

# SECTION B:1

# WASTE MANAGEMENT



## PROJECT MANAGERS

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## **SUMMARY**

Waste Management consists of the Solid Waste Storage and Disposal, Project Baseline Summary (PBS) WM03, Work Breakdown Structure (WBS) 1.2.1; Solid Waste Treatment, PBS WM04, WBS 1.2.2; Liquid Effluents - 200 Area, PBS WM05, WBS 1.2.3.1; and the Waste Encapsulation and Storage Facility, PBS TP02, WBS 1.4.2.

PBS WM05 is divided between WBS 1.2.3.1, Liquid Effluents (200 LEF) and WBS 1.2.3.2, 310 TEDF/340 Facility (300 LEF). The 310 TEDF/340 Facility work scope is now included in the River Corridor Project, whereas the Liquid Effluents (200 LEF) work scope has remained in Waste Management. For the purpose of performance analysis, PBS WM05 is reported in its entirety in the Waste Management Project, which has the majority of the work scope and funding.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule Date contained herein is as of April 30, 2000. Other information is updated as of May 19, unless otherwise noted.

Fiscal-year-to-date milestone performance (EA, DOE-HQ and RL) shows that one milestone (100 percent) was completed on or ahead of schedule. Overall Project performance continues to be excellent. Cost and schedule goals are on track to be met.

## **ACCOMPLISHMENTS**

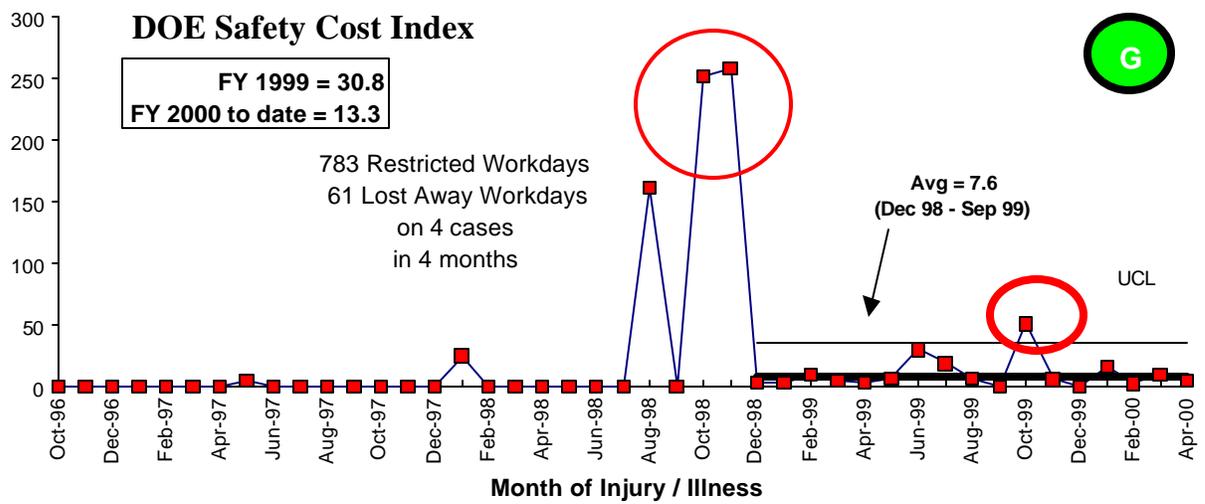
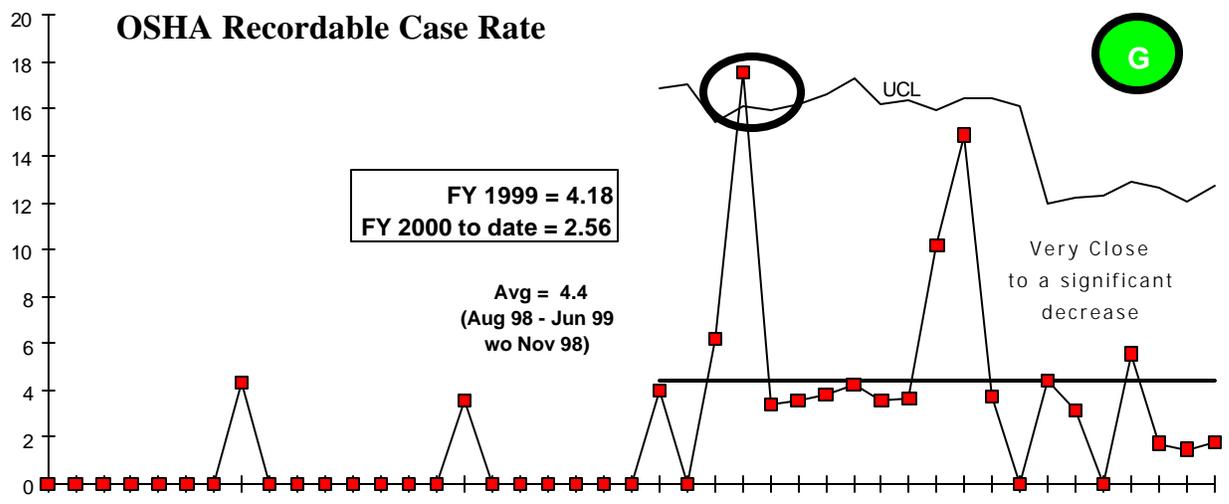
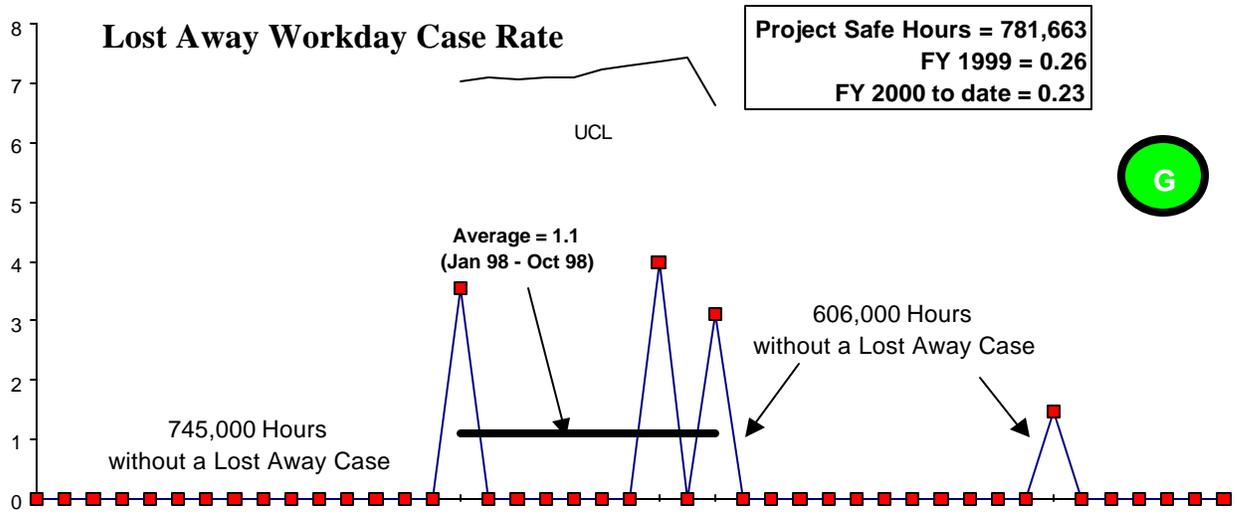
- New Mexico Ecology Department (NMED) approval of the Hanford Audit Report is anticipated in the middle of June 2000. As such, the first shipment of TRU waste is scheduled for June 19, 2000. Twelve containers have been readied for the first shipment and additional containers continue to be prepared.
- Shipped 360 containers totaling 848 cubic meters of mixed low-level waste to ATG, which represents 73% of the FY 2000 target. This waste volume represents an effective Central Waste Complex (CWC) storage volume reduction of 1,437 cubic meters. Allied Technology Group (ATG) has treated 115 containers totaling 455 cubic meters of waste, which represents 39% of the FY 2000 target. Hanford has accepted back for disposal, 95 containers totaling 250 cubic meters, which also represents 39% of the FY 2000 target. (All data as of May 19, 2000).
- Completed nondestructive examination (NDE) on 485 drums, radiography on 27 boxes, non-destructive assays of 534 drums, processing of 29 drums through the Low Level Waste repackaging/compaction glovebox, visual examinations of 25 transuranic (TRU) drums and repackaged two Waste Isolation Pilot Plant (WIPP) TRU drums in the TRU glovebox at the Waste Receiving and Processing (WRAP) facility through May 11, 2000. (Performance during current period on plan.)

- The 242A Evaporator campaign was completed on May 2, 2000, seven days ahead of schedule. The campaign processed 1.3 million gallons of high-level radioactive waste with an all-time high operational efficiency of 99.7%. Processed 7.8 million gallons (through May 15) of wastewater through the 200 Effluent Treatment Facility supporting River Protection Project (RPP), Environmental Restoration Contract (ERC) 200-UP-1 Groundwater, N-Basin Water, Mixed Waste Trench Leachate, and Environmental Restoration Disposal Facility (ERDF) Leachate.

## **SAFETY**

The project's safety rates are stable. The project has exceeded 750,000 safe hours.

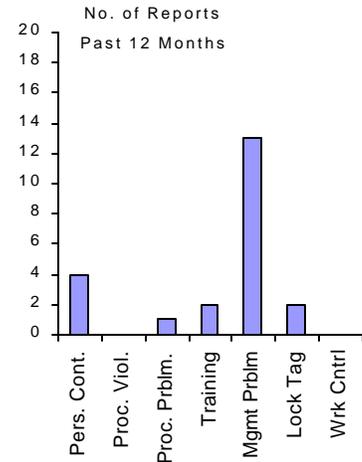
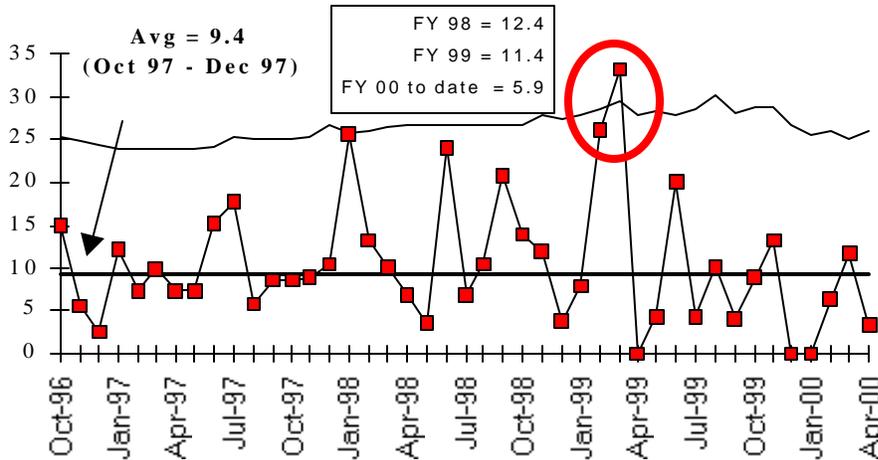
**PHMC Environmental Management Performance Report – June 2000**  
**Section B: 1 – Waste Management**



## CONDUCT OF OPERATIONS / ISMS STATUS

### CONDUCT OF OPERATIONS Events per 200,000 hours

Green



## ISMS STATUS

Green

### Completed activities:

- The DOE ISMS Phase I verification team completed their review, including interviewing of individual employees against a set of CRADS (Criteria and Review Approach Document). All CRAD objectives were met. Several Noteworthy Practices were found, as well as Opportunities for Improvement.
- Session Four Training, “ISMS Verification and Your Role” was held for all but a few employees in WMP / ASP. This training should help the activity level workforce prepare for Phase II verification.
- Authorization Agreements are completed however, they remain within the signature stage of the authorization process.
- Presentations detailing our readiness for Phase II verification were made to a combined WMP / ASP Senior Management Review Board (SMRB). Both Projects signed letters to FH, declaring readiness to proceed with Phase II verification.

### Planned Actions:

- Complete Training Session 4 (ISMS Verification and Your Role).
- Phase II verification is currently scheduled to begin June 12, 2000 and continue through June 21, 2000.
- Revise procedures, plans and documents to address Phase I verification Opportunities for Improvement.
- Prepare Projects for, and support DOE Phase II efforts.
- Generate and implement out-year plan to sustain and maintain ISMS effort.

## **BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT**

No Breakthroughs or Opportunities for Improvement are identified at this time.

## **UPCOMING ACTIVITIES**

**WIPP Certification and Waste Shipments**— Complete Waste Isolation Pilot Project (WIPP) Certification of Hanford's Transuranic (TRU) Project and initiate TRU shipments in June 2000.

**RH TRU PMP**— Issue Project Management Plan (PMP) for RH TRU in June 2000 to meet M-91 milestone.

**MLLW Treatment**— Treat 1,160 cubic meters (includes 100 cubic meters stretch) of Mixed Low-Level Waste (MLLW) at Allied Technology Group (ATG) by August 2000; dispose of the Land Disposal Restriction compliant waste by September 2000.

**Suspect TRU Waste Retrieval**— Retrieve 425 drums of suspect TRU waste from the Low-Level Burial Grounds by September 2000.

**Accelerate Readiness to Receive Spent Nuclear Fuel K Basin Sludge**— Clear three sections of the T Plant Canyon deck in FY 2000 and complete entire deck clearing by FY 2001. Complete Project Execution Plan and Conceptual Design Documents for removal of Shippingport Fuel from T Plant in FY 2000.

## **COST PERFORMANCE (\$M):**

	<b>BCWP</b>	<b>ACWP</b>	<b>VARIANCE</b>
<b>Waste Management</b>	\$57.1	\$57.1	\$0.0

There is no cost variance. Further information at the PBS level can be found in the following Cost Variance Analysis details.

## **SCHEDULE PERFORMANCE (\$M):**

	<b>BCWP</b>	<b>BCWS</b>	<b>VARIANCE</b>
<b>Waste Management</b>	\$57.1	\$60.3	- \$3.2

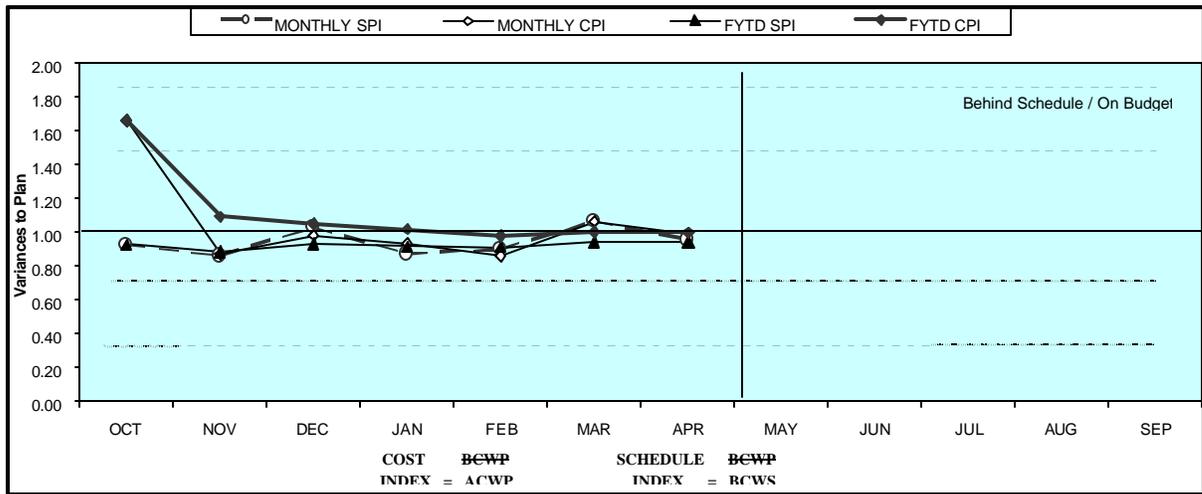
The \$3.2 million (5 percent) unfavorable schedule variance is within established thresholds. Further information at the PBS level can be found in the following Schedule Variance Analysis details.

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

By PBS		FYTD								PEM	FYSF	EAC
		BCWS	BCWP	ACWP	SV	%	CV	%				
PBS WM03 WBS 1.2.1	Solid Waste Storage & Disposal	\$ 20,688	\$ 20,613	\$ 18,607	\$ (75)	0%	\$ 2,006	10%	\$ 36,451	\$ 34,691	\$ 34,691	
PBS WM04 WBS 1.2.2	Solid Waste Treatment	\$ 16,009	\$ 15,171	\$ 17,686	\$ (838)	-5%	\$ (2,515)	-17%	\$ 30,124	\$ 34,273	\$ 34,273	
PBS WM05* WBS 1.2.3	Liquid Effluents - 200/300 Area	\$ 15,828	\$ 14,773	\$ 13,948	\$ (1,054)	-7%	\$ 825	6%	\$ 29,271	\$ 26,636	\$ 26,636	
PBS TP02 WBS 1.4.2	WESF	\$ 7,786	\$ 6,566	\$ 6,907	\$ (1,220)	-16%	\$ (341)	-5%	\$ 14,339	\$ 12,417	\$ 12,417	
<b>Total</b>		\$ 60,310	\$ 57,123	\$ 57,148	\$ (3,187)	-5%	\$ (25)	0%	\$ 110,184	\$ 108,017	\$ 108,017	

\* PBS WM05 includes the 300 Area Liquid Effluent, which is part of the River Corridor Project.

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



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.93	0.86	1.03	0.88	0.90	1.07	0.96					
MONTHLY CPI	1.66	0.87	0.98	0.94	0.86	1.07	0.99					
FYTD SPI	0.93	0.89	0.93	0.92	0.91	0.95	0.95					
FYTD CPI	1.66	1.09	1.05	1.02	0.98	1.00	1.00					
MONTHLY BCWS	\$ 6,641	\$ 9,616	\$ 7,269	\$ 8,331	\$ 8,862	\$ 10,686	\$ 8,906	\$ 10,979	\$ 8,170	\$ 8,091	\$ 10,757	\$ 11,877
MONTHLY BCWP	\$ 6,163	\$ 8,277	\$ 7,499	\$ 7,291	\$ 7,973	\$ 11,406	\$ 8,514					
MONTHLY ACWP	\$ 3,703	\$ 9,520	\$ 7,619	\$ 7,789	\$ 9,270	\$ 10,685	\$ 8,562					
FYTD BCWS	\$ 6,641	\$ 16,257	\$ 23,526	\$ 31,857	\$ 40,719	\$ 51,404	\$ 60,310	\$ 71,289	\$ 79,459	\$ 87,550	\$ 98,308	\$ 110,184
FYTD BCWP	\$ 6,163	\$ 14,440	\$ 21,939	\$ 29,230	\$ 37,203	\$ 48,609	\$ 57,123					
FYTD ACWP	\$ 3,703	\$ 13,223	\$ 20,842	\$ 28,631	\$ 37,901	\$ 48,586	\$ 57,148					

## **COST VARIANCE ANALYSIS: (\$0.0M)**

### **WBS/PBS**

### **Title**

#### **1.2.1/WM03**

#### **Solid Waste Storage & Disposal**

**Description/Cause:** The favorable cost variance of \$2.0M (10 percent) is due to vacancies and an April variance distribution of indirect costs.

**Impact:** No impact.

**Corrective Action:** Implementation of Baseline Change Requests in May, utilizing underruns and deletions, will reduce the variance.

#### **1.2.2/WM04**

#### **Solid Waste Treatment**

**Description/Cause:** The unfavorable cost variance of \$2.5M (17 percent) is due to Canyon Deck Clean Off workscope being performed under an Advanced Work Authorization (AWA) for T Plant support to accelerated SNF sludge removal. In addition, there are retooling and TRU project recertification costs caused by the new WIPP permit changes. Installation of the 2706-T greenhouse to support production and additional minimum safe maintenance activities also contributed to the variance.

**Impact:** No impact.

**Corrective Action:** A BCR for the T Plant was approved on 6/1. A BCR for the TRU Project additional workscope has been submitted.

#### **1.2.3.1/WM05**

#### **Liquid Effluents**

**Description/Cause:** The favorable cost variance of \$0.8M (6 percent) is within the established threshold.

**Impact:** No impact.

**Corrective Action:** No corrective action required.

#### **1.4.2/TP02**

#### **WESF**

**Description/Cause:** The unfavorable cost variance of \$0.3M (5 percent) is due to unplanned activities for the Ultrasonic Test (UT) of Cesium capsules and electrical system upgrades.

**Impact:** No impact.

**Corrective Action:** The variance will be managed in the Corrective Maintenance budget with no impact on scope.

## **SCHEDULE VARIANCE ANALYSIS: (- \$3.2M)**

### **WBS/PBS**

### **Title**

#### **1.2.1/ WM03**

#### **Solid Waste Storage & Disposal**

**Description /Cause:** The unfavorable schedule variance is less than 1%, which is within the established threshold.

**Impact:** No Impact.

**Corrective Action:** No corrective action required.



- Conducting multi-contractor team meetings to define scope and issues associated with this effort.
- Drafted definition of "waste stream" for inclusion in the LDR report and MW program.
- Defined path forward, budget estimate and schedule for development of the implementation plan.
- Drafted white paper regarding the proposed scope for both the 2000 and 2001 LDR submittals.
- Finalized draft Bases Of Estimates for proposed new scope.
- Drafted the Implementation Plan and distributed it for review.
- Conducted multi-contractor team meetings to define the scope of the new storage compliance assessment program.

**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
WM-2000-002	1/5/00	Waste Management FY 2000 Mandated Funds Reduction	\$ (3,042)			02/17/00	03/29/00	05/15/00	To be implemented in May Baseline
FSP-2000-018	1/25/00	WESF Mandated Funds Reduction	\$ (1,100)			02/29/00	02/29/00	05/15/00	To be implemented in May Baseline
WM-2000-003	2/8/00	T-Plant Canyon Deck Clean off and PWR Fuel Removal	\$ 3,085			4/13/200	04/13/00	06/01/00	To be implemented in June Baseline
WM-2000-004	2/8/00	WMP Stretch Goals	\$ 1,214			05/11/00	06/01/00		At RL
WM-2000-005	3/21/00	WMP FY 2000 Repricing Impacts	\$ 653			05/15/00	05/15/00	N/A	To be implemented in May Baseline
WM-2000-006	3/21/00	TRU Project Rebaselining	\$ -			06/08/00	06/08/00		At RL
WM-2000-008	4/13/00	LDR	\$ -			TBD			Draft in process
WM-2000-009	4/13/00	616 Transition	\$ 87			06/06/00	N/A		To be implemented in June Baseline
WM-2000-011	4/27/00	CSERS/Weed & Pest Allocation	\$ 822			05/31/00	06/01/00	N/A	To be implemented in June Baseline
FSP-2000-030	3/21/00	WMP FY 2000 Repricing Impacts	\$ (653)			05/15/00	05/15/00	N/A	To be implemented in May Baseline
<b>ADVANCE WORK AUTHORIZATIONS</b>									
AWA	2/25/00	TRU Retrieval/TRU PMP	\$ 750					05/31/00	Acceleration of scope
AWA	5/8/00	LDR	\$ 165					5/8/00	Acceleration of scope

## 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	1	0	0	0	0	1	0	2
DOE-HQ	0	0	0	0	0	0	0	0
RL	0	0	0	0	0	9	0	9
<b>Total Project</b>	1	0	0	0	0	10	0	11

### Tri-Party Agreement / EA Milestones

Number	Milestone Title	Status
M-91-03 (WMH-00-001)	Issue TRU/TRUM Waste PMP	due 06/30/00 — On schedule (stretch)
M-91-04 (A2J-00-001)	Complete Construction of CH TRU/TRUM Retrieval Facility	due 09/29/00 — DOE-RL issued a letter to Ecology on February 29, 2000 documenting closure of the TPA milestone as retrieval has been initiated and is planned to continue, even without construction of Project W-113 facilities.

### 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>
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**OVERDUE – 0**

**FORECAST LATE – 0**

**FY 1999 OVERDUE – 1**

TRP-98-709	RL	Complete Hot Cell Deactivation WESF Facility (A-E)	03/31/99	09/30/00
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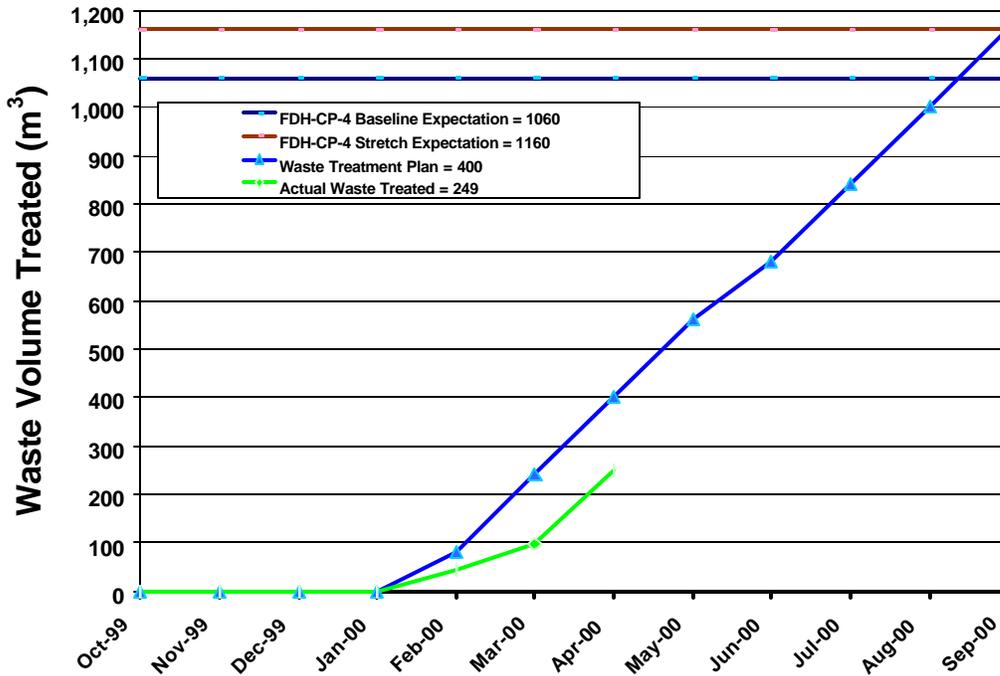
**Cause:** This milestone is not complete due to not being supported at the current funding level.

**Impact:** No overall impact is expected.

**Corrective Action:** Return-on-Investment (ROI) funding has been identified for this work scope and a new forecasted completion date of September 30, 2000 established.

## PERFORMANCE OBJECTIVES MLLW TREATMENT

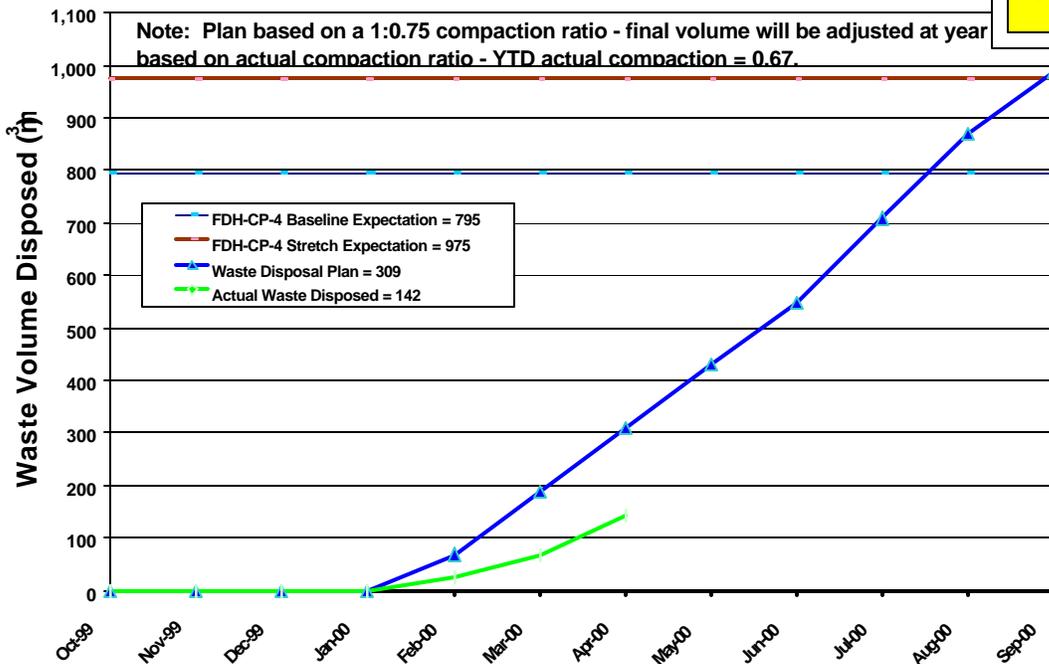
Yellow



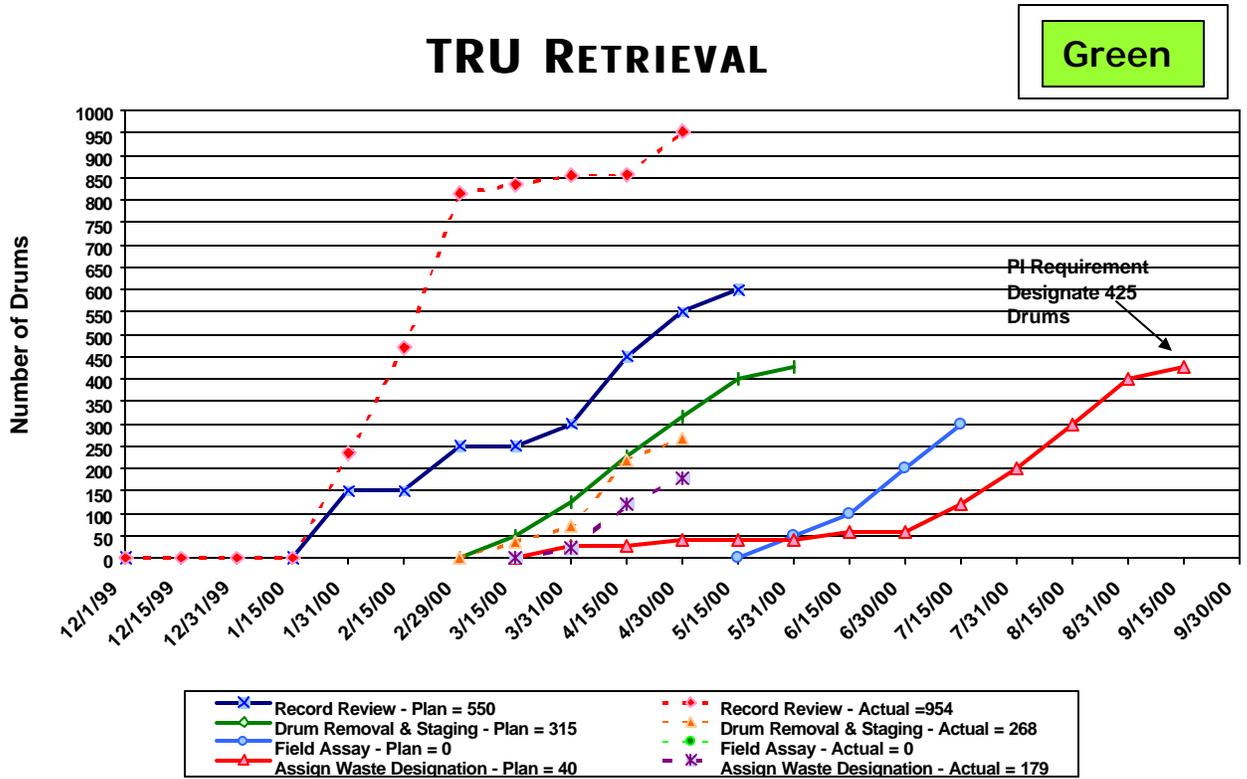
Action Plans: Ramping-up to meet stretch expectation. Recovery expected by the end of May 2000.

## MLLW DISPOSAL

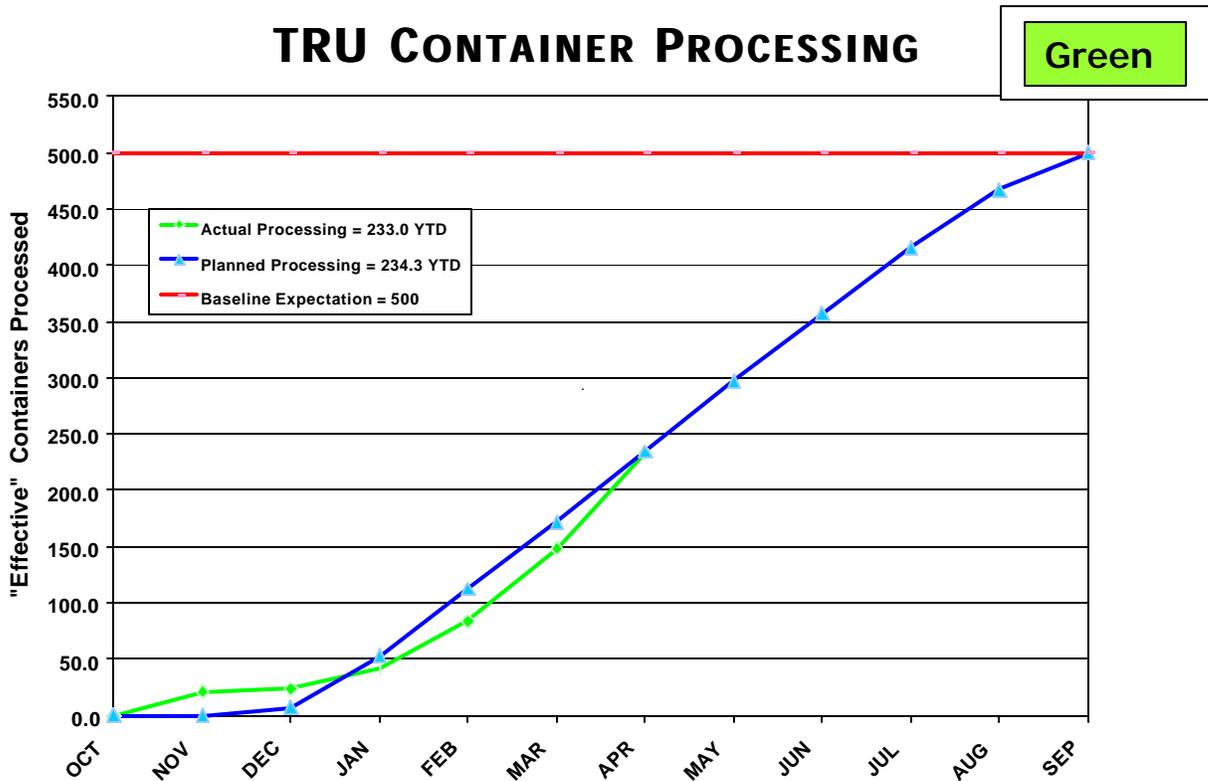
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Action Plans: Ramping-up to meet stretch expectation. Recovery expected by the end of May 2000.



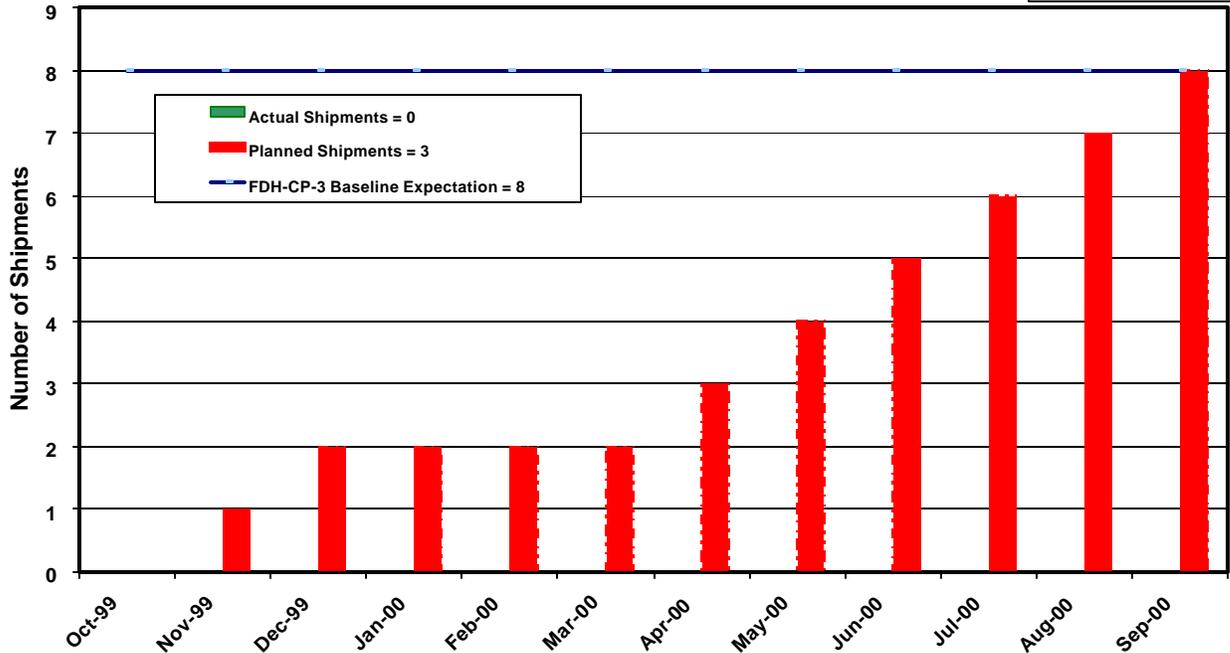
**Action Plans:** On track to meet the new stretch goal (425) for drums designated



**Action Plans:** On track.

## TRU SHIPMENTS

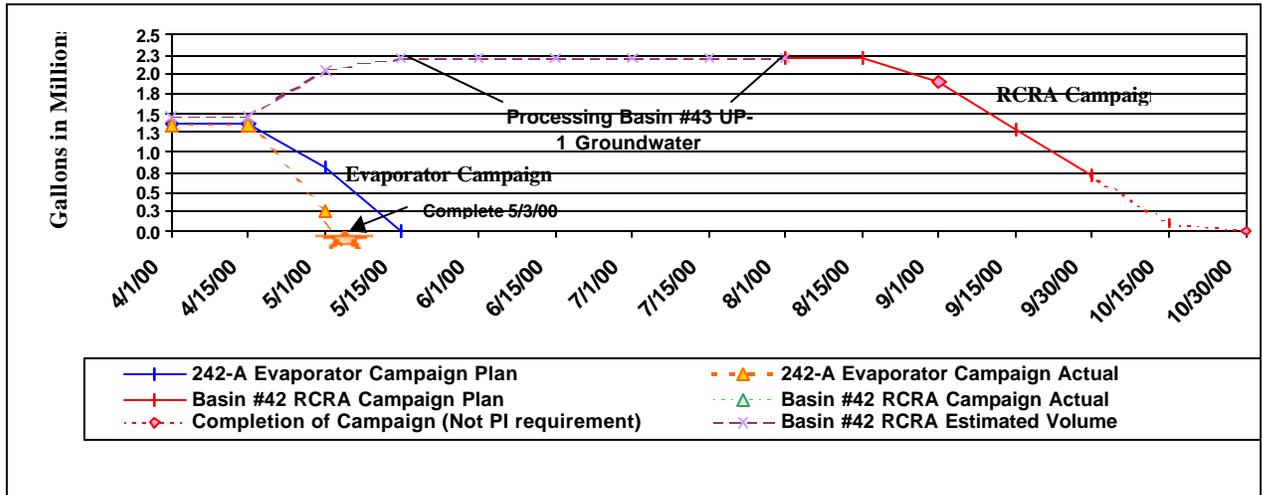
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**Action Plans:** Change required based on additional CAO WIPP Certification requirements. Initial shipment delayed until mid-June 2000.

Green

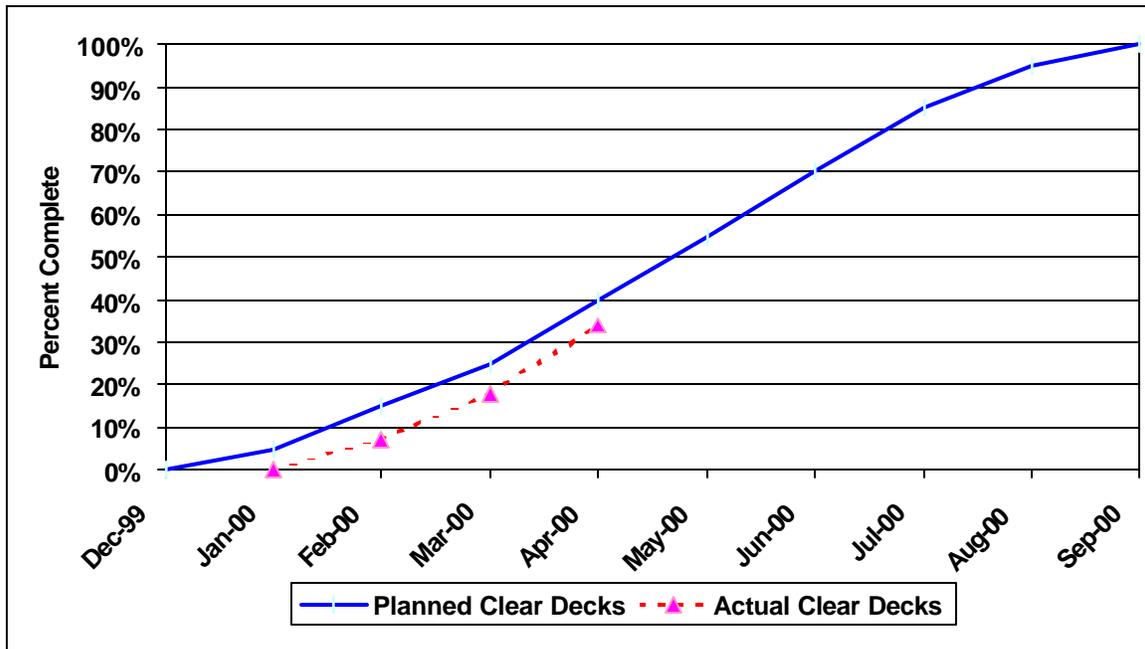
## LIQUID WASTE PROCESSING



**Action Plans:** 242A Evaporator campaign completed 5/2/2000. RCRA campaign scheduled to begin mid-August 2000. Change agreement completed 5/4/2000 and PI revision expected in May 2000.

## T Plant Deck Clearing (RC-4-1-1)

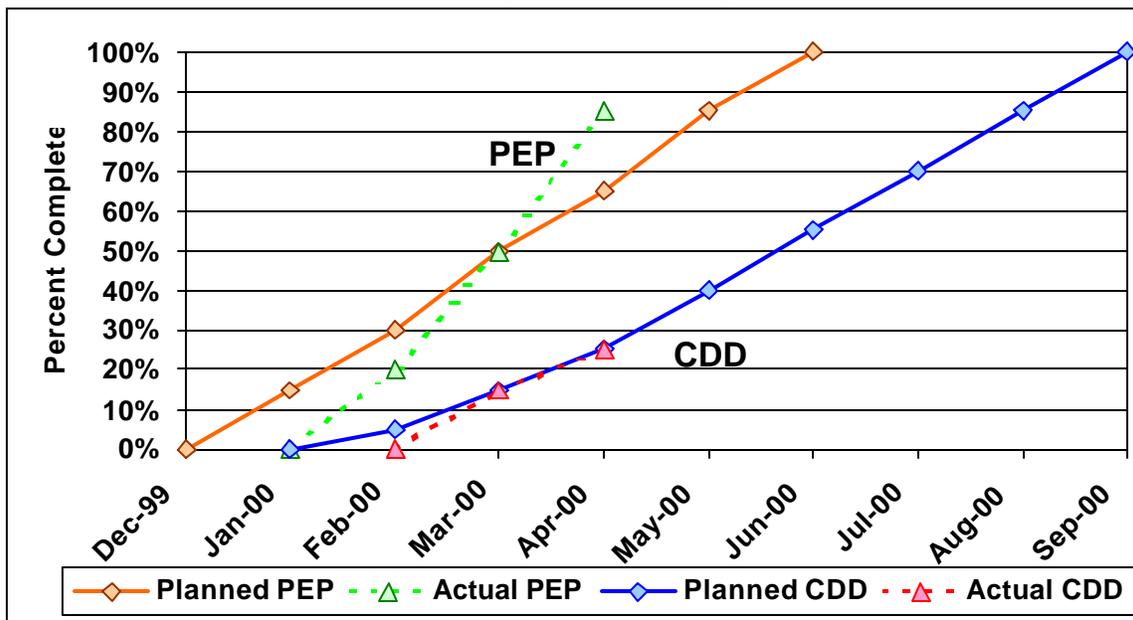
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**Action Plans:** On track for completion in September 2000.

## T PLANT PEP AND CDD (RC-4-1-1)

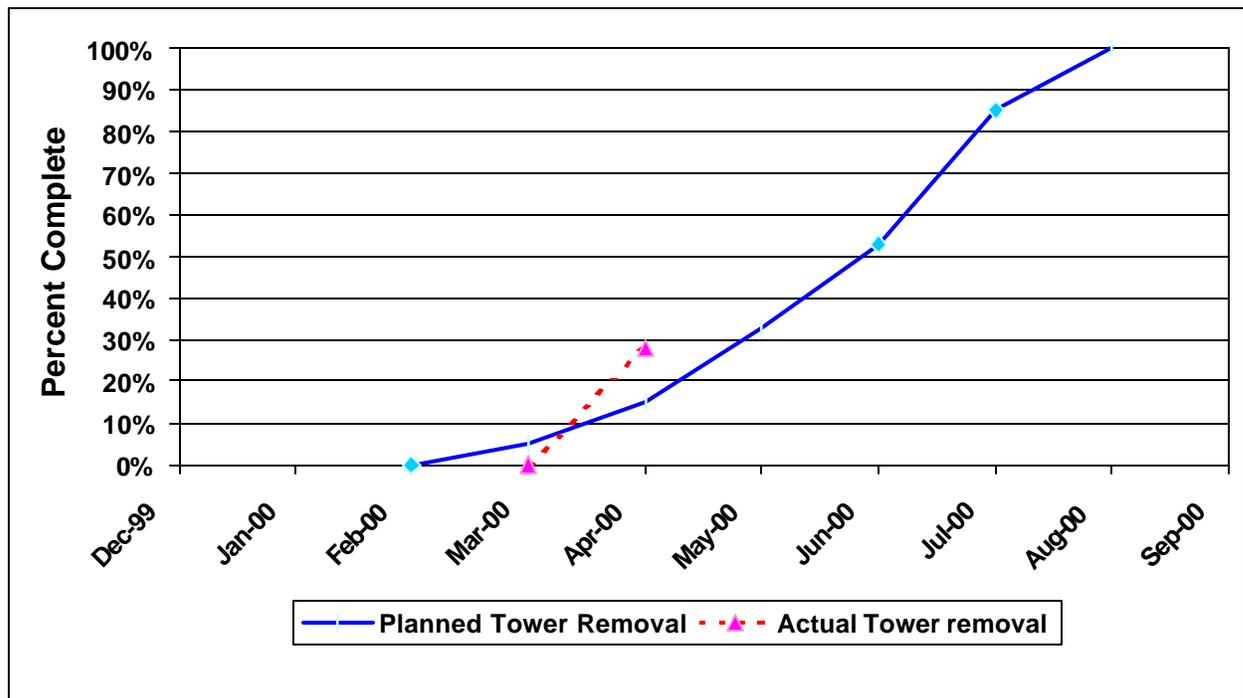
Green



**Action Plans:** On track for Project Execution Plan (PEP) completion in June 2000 and completion of the Conceptual Design Document (CDD) in September 2000.

## T PLANT TOWER REMOVAL (RC-4-1-2)

Green



**Action Plans:** On track for removal of two PUREX Towers from the T Plant canyon by September 2000.

### KEY INTEGRATION ACTIVITIES

- Preparing T Plant to receive Spent Nuclear Fuel K Basin sludge.
- Issuance of Records of Decision for LLW and MLLW is expected to affect Hanford's role in disposing of waste from other sites. Working with DOE-RL, DOE-HQ, WDOE and other Sites to develop and define Hanford's role as one of the identified LLW/MLLW disposal sites for the Complex.
- Support continued UP-1 Groundwater treatment.
- Support River Corridor Project in cleanup and removal of waste from 324 and 327 buildings.
- Working with PNNL, EM 50 and Mixed Waste Focus Area (MWFA) to obtain funding in support of mixed waste processing (M-91 Facility Project).
- Continue to work with DOE- RL, -Oakland, and -Ohio to support resolution of TRU small quantity site disposition issues.