## BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS (\$000)

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	FY00 COST IMPACT \$000	SCH	TECH	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
SNF-2000-008		Change Path Forward for K-Basin Sludge from Interim Storage in TWRS Double-Shell Tanks to T Plant		Y	Y	1/5/00	1/5/00	2/17/00	Received RL CO signature, 2/17/2000.
SNF-2000-009		Sludge Acceleration Strategy		Y	Y	2/24/00	2/25/00		Transmitted to RL 2/28/00
SNF-2000-012		Site Wide SNF Reschedule Due to Hanford Site Priorities	<\$1,300>	Y	N				In preparation.
<b>ADVANCE WORK AUTHORIZATIONS</b>									

**SPENT NUCLEAR FUELS – WBS 1.3**  
**MILESTONE ACHIEVEMENT**

MILESTONE TYPE	FISCAL YEAR-TO-DATE				REMAINING SCHEDULED			TOTAL FY 2000
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	0	0	0	0	0	2	0	2
DOE-HQ	0	0	0	0	0	0	0	0
RL	0	0	0	0	0	4	0	4
<b>Total Project</b>	0	0	0	0	0	6	0	6

**Status as of 3/1/2000**

Tri-Party Agreement / EA Milestones
<b>M-34-14A (S06-97-009), "Complete K West Basin Cask Facility Modifications"</b> , due 2/29/00 - Completed on schedule.
<b>M-34-04 (S01-99-124), "Submit Remedial Design Report/Remedial Action Work Plan for the K Basins"</b> , due 3/31/00 - Completed over 1 month early (2/10/00).
<b>M-34-15B-T01, "Complete remaining bay(s) of the Cold Vacuum Drying Facility construction and installation"</b> , due 6/30/00 – Proposed BCR SNF-2000-009 will delete this milestone.
<b>M-34-13B-T01, "Complete construction and installation of K East Basin Spent Nuclear Fuel Retrieval System"</b> , due 11/30/00 - Proposed BCR SNF-2000-009 will defer this milestone to 3/31/02.
<b>M-34-16 (S00-01-900), "Initiate removal of K West Basin Spent Nuclear Fuel"</b> , due 11/30/00 - On schedule.
<b>M-34-06-T01, "Initiate K West Basin Spent Nuclear Fuel Canister Cleaning Operations"</b> , due 12/31/00 - On schedule.
DNFSB Commitments
Nothing to report.

**MILESTONE EXCEPTION REPORT**

**Green**

<u>Number/WBS</u>	<u>Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
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**OVERDUE – 0**

**FORECAST LATE – 0**

**FY 1999 OVERDUE – 0**

## PERFORMANCE OBJECTIVES

**RC-1-1.a-I Readiness for Fuel Movement** -- Contractor completion of construction and operational testing, Management Self-Assessment, and Independent ORR by 9/14/00 to begin moving fuel by 11/30/00. Start of fuel movement is currently on track for 11/30/00.

Green

**RC-1-1.a-II Phased Startup Initiative (PSI)** -- Complete PSI Phases 1 & 2 by April 15, 2000. This includes successful Cold Testing of IWTS & FRS. This activity is on schedule.

Green

**RC-1-1.b K East Fuel Retrieval System** -- Complete facility modification necessary to allow FRS installation by September 30, 2000, as defined in the MYWP. Baseline Change Request in process to change this activity with implementation of new strategy.

**RC-1SS-1 Accelerate Fuel Movement** -- Accelerate start of fuel movement by two months. Requires flawless execution of remaining schedule and no significant new issues.

Yellow

**RC-1SS-2 Phased Startup Initiative (PSI)** -- Complete Phases 3 & 4 by August 15, 2000. This includes completion of FRS/IWTS system testing using SNF (real fuel) and completion of CCD2. This activity is on schedule.

Green

## KEY INTEGRATION ACTIVITIES

- Spent nuclear fuel (SNF) final disposition interface activities, including OCRWM QA Program implementation, ongoing with National SNF Program.
- K Basins sludge removal and Shipping port (PA) Pressurized Water Reactor Core 2 SNF removal implementation activities ongoing with Waste Management; Baseline Change Requests are in preparation by the SNF Project and Waste Management to support integrated activity for accelerated sludge removal strategy. Funding authorized for initial T-Plant readiness activities.
- 324 Building (B Cell) SNF removal acceptance criteria and conceptual design reviews ongoing with River Corridor Project
- Neutron Radiography Facility, Training, Research and Isotope Production, General Atomics (TRIGA), and FFTF SNF relocation planning ongoing with FFTF Project
- Input provided to BHI on recovery actions required if SNF is discovered during upcoming reactor basins deactivation
- Completed assessment and draft documentation for the Canister Storage Buildings readiness to support the receipt of Immobilized High Level Waste (IHLW) from ORP. This is in direct support of DOE's Readiness to Proceed determination of the Hanford Vitrification Plan.