

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, Milestone Achievement, and Cost/Schedule data contained herein is as of March 31, 2000. All other information is as of April 18, 2000.

The first four Multi-Canister Overpacks (MCOs) were shipped from Joseph Oat, Inc. Fabrication of the MCO baskets continued at the Hanford Site.

Pre-operational Acceptance Testing of systems within Bays 4 and 5 of the Cold Vacuum Drying (CVD) Facility continued. Fabrication of equipment for installation in Bay 3 also continued. The integrated MCO/Process Pre-operational Acceptance Test continued; initiated testing with dummy fuel.

Fiscal year-to-date milestone performance (EA, DOE-HQ, and RL) shows that two out of three milestones were completed on or ahead of schedule and one milestone was overdue as of the end of March. The Milestone Achievement details, found following cost and schedule variance analysis, provide further information on all milestone types.

ACCOMPLISHMENTS

- The Baseline Change Request (BCR) for the sludge acceleration strategy was approved by RL. 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.
- Received RL approval of the SNF Project Safety Authorization Basis documents for fuel removal from K Basins, including CSB FSAR and TSR documents, SNF Project FSAR Volume 1, CVD Facility FSAR and TSR documents, and MCO Topical Report.
- Phase Startup Initiative (PSI) Phase 1 and II testing activities continued. Component tests of the Integrated Water Treatment System (IWTS) and the Fuel Retrieval System (FRS) were completed successfully.
- Initiated the integrated Multi-Canister Overpack (MCO)/Process Pre-operational Acceptance Test (PAT). This integrated test is being conducted after all subsystems' tests have been successfully performed, and when completed, it will demonstrate that the installed process equipment meets its performance criteria for safely drying fuel.
- Initiated work efforts in support of the Sludge Acceleration BCR.
- Began installation of Canister Storage Building Overpack Tubes.

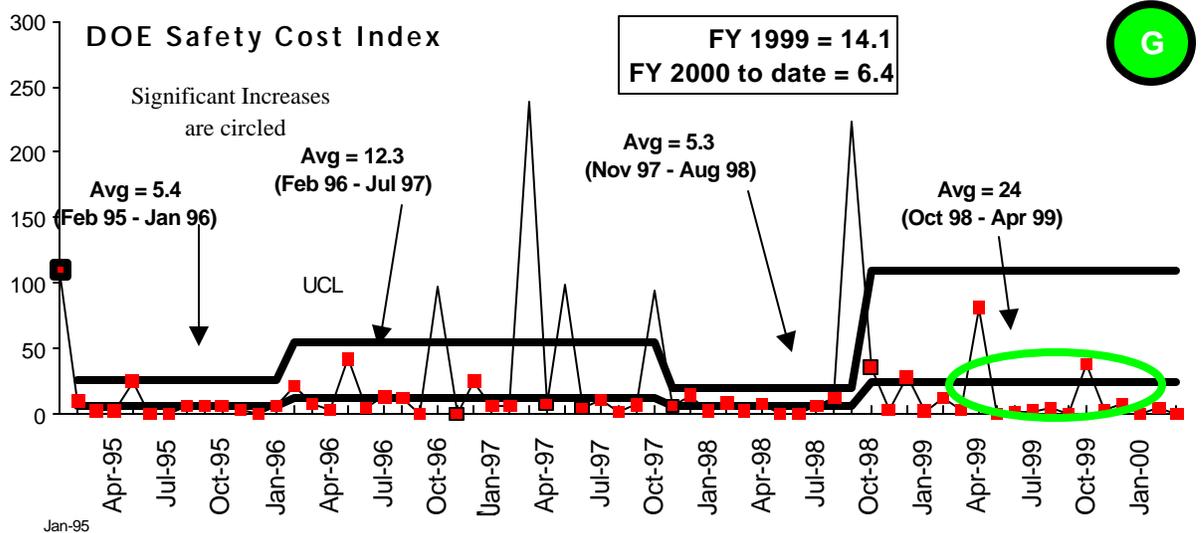
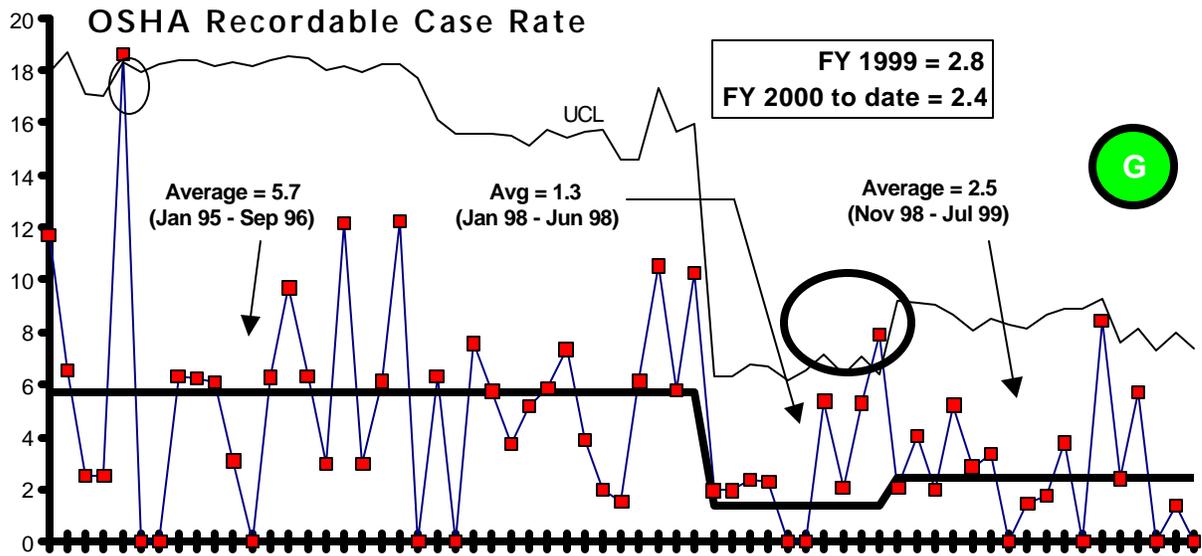
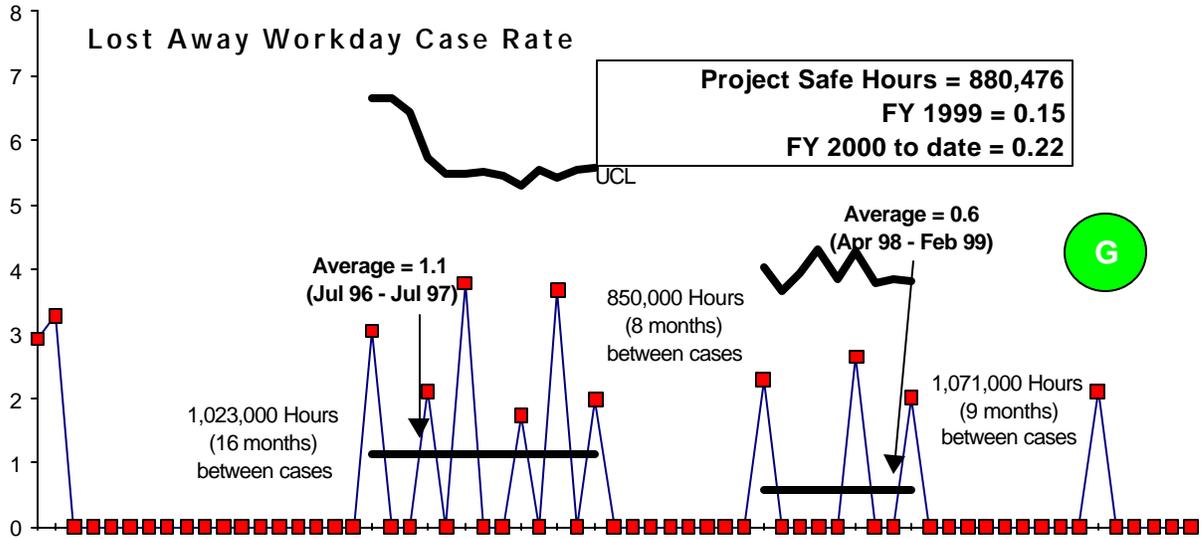
- Completed Baseline Drying Test for the Cold Vacuum Drying.
- The first four MCOs were shipped from Joseph Oat, Inc.

SAFETY

Although the SNF Project experienced some safety performance degradations with the start of FY 2000, performance appears to be recovering. October 1999 had two Restricted Workday Cases, and one 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). The project has achieved almost 750,000 safe work hours. The past nine of ten months for the DOE Cost Index and Severity Rate have been below average.

The project's safety record is improving in both OSHA recordables and DOE Cost Index. Lost away overall has had only one case in the past year.

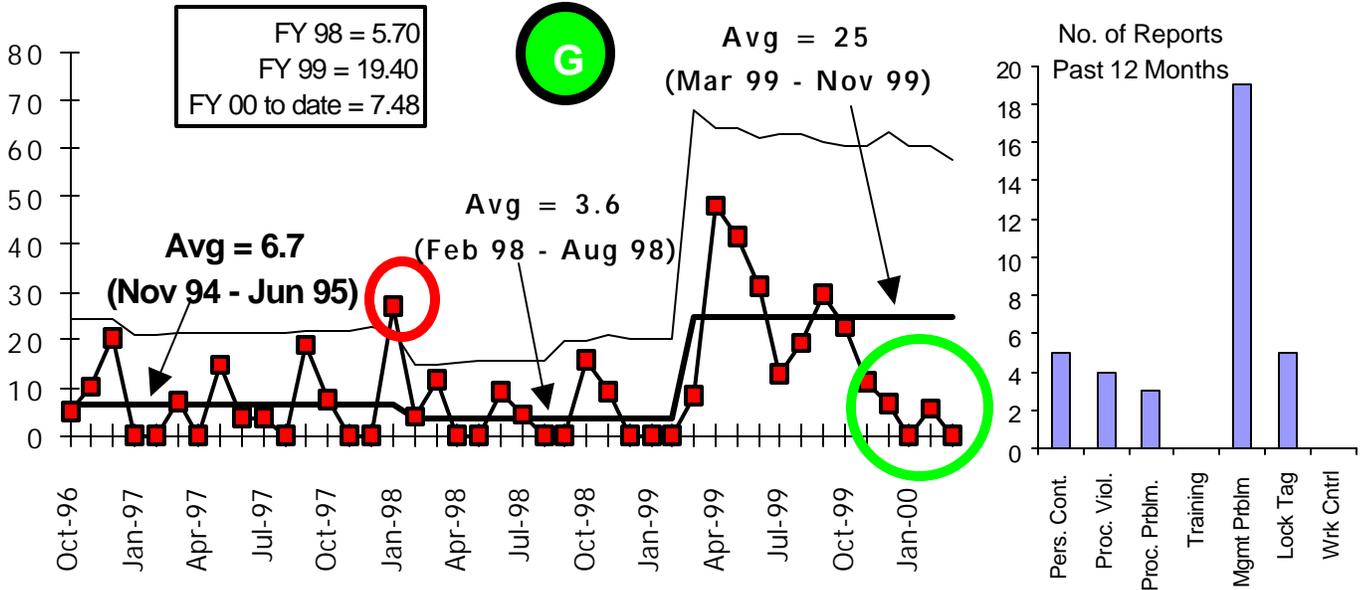
PHMC Environmental Management Performance Report – May 2000
Section D – Spent Nuclear Fuel



CONDUCT OF OPERATIONS / ISMS STATUS

CONDUCT OF OPERATIONS

Events per 200,000 hours



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 now complete. Documentation packages are being prepared for transmittal to the Environmental, Safety & Health organization.

BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

Breakthroughs

Green

- Baseline Change Request SNF-2000-009, which proposes a strategy to accelerate the completion of sludge removal by one year from August 2005 to August 2004 and reduce total project life cycle cost by \$16 million, was approved for Implementation.

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.

UPCOMING ACTIVITIES

CVD Facility Testing — Testing at the CVD Facility continues to remain on critical path. Completion of testing is scheduled for the end of May 2000.

Cask Loadout System (CLS) Testing — Complete startup testing by mid-June 2000.

Phased Startup Initiative (PSI) — Complete PSI Phases 1 & 2 in order to support start of Phase 3. Complete Phases 3 & 4 by mid-August 2000.

Storage Projects — Deliver first shipment of Multi-Canister Overpack baskets by June 1, 2000.

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

COST PERFORMANCE (\$M):

	BCWP	ACWP	VARIANCE
Spent Nuclear Fuel	\$89.4	\$104.9	- \$15.5

The unfavorable cost variance of \$15.5 million (17 percent) is primarily due to engineering, testing, transition and administrative support being underestimated for FY 2000; KW punchlist items not in baseline; and Hanford Site assessments higher than baseline.

SCHEDULE PERFORMANCE (\$M):

	BCWP	BCWS	VARIANCE
Spent Nuclear Fuel	\$89.4	\$91.4	- \$2.0

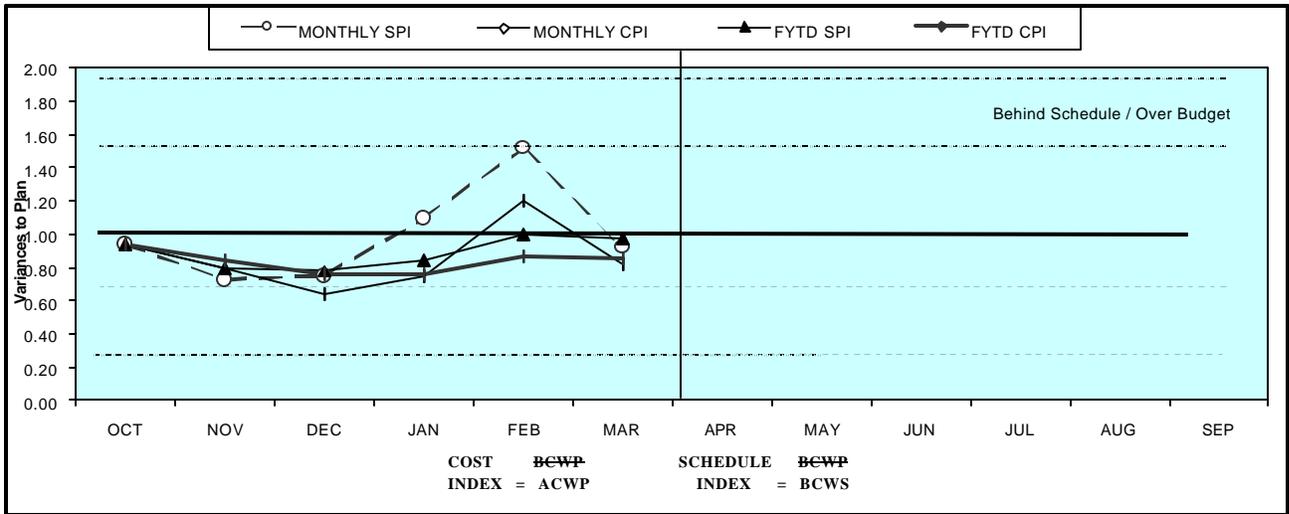
The unfavorable schedule variance of \$2.0 million (2 percent) is primarily a result of K East basin work that has been stopped pending approval of the sludge acceleration strategy, upon which the workscope will be deferred to later years. In addition, site-wide spent nuclear fuel work has been stopped as a result of site workscope prioritization.

FY 2000 COST/SCHEDULE PERFORMANCE – ALL FUND TYPES
CUMULATIVE TO DATE STATUS – (\$000)

			FYTD							
Bv PBS			BCWS	BCWP	ACWP	SV	%	CV	%	PEM
PBS WM01	Spent Nuclear									
WBS 1.3	Fuel Project		\$ 91,382	\$ 89,428	\$ 104,925	\$ (1,955)	-2%	\$ (15,497)	-17%	\$ 195,073
Total			\$ 91,382	\$ 89,428	\$ 104,925	\$ (1,955)	-2%	\$ (15,497)	-17%	\$ 195,073

COST/SCHEDULE PERFORMANCE INDICES
(MARCH 2000 AND FYTD)

Yellow



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.94	0.73	0.75	1.09	1.52	0.92						
MONTHLY CPI	0.93	0.79	0.64	0.74	1.20	0.82						
FYTD SPI	0.94	0.79	0.78	0.85	0.99	0.98						
FYTD CPI	0.93	0.84	0.76	0.75	0.86	0.85						
MONTHLY BCWS	\$8,574	\$19,209	\$15,681	\$12,081	\$15,753	\$20,085	\$16,200	\$19,684	\$15,440	\$14,073	\$18,415	\$19,880
MONTHLY BCWP	\$8,049	\$13,968	\$11,770	\$13,221	\$23,909	\$18,511						
MONTHLY ACWP	\$8,626	\$17,581	\$18,370	\$17,831	\$19,906	\$22,611						
FYTD BCWS	\$8,574	\$27,783	\$43,463	\$55,544	\$71,297	\$91,382	\$107,582	\$127,266	\$142,706	\$156,778	\$175,193	\$195,073
FYTD BCWP	\$8,049	\$22,016	\$33,786	\$47,008	\$70,917	\$89,428						
FYTD ACWP	\$8,626	\$26,207	\$44,577	\$62,408	\$82,314	\$104,925						

COST VARIANCE ANALYSIS: (- \$15.5M)

WBS/PBS

Title

1.3.1/WM01

Spent Nuclear Fuel Project

Description/Cause: The unfavorable cost variance of \$15.5M (17.0 percent) is due to engineering, testing, transition and administrative support underestimated for FY 2000 (78%); KW punchlist items not in baseline (13%); and Hanford Site assessments higher than baseline (9%).

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, and fee allocation are likely to have an adverse impact unless outside funding sources are made available. In addition, Change Requests (CRs) have been developed and reviewed and are on hold pending source availability for KW punchlist items, engineering, testing and administrative support.

Corrective Action: Pursue other Hanford funding to cover site issues and prioritize SNF work within available SNF budget.

SCHEDULE VARIANCE ANALYSIS: (- \$2.0M)

WBS/PBS

Title

1.3.1/ WM01 Spent Nuclear Fuel Project

Description /Cause: The unfavorable schedule variance of \$2.0M (2.2 percent) is primarily a result of K East basin work that has been stopped pending approval of the sludge acceleration strategy, upon which the workscope will be deferred to later years (55%). In addition, site-wide spent nuclear fuel work has been stopped as a result of site workscope prioritization (37%).

Impact: No impact to schedule baseline is anticipated as CR approval and implementation is expected to either defer or eliminate this workscope.

Corrective Action: Approve and implement CRs SNF-2000-009, “Sludge Acceleration Strategy,” and SNF-2000-016, “Defer Site-Wide SNF Project Activities to Align with Site Prioritization.”

ISSUES

There are no technical, DOE, Regulator or external issues identified at this time.

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-2000-009	1/31/00	Sludge Acceleration Strategy		Y	Y	2/24/00	2/25/00	4/7/00	Received DOE HQ approval 4/7/00. In preparation.
SNF-2000-010	1/31/00	SNF Project FY2000 MYWP Revised Rate Impacts		N	N				
SNF-2000-013	3/6/00	Delayed Scope for TGA Sample Disposal		Y	Y				Transmitted to FDH CCA 3/28/00. On Hold.
SNF-2000-014	3/20/00	FY2000 Budget Authority Increase	\$1,300	N	N				Transmitted to FDH CCA 3/28/00. On Hold
SNF-2000-016	3/24/00	Defer Site-Wide SNF Project Activities to Align with Site-Wide Prioritization	(\$1,300)	Y	N				In Project Controls Review.
ADVANCE WORK AUTHORIZATIONS									
		Nothing to report							

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	2	0	0	0	0	0	0	2
DOE-HQ	0	0	0	0	0	0	0	0
RI	0	0	0	1	0	3	0	4
Total Project	2	0	0	1	0	3	0	6

Status as of 4/18/2000

Green

Tri-Party Agreement / EA Milestones

Number	Milestone Title	Status
M-34-14A (S06-97-009)	“Complete K West Basin Cask Facility Modules”	due 2/29/00 — Completed on schedule
M-34-04 (S01-99-124),	"Submit Remedial Design Report/Remedial Action Work Plan for the K Basins"	due 3/31/00 – Completed over 1 month early (2/10/00).
M-34-05 (T01)	"Submit Report on Quantities, Character, and Management of K Basins Debris"	due 5/31/00 – On schedule
M-34-16 (S00-01-900)	"Initiate removal of K West Basin Spent Nuclear Fuel"	due 11/30/00 - On schedule.
M-34-06-T01	"Initiate K West Basin Spent Nuclear Fuel Canister Cleaning Operations"	due 12/31/00 - On schedule.

DNFSB Commitments

	Nothing to report.	

MILESTONE EXCEPTION REPORT

<u>Number/WBS</u>	<u>Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
-------------------	--------------	------------------------	----------------------	----------------------

OVERDUE – 1

S07-97-053	RL	CSB FSAR and Project FSAR Approval	03/01/00	04/18/00
1.3.1				

Cause: RL Directed changes to remove conservatism

Impact: None

Corrective Action: Was completed on April 18.

PERFORMANCE OBJECTIVES

Readiness for Fuel Movement (RC-1-1.a-I) ¾ 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

Phased Startup Initiative (PSI) (RC-1-1.a-II) ¾ Complete PSI Phases 1 & 2 by April 15, 2000. This includes successful Cold Testing of IWTS & FRS. This activity is behind schedule due to required changes to the IWTS Control System Software.

Red

Accelerate Fuel Movement (RC-1SS-1) ¾ Accelerate start of fuel movement by two months. Assumes no problems during first fuel movement and no ORR or MSA discrepancies.

Yellow

Phased Startup Initiative (PSI) (RC-1SS-2) ¾ 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 Office of Civilian Radiation Waste Management (OCRWM) Quality Assurance (QA) Program implementation, ongoing with National SNF Program.
- K Basins sludge removal and Shippingport (PA) Pressurized Water Reactor Core 2 SNF removal implementation activities ongoing with Waste Management Project.
- 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 documentation for the Canister Storage Building's readiness to support the receipt of Immobilized High Level Waste (IHLW) from ORP.