

# **Environmental Management Performance Report November 2000**

**Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management**

Project Hanford Management Contractor for the  
U.S. Department of Energy under Contract DE-AC06-96RL13200



**United States  
Department of Energy**  
P.O. Box 550  
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Chris Willingham 11-8-00  
Release Approval Date

## **INTRODUCTION**

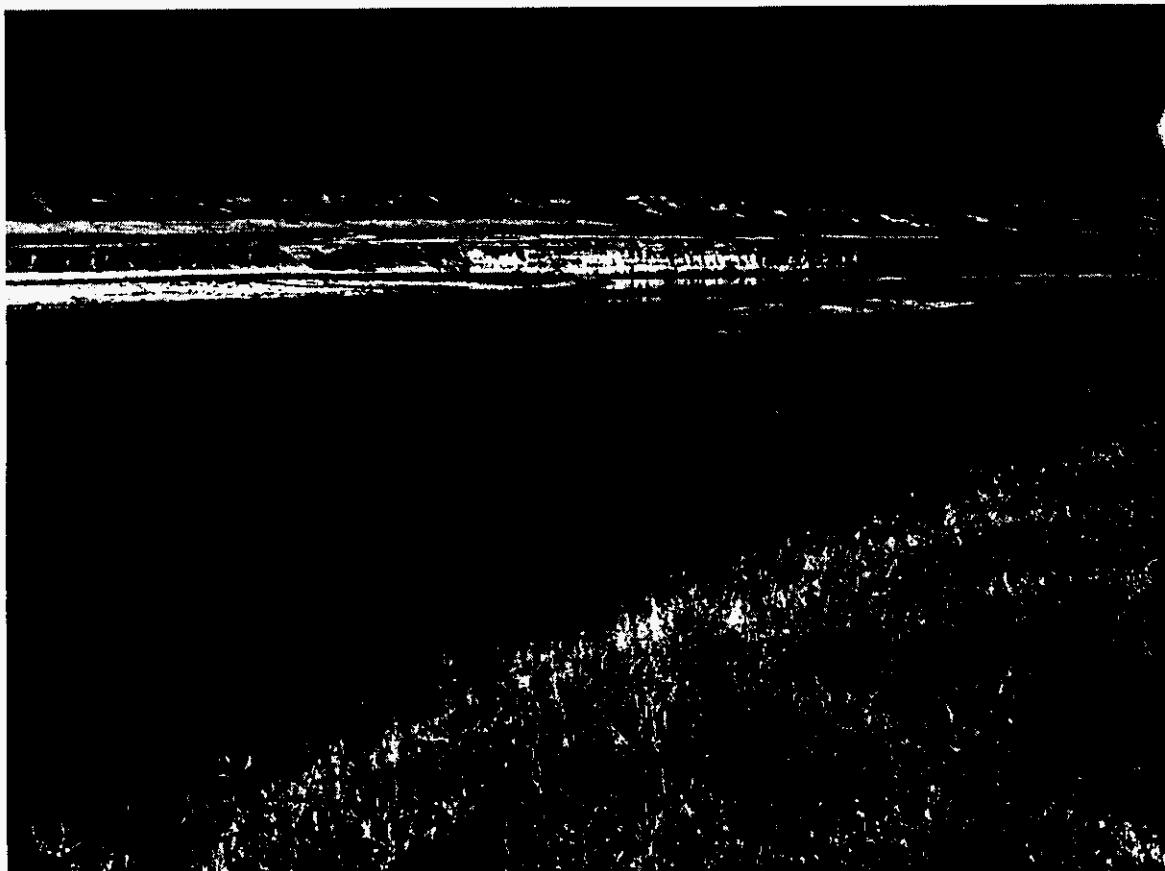
**T**he purpose of the Environmental Management Performance Report (EMPR) is to provide the Department of Energy Richland Operations Office's (DOE-RL's) report of Hanford's Environmental Management (EM) performance by:

- Project Hanford Management Contract (PHMC) through Fluor Hanford, Inc. (FH) and its subcontractors,
- Environmental Restoration Contract through Bechtel Hanford, Inc. (BHI), and its subcontractors,
- Pacific Northwest National Laboratories (PNNL) for Science and Technology support to the EM Mission, and
- Office of Safety Regulation of the TWRS Privatization Contractor.

This report is a monthly publication that summarizes EM Site performance under RL Operations Office. It is organized by the four sections listed above, with each section containing an Executive Summary and Area Performance Summaries. A glossary of terms is provided at the end of this report for reference purposes.

The report date on the cover reflects the month in which the report is released.

**Project Hanford Management Contractor  
Environmental Management  
Performance Report to  
DOE Richland Operations Office  
November 2000**



**Fluor Hanford**  
A Fluor Global Services Company

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## INTRODUCTION

The purpose of this report is to provide the Department of Energy Richland Operations Office (DOE-RL) a monthly summary of the Project Hanford Management Contractor's (PHMC) Environmental Management (EM) performance by Fluor Hanford (FH) and its subcontractors. In addition to project-specific information, it includes some PHMC-level data not detailed elsewhere in the report.

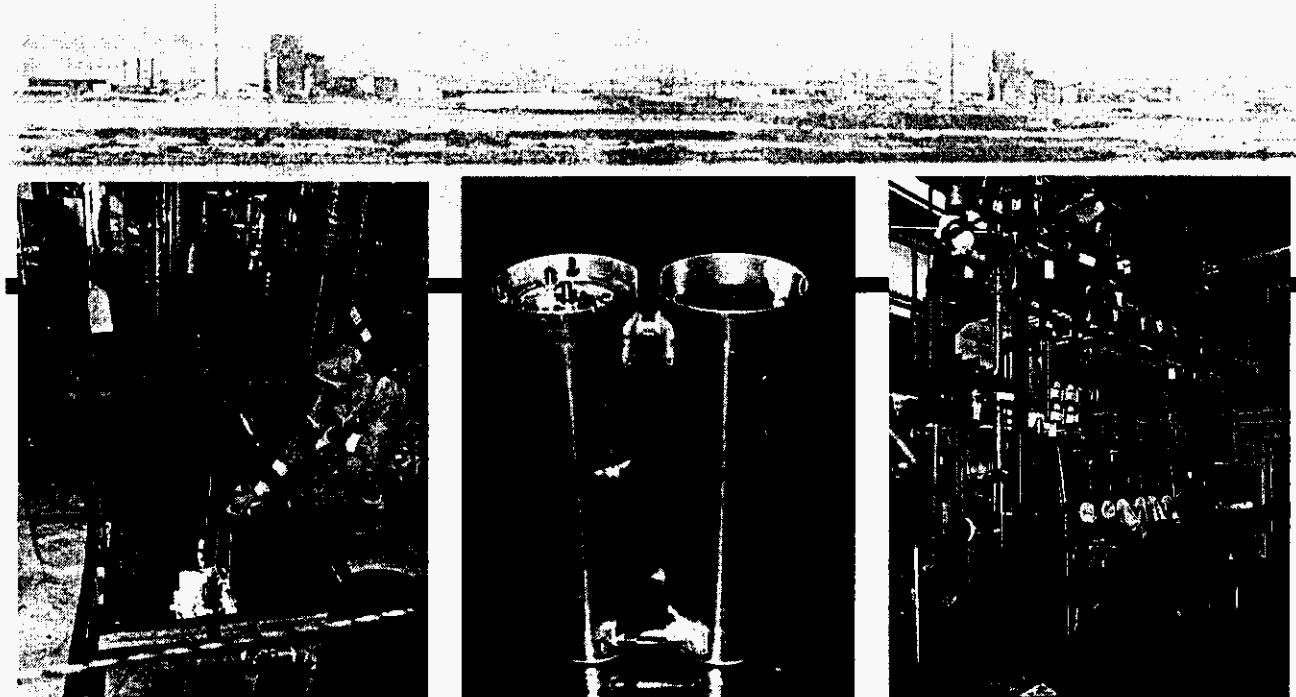
Section A, Executive Summary, provides an executive level summary of the cost, schedule, and technical performance described in this report. It summarizes performance for the period covered, highlights areas worthy of management attention, and provides a forward look to some of the upcoming key performance activities as extracted from the PHMC baseline.

The remaining sections provide detailed performance data relative to each individual Project (e.g., Waste Management, Spent Nuclear Fuels, etc.), in support of Section A of the report. Unless otherwise noted, the Safety, Conduct of Operations, and Cost/Schedule data contained herein is as of September 30, 2000. All other information is updated as of October 19, unless otherwise noted. A summary of the year's accomplishments has been included, grouped by the following categories:

- **Momentum** - How in terms of waste processing rates, etc. the cleanup of Hanford has been "*sped up*".
- **Progress** - What "*things*" have been achieved this year in terms of amounts and percentages.
- **Completion & Removal** - What's done and what's gone.

“Stoplight” boxes are used to indicate at a glance the condition of a particular area. Green boxes denote on schedule. Yellows denote behind schedule but recoverable. Red is either missed or unrecoverable.

**PHMC Environmental Management Performance Report – November 2000**  
**Section A – Executive Summary**



# **Section A**

## ***Executive Summary***

## INTRODUCTION

This section provides an executive level summary of the performance information covered in this report and is intended to bring to Management's attention that information considered to be most noteworthy. All cost, schedule, milestone commitments, performance measures, and safety data is current as of September 30. Accomplishments, Issues and Integration items are current as of October 19 unless otherwise noted.

The section begins with a summary of notable accomplishments for FY 2000, which are considered to have made the greatest contribution toward safe, timely, and cost-effective, clean up. In addition, notable accomplishments for the first three weeks of FY 2001 are also included. Following the accomplishment section is an overall fiscal year-to-date summary analysis addressing cost, schedule, and milestone performance. Overviews of safety ensue. The next segment of the Executive Summary, entitled Critical Issues, is designed to identify the high-level challenges to achieving cleanup progress.

The next section includes FY 2000 EM Corporate Performance Measures, Management Commitment High Visibility Project Milestones and Critical Few Performance Measures.

The Key Integration Activities section follows next, highlighting PHMC activities that cross contractor boundaries and demonstrate the shared value of partnering with other Site entities to accomplish the work. Concluding the Executive Summary, a forward-looking synopsis of Upcoming Planned Key Events is provided.

Note: Milestones tracked and reported in this report consist of two Department of Energy levels. In descending order these levels are: 1) Department of Energy-Headquarters (HQ), and 2) Richland Operations (RL). Because it is also useful to distinguish milestones based on specific drivers, the Site applies a designation for those milestones created or tracked to meet the requirements of Enforceable Agreements (EAs). When a milestone satisfies both an EA requirement and a milestone level, it is categorized as both. However, in order to avoid duplicate reporting, this report accounts for each milestone only once. Where an overlap exists between EA and a level (i.e., HQ or RL), the milestone is reported as EA. Additionally, Tri-Party Agreement (TPA) Major and Interim milestones are EA milestones, TPA target milestones are not.

## Top 5 Accomplishments for FY 2000

### STABILIZATION AND PACKAGED PLUTONIUM – FOUR MAJOR PROCESSES ON LINE

- Quadrupled thermal stabilization rates for plutonium (Pu) oxides (658 items in FY 2000 versus 150 items in FY 1999) using 5 muffle furnaces.
- The startup operation of the magnesium hydroxide  $[Mg(OH)_2]$  precipitation process, initiated September 20, is converting potentially volatile plutonium nitrate acid solutions to a stable oxide form thereby reducing a significant safety risk. Startup of the process is the culmination of months of precise and integrated preparations in what was a very aggressive schedule.
- Operation of an automated state-of-the-art system known as the Bagless Transfer System (BTS) began September 30, 2000, at the Plutonium Finishing Plant. This system accelerates

**Section A –Executive Summary**

packaging capabilities and reduces radiation exposure through automated packaging of plutonium-bearing material in welded stainless steel containers for long term storage.

- The accelerated startup of the plutonium residues packaging process (Pipe'n'Go) was accomplished on September 11 through successful negotiations between the Department of Energy, Fluor Hanford Inc., and the Washington State Department of Ecology. This process packages imported Rocky Flats ash in preparation for future shipment to the Waste Isolation Pilot Plant (WIPP) in New Mexico (Momentum).

**COMPLETED SNF CONSTRUCTION, EQUIPMENT INSTALLATION / TESTING**

- Completed construction activities on new nuclear cleanup and storage facilities: Canister Storage Building (CSB), Cold Vacuum Drying Facility (CVDF), and major modifications on K West Basin. Construction of the Interim Storage Area (ISA) adjacent to the CSB was also completed.
- Implemented a strategy to conduct early testing of K West Fuel Retrieval System and Integrated Water Treatment System reducing schedule risk for fuel movement and improving projected fuel production rates in FY 2001.
- Cleared three sections of the T Plant Canyon deck for future acceptance of SNF sludge. This represents significant progress toward readying T Plant and supports completion of sludge removal one-year ahead of schedule (Progress).

**TREATED/DISPOSED WASTE AND MATERIALS**

- Shipped all 184 T-hoppers containing approximately 667 metric tons of low-enriched uranium in the form of uranium trioxide powder to the DOE Portsmouth site in Ohio by the due date of September 28, 2000. This represents approximately one-third of the total unirradiated uranium inventory stored on the Hanford Site at the beginning of FY 2000.
- Shipped 89 drums of TRU waste, the first three of 2,500 shipments scheduled over the next 30 years, to the Waste Isolation Pilot Plant in Carlsbad, New Mexico.
- Treated or direct disposed of 1,204 m<sup>3</sup> of Mixed Low Level Waste (MLLW), surpassing the FY 2002 goal and completing Tri-Party Agreement (TPA) milestone M-19-00 eighteen months early. MLLW treatment produced 1,940 m<sup>3</sup> of free space in the Central Waste Complex (Completion and Removal).

**REMOVED HIGHLY RADIOACTIVE WASTE FROM 300 AREA**

- Key 327 Building cleanup was accomplished, which included packaging and shipping: 32.5 m<sup>3</sup> of bulk waste (exceeding the fiscal-year target); 103 legacy waste buckets (28 more than planned); and 90 percent of the 297 sample cans of radioactive materials from dry storage. All eight fuel pins were packaged and shipped; cleanout of H Cell was completed; and all accountable fissile material in hot cells packaged and shipped.
- 324 B Cell Cleanout (2A Rack Removal and Size Reduction) was completed three weeks early, and 1A 3-82B cask shipments were completed seven days early, with all 17 grout containers scheduled for FY 2000 shipped (Momentum).

### **ACHIEVED SAFE WORK HOURS RECORD**

- Fluor Hanford, its projects, affiliate companies, and lower tier subcontractors have achieved more than 10 million hours worked since the last Lost Away Workday injury. These hours have accumulated from December 15, 1999 to November 1, 2000 and represent the best Hanford and one of the best DOE complex records (Progress).

## **PERFORMANCE DATA AND ANALYSIS**

**T**he following provides a brief synopsis of overall PHMC Environmental Management (EM) cost, schedule, and milestone performance.

### **FY 2000 Cost and Schedule Performance**

**Cost Performance** — FY 2000 year end cost performance reflects a 3.7 percent (\$21.9 million) favorable cost variance that is within the established +10/-5 percent threshold. Four projects outside the threshold and contributing to the favorable cost variance are Waste Management, River Corridor, Landlord, and National Programs. Detailed variance analysis explanations can be found in the Project Sections.

**Schedule Performance** — There is a FY 2000 year end 1.5 percent (\$8.9 million) unfavorable schedule variance that is within the established +10/-7.5 percent threshold. One project outside the threshold and contributing to the unfavorable schedule variance is Technology Development. Detailed variance analysis explanations can be found in the Project Sections.

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

**DATA THROUGH SEPTEMBER 30, 2000**

	Current Fiscal Year Performance (\$ x Million)				
	FYTD			Schedule Variance	Cost Variance
	BCWS	BCWP	ACWP		
<b>The Plateau</b>					
1.2 <b>Waste Management</b> TP02,WM03-05	117.0	115.0	102.2	(2.0)	12.8
1.2.4 <b>Analytical Svcs (222-S,HASP,WSCF)</b> WM06	28.3	27.6	26.5	(0.7)	1.1
1.4.5 <b>Nuclear Materials Stabilization</b> TP05	123.9	123.1	124.5	(0.8)	(1.4)
<b>Subtotal The Plateau</b>	<b>269.2</b>	<b>265.7</b>	<b>253.2</b>	<b>(3.5)</b>	<b>12.5</b>
<b>The River</b>					
1.4 <b>River Corridor</b> TP01,TP04,TP08,TP10,TP12,TP14	58.1	60.5	51.9	2.4	8.6
1.3 <b>Spent Nuclear Fuel</b> WM01	201.8	198.2	201.7	(3.6)	(3.5)
1.12 <b>Advanced Reactors (EM)</b>	1.7	1.7	2.2	(0.0)	(0.5)
<b>Technology Development</b> (EM-50)	23.9	21.5	20.0	(2.5)	1.4
<b>Subtotal The River</b>	<b>285.4</b>	<b>281.8</b>	<b>275.8</b>	<b>(3.6)</b>	<b>6.0</b>
<b>The Future</b>					
1.9 <b>HAMMER</b> HM01	5.9	5.8	5.4	(0.1)	0.4
<b>Subtotal The Future</b>	<b>5.9</b>	<b>5.8</b>	<b>5.4</b>	<b>(0.1)</b>	<b>0.4</b>
<b>Multiple Outcomes</b>					
1.5 <b>Landlord</b> TP13	16.3	15.3	13.7	(1.0)	1.7
1.8 <b>Mission Support</b> OT01	25.5	24.7	25.2	(0.9)	(0.5)
1.11 & <b>National Programs</b> WM07	6.0	6.2	4.3	0.2	1.8
<b>Subtotal Multiple Outcomes</b>	<b>47.8</b>	<b>46.2</b>	<b>43.2</b>	<b>(1.7)</b>	<b>2.9</b>
<b>Total PHMC Projects</b>	<b>608.4</b>	<b>599.5</b>	<b>577.6</b>	<b>(8.9)</b>	<b>21.9</b>

**Notes:**

Column headings [Budgeted Cost of Work Scheduled (BCWS), Budgeted Cost of Work Performed (BCWP), etc.] are defined in the glossary at the end of the report. Calculations are based on Project Baseline Summary detail. Waste Management, Analytical Services, River Corridor, and Nuclear Materials Stabilization have included RL-Directed costs (e.g. steam and laundry) in the Project Execution Module (PEM) BCWS. Technology Development does not include ORP/RPP TTPs currently reported in the RL Dataset in PEM.

**Funds Management** — Although earned value measures are close to or within established thresholds, the PHMC previously projected a potential overrun in the Project Completion Control Point. Project Fiscal Year Spend Forecast (FYSF) data continued to be analyzed in comparison to available funds. Management's aggressive steps designed to correct the possible overrun were effective. In addition, an internal reprogramming transferred \$5M from the Post 2006 control point to the Project Completion control point and RL identified supplemental funds of \$2.94M for the Project Completion control point. As of October 6, a number of other solutions including the reclassification of the 300 Area Accelerated Cleanup Plan and Hanford fire costs to the Post 2006 control point totally mitigated the potential spending variance and resulted in an underrun of approximately \$4.0M.

## FUNDS MANAGEMENT

### FUNDS VS. SPENDING FORECAST (\$000)

#### (FLUOR HANFORD, INC. ONLY)

Data Through September 2000

	Project Completion *			Post 2006 *			Line Items/Other *		
	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance
<b>The Plateau</b>									
12 Waste Management TP02,WM03-05				105,054	95,615	9,439			
124 Analytical Svcs (222-S,HASP,WSCF) WM06				26,457	25,779	678			
145 Nuclear Materials Stabilization TP05	115,639	113,786	1,853				18,178	11,383	6,795
<b>Subtotal The Plateau Operating</b>	<b>\$ 115,639</b>	<b>\$ 113,786</b>	<b>\$ 1,853</b>	<b>\$ 131,511</b>	<b>\$ 121,394</b>	<b>\$ 10,117</b>	<b>\$ 18,178</b>	<b>\$ 11,383</b>	<b>\$ 6,795</b>
<b>Subtotal The Plateau Line Item</b>									
<b>The River</b>									
14 River Corridor TP01,TP04,TP06,TP10,TP12,TP14,WM05	46,198	44,404	1,794	5,168	4,323	845	279	154	125
Line Item									
13 Spent Nuclear Fuel WM01	179,045	178,640	405				22,669	22,653	16
Line Item							4,199	2,073	2,126
1.12 Advanced Reactors (EM)									
<b>Subtotal The River Operating</b>	<b>\$ 225,243</b>	<b>\$ 223,044</b>	<b>\$ 2,199</b>	<b>\$ 5,168</b>	<b>\$ 4,323</b>	<b>\$ 845</b>	<b>\$ 27,147</b>	<b>\$ 24,880</b>	<b>\$ 2,267</b>
<b>Subtotal The River Line Item</b>									
<b>The Future</b>									
19 HAMMER HM01				6,318	5,373	945			
<b>Subtotal The Future</b>				<b>\$ 6,318</b>	<b>\$ 5,373</b>	<b>\$ 945</b>			
<b>Multiple Outcomes</b>									
15 Landlord TP13				17,713	11,754	5,959			
16 Mission Support OT01				17,652	17,060	592			
Inventory				7,267	(172)	7,439			
1.11 National Programs OT02,WM07							6,638	4,328	2,310
<b>Subtotal Multiple Outcomes Operating</b>				<b>\$ 42,632</b>	<b>\$ 28,642</b>	<b>\$ 13,990</b>			
<b>Subtotal Multiple Outcomes Line Item</b>							<b>\$ 6,638</b>	<b>\$ 4,328</b>	<b>\$ 2,310</b>
<b>Total PHMC Proj Operating</b>	<b>\$ 340,882</b>	<b>\$ 336,830</b>	<b>\$ 4,052</b>	<b>\$ 185,629</b>	<b>\$ 159,732</b>	<b>\$ 25,897</b>			
<b>Total PHMC Line Items/Other</b>							<b>\$ 51,963</b>	<b>\$ 40,591</b>	<b>\$ 11,372</b>

**Notes:** This chart reflects FH Project structure, which divides certain PBS's (WM05 and TP12) between projects. This breakout is necessary to provide FH project managers with information specific to their areas of responsibility

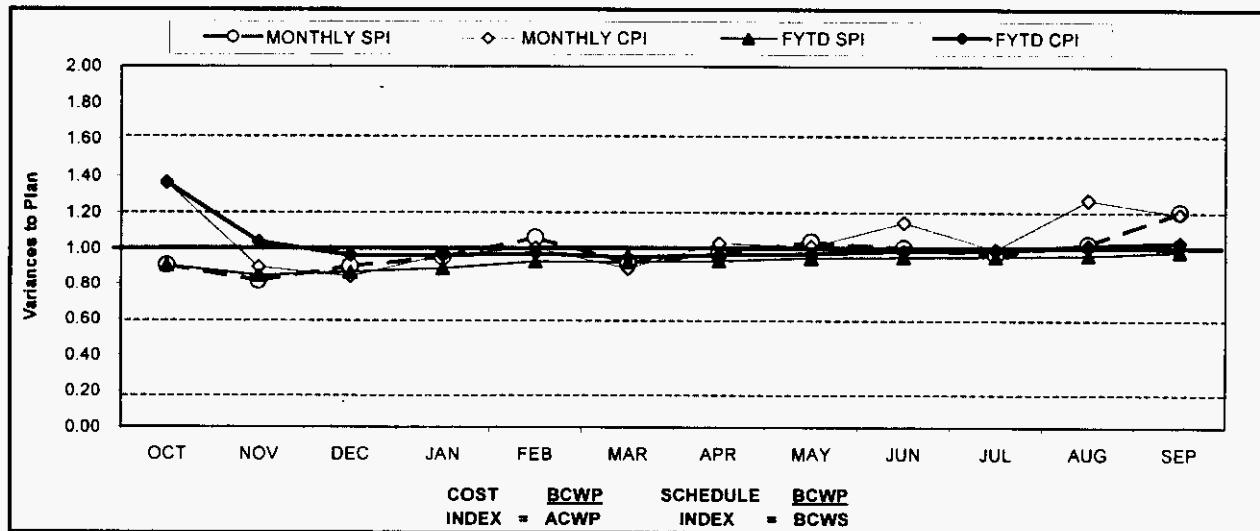
**PHMC Environmental Management Performance Report November 2000**  
**Section A -Executive Summary**

and accountability and to facilitate effective management of the funds within their control (obligated to the PHMC). Consequently, these figures will differ from those shown elsewhere in this report (as generated in the PEM system). For purposes of funds management, the "Other" category includes all funding sources not suitable for redistribution within the Project Completion and Post 2006 control points.

The Mission Support Inventory reflects the estimated reserve needed to accommodate indirect commitments.

The following Cost/Schedule and Variance to Plan chart provides an overall graphical view of fiscal year to date cost and schedule performance.

## FY 2000 COST / SCHEDULE PERFORMANCE CUMULATIVE TO DATE STATUS



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.90	0.82	0.90	0.95	1.06	0.92	0.97	1.04	1.00	0.97	1.02	1.20
MONTHLY CPI	1.36	0.90	0.84	0.96	1.00	0.89	1.03	1.01	1.15	1.00	1.27	1.19
FYTD SPI	0.90	0.85	0.87	0.89	0.93	0.92	0.93	0.95	0.95	0.96	0.96	0.99
FYTD CPI	1.36	1.04	0.96	0.96	0.97	0.95	0.96	0.97	0.99	0.99	1.02	1.03
MONTHLY BCWS	\$ 32,549	\$ 53,749	\$ 43,002	\$ 46,580	\$ 47,980	\$ 59,420	\$ 52,063	\$ 62,362	\$ 46,232	\$ 43,122	\$ 64,121	\$ 55,018
MONTHLY BCWP	\$ 29,438	\$ 43,863	\$ 38,748	\$ 44,295	\$ 50,947	\$ 54,698	\$ 50,649	\$ 64,618	\$ 46,358	\$ 41,741	\$ 65,686	\$ 66,252
MONTHLY ACWP	\$ 21,600	\$ 49,006	\$ 45,973	\$ 46,037	\$ 50,745	\$ 61,462	\$ 49,182	\$ 63,799	\$ 40,470	\$ 41,919	\$ 51,768	\$ 55,618
FYTD BCWS	\$ 32,549	\$ 86,298	\$ 129,299	\$ 175,880	\$ 223,860	\$ 283,280	\$ 335,344	\$ 397,706	\$ 443,938	\$ 487,060	\$ 551,180	\$ 606,198
FYTD BCWP	\$ 29,438	\$ 73,302	\$ 112,049	\$ 156,344	\$ 207,291	\$ 261,990	\$ 312,639	\$ 377,257	\$ 423,615	\$ 465,356	\$ 531,042	\$ 597,294
FYTD ACWP	\$ 21,600	\$ 70,606	\$ 116,579	\$ 162,616	\$ 213,361	\$ 274,823	\$ 324,005	\$ 387,804	\$ 428,274	\$ 470,193	\$ 521,961	\$ 577,579

## MILESTONE PERFORMANCE

Milestones represent significant events in project execution. They are established to provide a higher level of visibility to critical deliverables and to provide specific status about the accomplishment of these key events. Because of the relative importance of milestones, the ability to track and assess milestone performance provides an effective tool for managing the PHMC EM cleanup mission.

FYTD milestone performance (Enforceable Agreement [EA], U.S. Department of Energy-Headquarters [DOE-HQ], and RL) shows that 86 of 101 (85 percent) approved baseline milestones were completed on or ahead of schedule, 11 milestones (11 percent) were completed late, and 4 milestones (4 percent) are overdue. The four overdue milestones are associated with three projects: Nuclear Material Stabilization (Section C: 1)—two, Spent Nuclear Fuel (Section D)—

one, and River Corridor (Section C: 2)—one. These overdue milestones do not share a common cause.

In addition to the FY2000 milestones described above, there are three overdue milestones [(Waste Management (Section B: 1) and Nuclear Materials Stabilization Projects (Section C: 1)] from the prior fiscal year (FY1999). Further details regarding these milestones may be found in the referenced Project Sections.

FY 2000 information is depicted graphically below and on the following page. For additional details related to the data in the graphs and prior year milestones, refer to the relevant project section titled “Milestone Exception Report.”

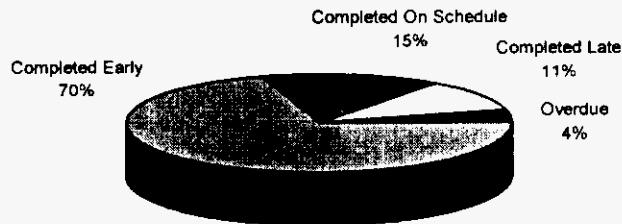
FY 2000 information reflects the current approved baseline. Changes in both the number and type of milestones from month to month are the result of Baseline Change Requests (BCRs) approved during the year.

## TOTAL ALL HANFORD PROJECTS

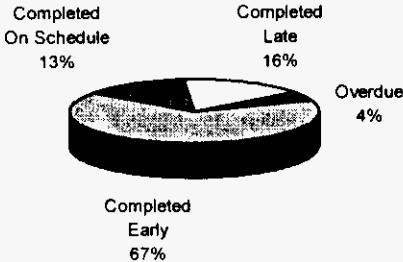
### MILESTONE ACHIEVEMENT

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	27	5	0	0	0	0	0	32
DOE-HQ	0	1	0	1	0	0	0	2
RL	44	9	11	3	0	0	0	67
<b>Total Project</b>	<b>71</b>	<b>15</b>	<b>11</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>

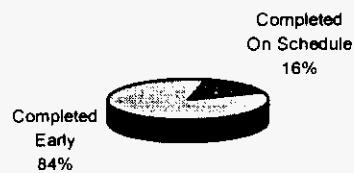
### Total Project



### RL

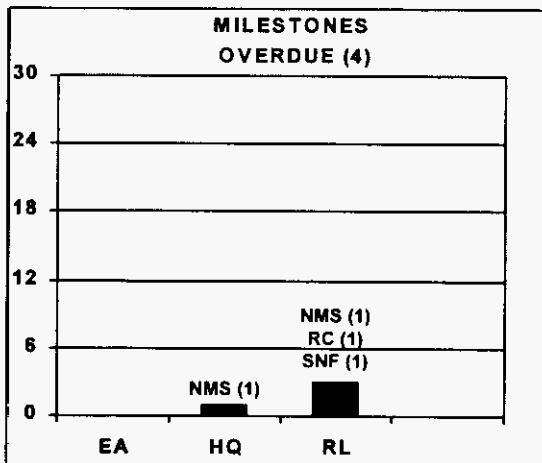
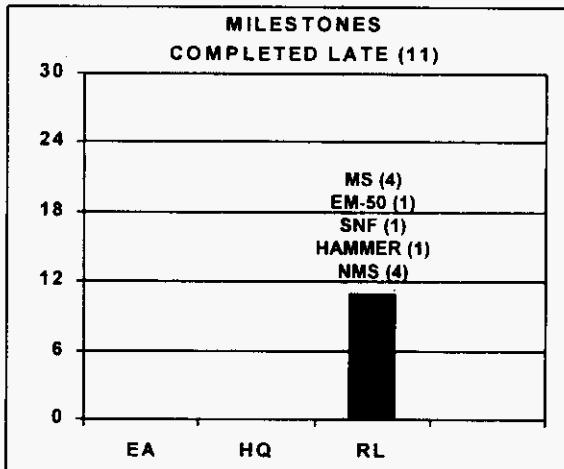


### Enforceable Agreement

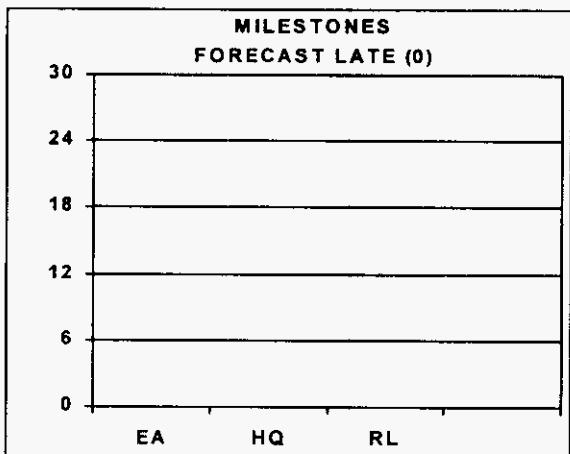


## MILESTONE EXCEPTIONS

### FISCAL YEAR TO DATE



### REMAINING SCHEDULED



These charts provide detail by project and milestone level / type for milestones

- Completed Late
- Overdue
- Forecast Late
- Detailed information can be found in the individual project sections

## **SAFETY OVERVIEW**

The focus of this section is to document trends in occurrences. Improvements in these rates are due to the efforts of the PHMC workforce as they implement the Integrated ES&H Management System (ISMS), work towards achieving Voluntary Protection Program (VPP) "star" status, and accomplish work through Enhanced Work Planning (EWP). Safety and health statistical data is presented in this section.

### **SIGNIFICANT SAFETY AND HEALTH EVENTS**

The Waste Management (WM) Project has demonstrated a significant improvement in their OSHA recordable case rate and has recently achieved One Million Safe Work hours without a lost workday case.

The Analytical Services (AS) Project has had a significant increase in the OSHA recordable case rate in the fourth quarter of FY 2000. AS has been conducting ergonomic evaluations to reduce workplace injuries, and will report findings at the October Presidents' Zero Accident Council Meeting.

The Nuclear Material Stabilization (NMS) Project DOE Safety Cost Index and Lost Away Workday Case Rate are zero. The Employee-led Zero Accident Council has been instrumental in the improvement in workplace safety.

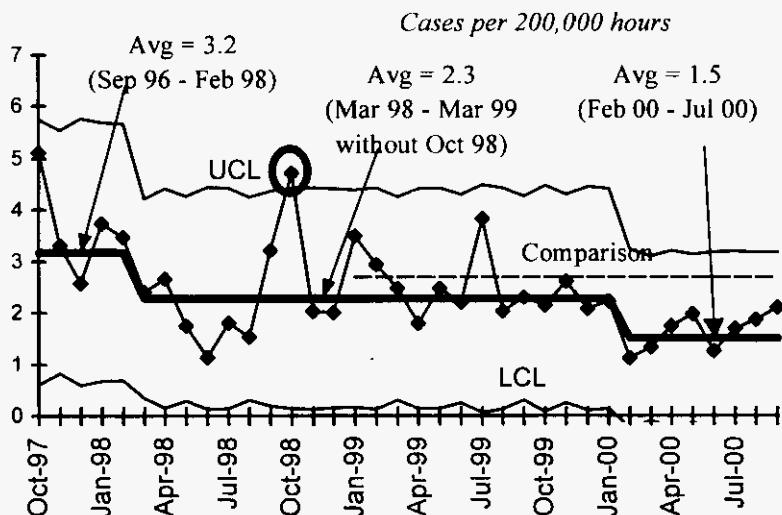
The River Corridor (RC) Project OSHA Recordable Case Rate remains low, however, there has been a significant increasing trend with four cases during June 2000 through August 2000. RC has recently achieved 1 Million Safe Work hours without a lost workday case.

The Spent Nuclear Fuels (SNF) Project OSHA Recordable case rate is stable. There had been signs of improvement in the middle of FY 2000, but it was not significant and has returned to the existing baseline rate.

The Landlord (LL) Project Lost Away Case Rate is very good, and LL is close to exceeding 2 million safe work hours. LL may be showing some signs of improvement in their OSHA recordable case rate, but it is not yet significant.

Due to space constraints, FY1996 data is not portrayed on the following graphs.

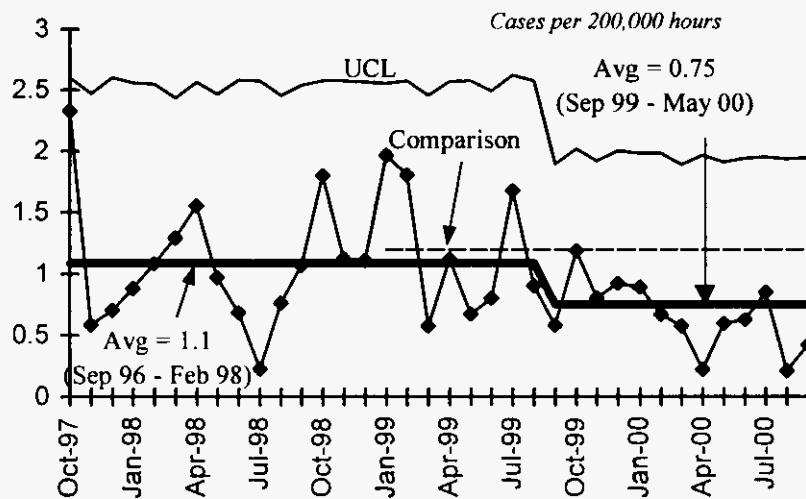
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**Total OSHA Recordable Case Rate**

FY 1999 = 2.7  
 FY 2000 = 1.8  
 Contractor Comparison  
 Average = 2.7 (CY99)

Recent data have been stable within the new 1.5 baseline. The FH Team continues to look for opportunities for injury reduction in the areas of ergonomics and lacerations.

FH implemented a program to target an OSHA Recordable Case Rate of 0.9. The Fluor Global Services goal is 1.0. This is in line with Fluor's corporate value of safety and our commitment to the safe clean-up of the Hanford Site.

**OSHA LOST/RESTRICTED WORKDAY CASE RATE**

FY 1999 = 1.15  
 FY 2000 to date = 0.65  
 Contractor Comparison Average = 1.2 (CY99)

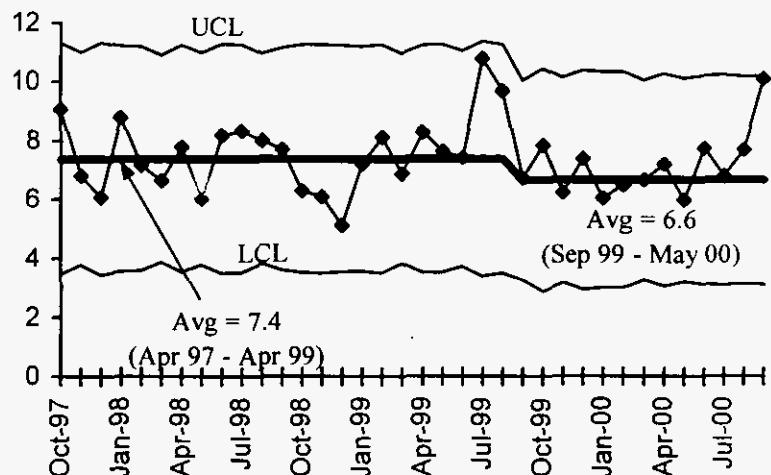
Data continue to be at or below the current baseline average established for September 1999 - May 2000, but is not yet a significant trend.

As of November 1, the FH Team accumulated over 10 million safe work hours since mid-December 1999 without any new lost away workday cases.

Green

## First Aid Case Rate

Cases per 200,000 hours



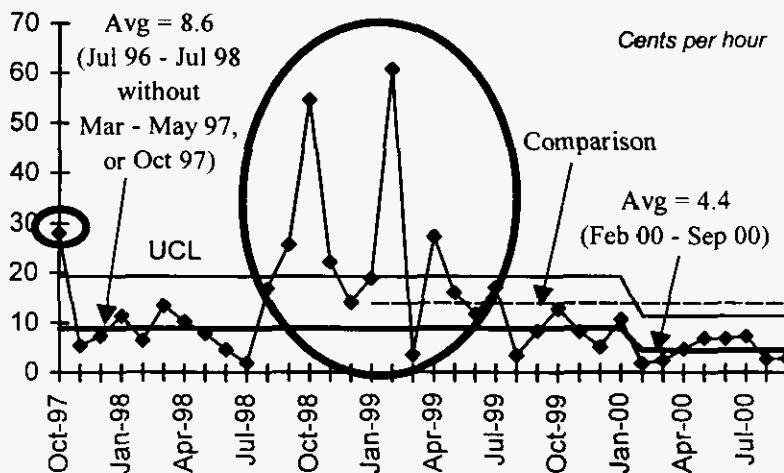
First Aid Rate undergoes seasonal cycles. Increases occur in warmer weather due to insect and animal encounters, and due to wind related minor injuries. First Aid case rate has remained relatively stable, a good indicator that injuries are not being under-reported.

There was a nearly significant increase in September 2000, but the increase appears to be primarily related to summer increases in insect and wind hazards. Past activities to increase awareness of wind hazards and actions to control insects and animals appear to be having an effect.

The hazard of receiving wind-borne debris in eyes when working outdoors has considerably increased due to the bare, exposed sand left by the Hanford wildfire.

Green

## DOE Safety Cost Index



FY 1999 = 21

FY 2000 to date = 5.9

Contractor Comparison Average = 13.9 (CY99)

This indicator has had new average and control limits calculated reflecting recent significant decreases in the cost index. This decrease is primarily related to the reduction in Lost Away workday injuries.

Past data continue to be corrected as further days accumulate on any work restrictions or lost days.

## CRITICAL ISSUES

- INABILITY TO MEET ACCEPTANCE CRITERIA DELAYS CELL CLEANUP**  
Hot spots on the bottom of Steel Waste Disposal Boxes loaded with Rectangular Grout Containers from the 324 Building are more radioactive than the current Central Waste Complex (CWC) acceptance criteria of 1R. The shipment schedule/in-cell work schedule has been delayed, but several actions are being pursued. See the River Corridor Project Section C: 2 for more information.

## **EM CORPORATE PERFORMANCE MEASURES**

<b>Performance Measures</b>	<b>EM Management Commitment</b>	<b>FY 2000 Current Baseline</b>	<b>FY 2000 Planned</b>	<b>FY 2000 Actual</b>
<b>Facilities Deactivated/Decommissioned</b>				
Facilities deactivated	21	21	21	25
Facilities decommissioned	13	13	13	23
<b>TRansUranic (TRU) Waste</b>				
Stored - total inventory (m <sup>3</sup> )	16,333	16,316	16,316	16,407
Disposed (shipped to DOE site m <sup>3</sup> )	55	55	51	19
<b>High Level Waste</b>				
Stored - total inventory (m <sup>3</sup> )	4	2	2	2
Treated (m <sup>3</sup> )	3,600	3,600	3,600	5,070
<b>Mixed Low Level Waste</b>				
Stored - total inventory (m <sup>3</sup> )	7,852	7,852	7,852	7,677
Treated (m <sup>3</sup> )	1,060	1,060	1,060	1,204
Disposed	835	835	835	666
<b>Low Level Waste</b>				
Stored - total inventory (m <sup>3</sup> )	180	180	180	298
Disposed (on-site/commercial) (m <sup>3</sup> )	6,936	6,936	6,936	8,079
<b>Material Stabilized</b>				
Plutonium Oxide (cans)	400	140	140	574
Plutonium Solution (L)	255	255	255	67
Plutonium Residue (kg)	29	29	29	17
<b>Technology Deployments</b>	9	9	5	17
<b>Pollution Prevention</b>				
HAZ (MT)	45	45	45	19
SAN (MT)	1,781	1,781	1,781	986
LLW (m3)	470	470	470	218
MLLW (m3)	138	138	138	120
<b>Cleanup/Stabilized Waste Avoided</b>				
FY 2000 planned baseline amount (m <sup>3</sup> )	1,920	1,920	1,920	7,280
FY 2001 planned baseline amount (m <sup>3</sup> )	1,926	1,926	N/A	N/A

All of the above reflect the FY2000 year-end status. For deviations +/- 10 percent, see the following projects sections: Facilities Deactivated, Facilities Decommissioned (Landlord); TRU Disposed, HLW Treated, MLLW Treated, MLLW Disposed, LLW Stored, LLW Disposed (Waste Management Project); Materials Stabilized - Plutonium Oxide, Solution and Residue (Nuclear Materials Stabilization Project) and Technology Deployments (EM-50).

Pollution Prevention (National Programs) - PNNL generated approximately 27 mT less of Hazardous Waste (HAZ) then in FY99 as a result of various actions taken in the past few years to minimize HAZ waste generated (i.e., Pollution Prevention Opportunity Assessments, Return on Investment [ROI] implementation, material substitution, and inventory reduction). SAN, LLW and MLLW reflects waste reduction resulting from recycling, ROI implementation, and source reduction. Waste Avoided (National Programs) - The Cleanup/Stabilized Waste Avoided goal to reduce all waste by 10 percent (1,920 m<sup>3</sup>) was greatly exceeded. The documented waste was reported at 7,280 m<sup>3</sup> through various processes and uses.

**PHMC Environmental Management Performance Report**  
**Section A -Executive Summary**

**EM MANAGEMENT COMMITMENT MILESTONES AS OF SEPTEMBER 30, 2000**

Milestones	Due Date	Forecast Date	Actual Date	Status / Comments
<b>Nuclear Material Stabilization</b>				
Submit PRR Tank 241-Z-311 Core Sample Data to EPA (M-015-37B)	5/31/00	5/31/00	5/31/00	Complete
Begin Stab Opt/o Solutions via Mg(OH) <sub>2</sub>	7/31/00	9/12/00	9/20/00	Complete
Spent Nuclear Fuel:				
complete NW C reactivity Mod (M-034-13)	2/29/00	2/29/00	2/29/00	Complete
commence Phased Startup Initiative: Ho	5/31/00	Mid-October	10/19/00	Complete
complete Phased Startup Initiative: Testing	8/31/00	TBD		
<b>Waste Management</b>				
Initiate TRU Shipment to WIPP	5/31/00	7/12/00	7/12/00	Complete

**CRITICAL FEW PERFORMANCE MEASURES**

**Performance Measure**

Data Through  
September 2000

**Spent Nuclear Fuel:**

**Measure** - Amount of fuel removed

Declaration of Readiness to move Spent Nuclear Fuel

Red

Phased Startup Initiative Phases I & II

Red

**Measure** - Amount of SNF Stabilized

NA FY 2000

**324/327 Building Deactivation:**

**Measure** - Number of buildings dispositioned

Green

**Waste Management:**

**Measure** - Adequacy of waste management services support

Green

Number of analytical equivalent units (AEU's) analyzed

Green

Through-put efficiency of effluent treatment facility (ETF) gpm

Green

Number of 242-A evaporator campaigns completed

Green

**Measure** - Retrieve and ship TRU offsite

Green

Number of drums retrieved

Green

Number of shipments to WIPP

Green

**Measure** - MLLW Treated (m3)

Green

**Measure** - MLLW Disposed (m3)

Green

**Measure** - Clear three T-Plant canyon deck sections

Green

**Measure** - Remove two PUREX separation towers

Green

**Plutonium Stabilization:**

**Measure** - Pu metal/oxides/other types dispositioned (items)

Yellow

Yellows noted above are behind schedule but recoverable. Red is either missed or unrecoverable. Details can be found in the Project Sections.

## **KEY INTEGRATION ACTIVITIES**

The following are the key technical integration activities that are currently underway and cross project/contractor lines. These activities are being addressed by inter-discipline and inter-project groups and demonstrate that Hanford Site contractors are working together to accomplish the EM Clean up mission.

- Waste Management (WM) continues working with RL, DOE-HQ and other Sites to develop and define Hanford's role in disposing of waste from other sites. Hanford's role as one of the identified LLW/MLLW disposal sites for the Complex is yet to be fully defined.
- WM supporting the Office of River Protection Waste Treatment Plant.
- WM supporting visits from both the DOE-Idaho Program Office and the Office of the Inspector General in regards to opportunities for treatment/disposal of Idaho National Engineering Environment Laboratory (INEEL) wastes at Hanford.
- WM continues working with PNNL, EM-50 and Mixed Waste Focus Area (MWFA) to obtain funding in support of mixed waste processing.
- Analytical Services continues to support ORP efforts to establish required analytical support for Waste Treatment Plant (WTP) design and operation.
- Through involvement with the National Facility Deactivation Initiative, Hanford, Rocky Flats, and Savannah River are working to submit a joint proposal for a contaminated large equipment size reduction system deployable at the three sites.
- Spent nuclear fuel (SNF) final disposition interface activities, including Office of Civilian Radiation Waste Management (OCRWM) Quality Assurance (QA) Program implementation, is ongoing with the National SNF Program. The SNF Project submitted eight Corrective Action Closure packages to RL for National SNF Program approval.
- SNF Project Programmatic Agreement with River Corridor Project for 324 Building (B Cell) fuel removal was approved.
- The SNF Project and Waste Management Project continued preparations for K Basins' sludge removal and Shippingport (PA) Pressurized Water Reactor Core 2 SNF removal.
- Bechtel Hanford, Inc. transmitted the transfer plan for SNF discovered during upcoming 105F and 105H reactor basins deactivation to SNF Project for review and approval.

## **UPCOMING PLANNED KEY EVENTS**

**T**he following Key events are extracted from the authorized baseline and are currently expected to be accomplished during the next several months. Most are Enforceable Agreement (EA), HQ or DNFSB Milestones.

### **Waste Management:**

- Accelerate Readiness to Receive Spent Nuclear Fuel K Basin Sludge.
  - Complete procedures, training, and Operations Readiness Review (ORR) by June 2001.
  - Complete entire T Plant deck clearing in FY 2001.
  - Complete safety basis documentation and long lead procurements in FY 2001.
  - Install handling, drying and loading equipment in FY 2001.

### **Analytical Services**

- Dr. Steven Bakhtiar of Analytical Services is chairing the 46<sup>th</sup> Annual Bioassay, Analytical, and Environmental Radiochemistry (BAER) Conference in Seattle in mid-November 2000.

### **Nuclear Materials Stabilization:**

- Complete installation and startup of the Supercritical Fluids Extraction equipment for Loss-on-Ignition moisture measurement in the first quarter of FY 2001.
- Initiate metal processing in the first quarter of FY 2001.
- Receive delivery of the 2736-ZB BTS and Outer Can Welder (OCW) during the second quarter of FY 2001.
- Initiate alloys and polycube stabilization in third quarter of FY 2001.

### **River Corridor Project:**

- Complete Removal of 324 Building Radiochemical Engineering Cell (REC) B Cell Mixed Waste (MW) and Equipment in the first half of FY 2001.
- Implement technical update of 324 Authorization Basis (Safety Analysis Report) by mid-December, 2000 and implement technical update of 327 Authorization Basis (Basis of Interim Operation) by March, 2001.
- Complete Facility Evaluation Board review during first quarter of FY 2000.
- Complete shipment of approximately 235 metric tons of excess uranium billets and approximately 5 metric tons of uranium dioxide to the DOE Portsmouth site in Ohio by March 31, 2001 and disposition approximately 140 metric tons of surface contaminated uranium fuel by June 30, 2001.
- Complete shipment of B Cell waste currently stored in A Cell to the 200 Areas in July 2001.

### **Spent Nuclear Fuels:**

- Begin K West Basin fuel removal, drying and storage operations by November 30, 2000.
- Start K West Basin canister cleaning in December 2000.
- Complete K East Basin Sludge Loadout conceptual design in January 2001.
- Complete K East Basin Integrated Water Treatment System (IWTS) definitive design in April 2001.

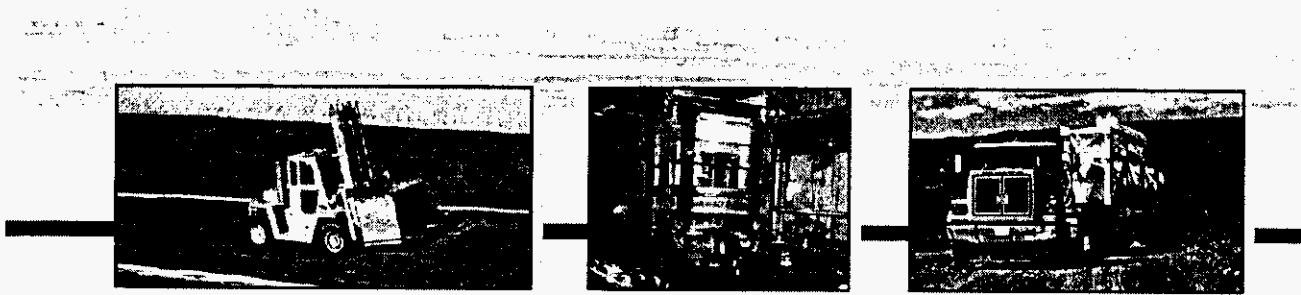
### **Landlord**

- Complete Project L-309, "Replace Main Water Lines" by December 22, 2000.
- Complete installation of a chlorine containment system for Project L-303, "200 West Area Chlorine Mitigation" by January 31, 2001.



## **The Plateau**

Transitioning the central plateau for long-term waste management is a key part of the Hanford vision. Determining the disposition of the “canyon” facilities, deactivating the Plutonium Finishing Plant and disposing of solid waste are the desired outcomes. Projects included in The Plateau are Waste Management, Analytical Services, and Nuclear Material Stabilization.



## **Section B:1**

### ***Waste Management***

#### **PROJECT MANAGERS**

G.H. Sanders, RL  
(509) 376-6888

E.S. Aromi Jr., WMH  
(509) 372-1033

## **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 TEDE/340 Facility (300 LEF). The 310 TEDE/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 (WMP), which has the majority of the work scope and funding.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of September 30, 2000. Other data is updated as noted.

### **Top 5 Accomplishments for FY 2000**

The Project completed all FY 2000 milestones on or ahead of schedule. In addition, all Performance Incentive commitments, including stretch goals, were completed (Momentum).

The first three shipments of Hanford transuranic (TRU) waste for disposal at the Waste Isolation Project Plant (WIPP) were completed. Certification of the Hanford TRU Program was achieved with the Carlsbad Field Office (CFO) and the New Mexico Environment Department (NMED). This certification is necessary for these and future waste shipments (Completion and Removal).

Treatment or direct disposal of 1,204 m<sup>3</sup> of Mixed Low Level Waste (MLLW) was completed, surpassing the FY 2002 goal and completing Tri-Party Agreement (TPA) milestone M-19-00. MLLW treatment produced 1,940 m<sup>3</sup> of free space in the Central Waste Complex (Completion and Removal).

Three sections of the T Plant deck were cleared for future acceptance of K Basins sludge in support of the Spent Nuclear Fuels Project (Momentum).

Retrieval and designation of 437 suspect TRU drums (12 more than planned) was achieved with the completion of field assaying (Momentum).

### **Additional FY 2000 Accomplishments**

#### **Momentum**

WM supported the DOE-RL in the declaration of Readiness-to-Proceed for support of the Office of River Protection (ORP) Waste Treatment Plant Contract.

The Waste Minimization and Pollution Prevention expectations associated with waste generation, recycling and affirmative procurement were exceeded.

More than \$8.9M in cost savings were identified. These savings are a result of efficiencies, favorable passbacks, attrition, and procurements put on hold.

A new in-trench technology was deployed where concrete grout is injected around the Category 3 LLW. The new technology results in higher waste loading in the burial grounds, reduced construction costs, and reduced future burial ground closure and monitoring costs.

### **Progress**

The Site groundwater was protected by treating over 17 million gallons of radioactive/hazardous wastewater at the 200 Area Effluent Treatment Facility (ETF). ORP was supported by processing over 1.3 million gallons of tank waste through the 242A Evaporator. The Total Operational Efficiency of 99.3 percent was the highest ever achieved. An operational savings of \$1.2 million was achieved by campaigning 200 Area ETF and 242A Evaporator operations.

### **Completion and Removal**

A total of 8,079 m<sup>3</sup> of low-level waste was disposed in the Low-Level Burial Grounds including 6,582 m<sup>3</sup> from off-site, versus a planned 6,936 m<sup>3</sup>.

Fiscal year milestone performance (EA, DOE-HQ and RL) shows that ten milestones (100 percent) were completed. Nine of the milestones were completed ahead of schedule, including the two Enforceable Agreement milestones. Overall Project performance is superior. Cost and schedule goals for fiscal year 2000 were met.

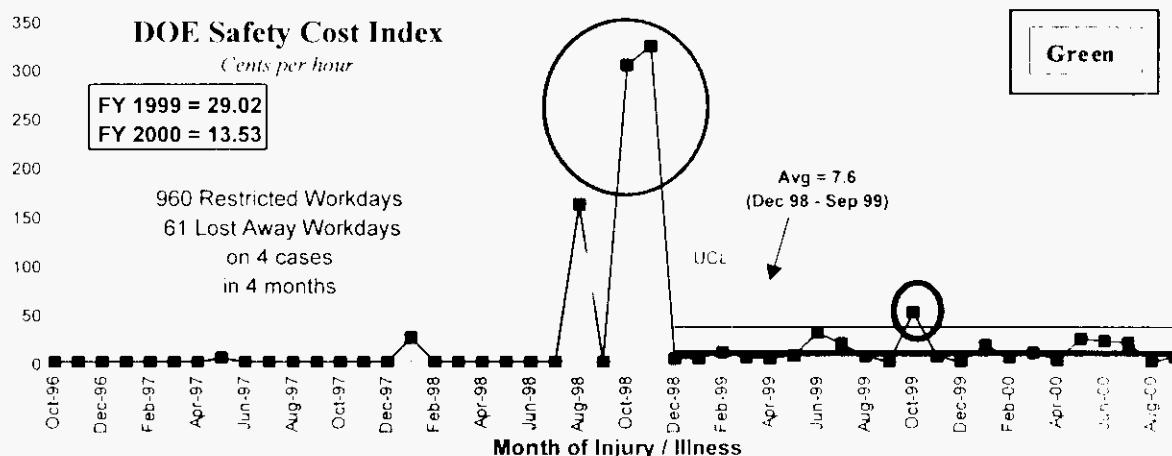
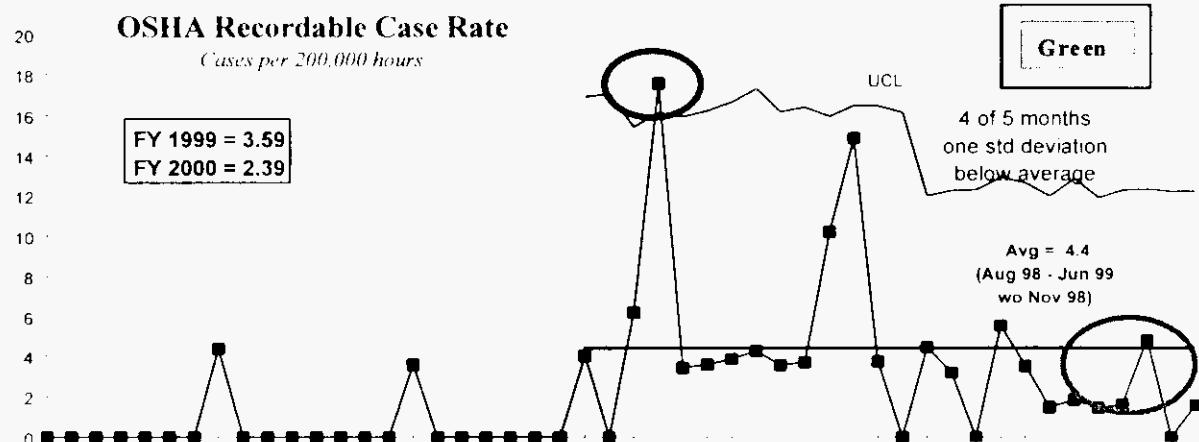
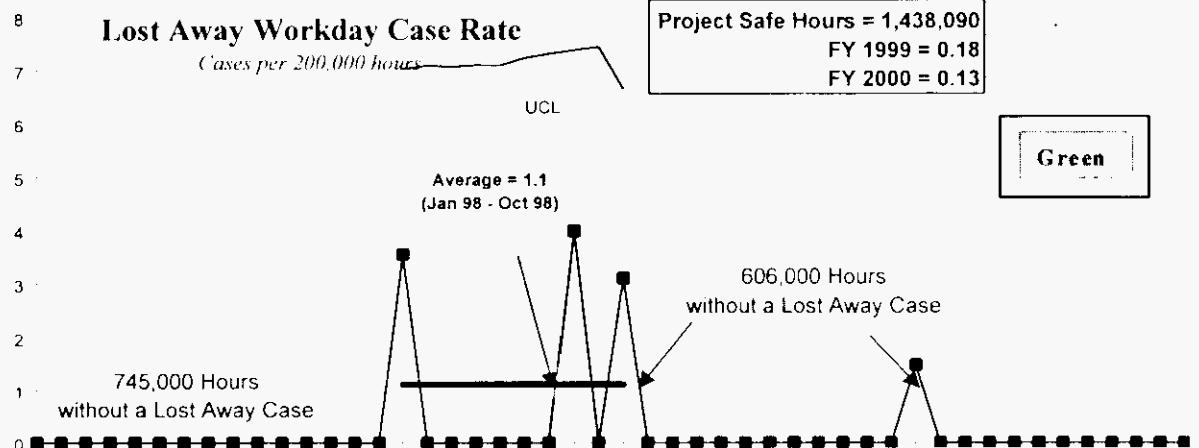
## **ACCOMPLISHMENTS THIS REPORTING PERIOD**

The following activities were completed at the Waste Receiving and Processing (WRAP) facility through September 30, 2000:

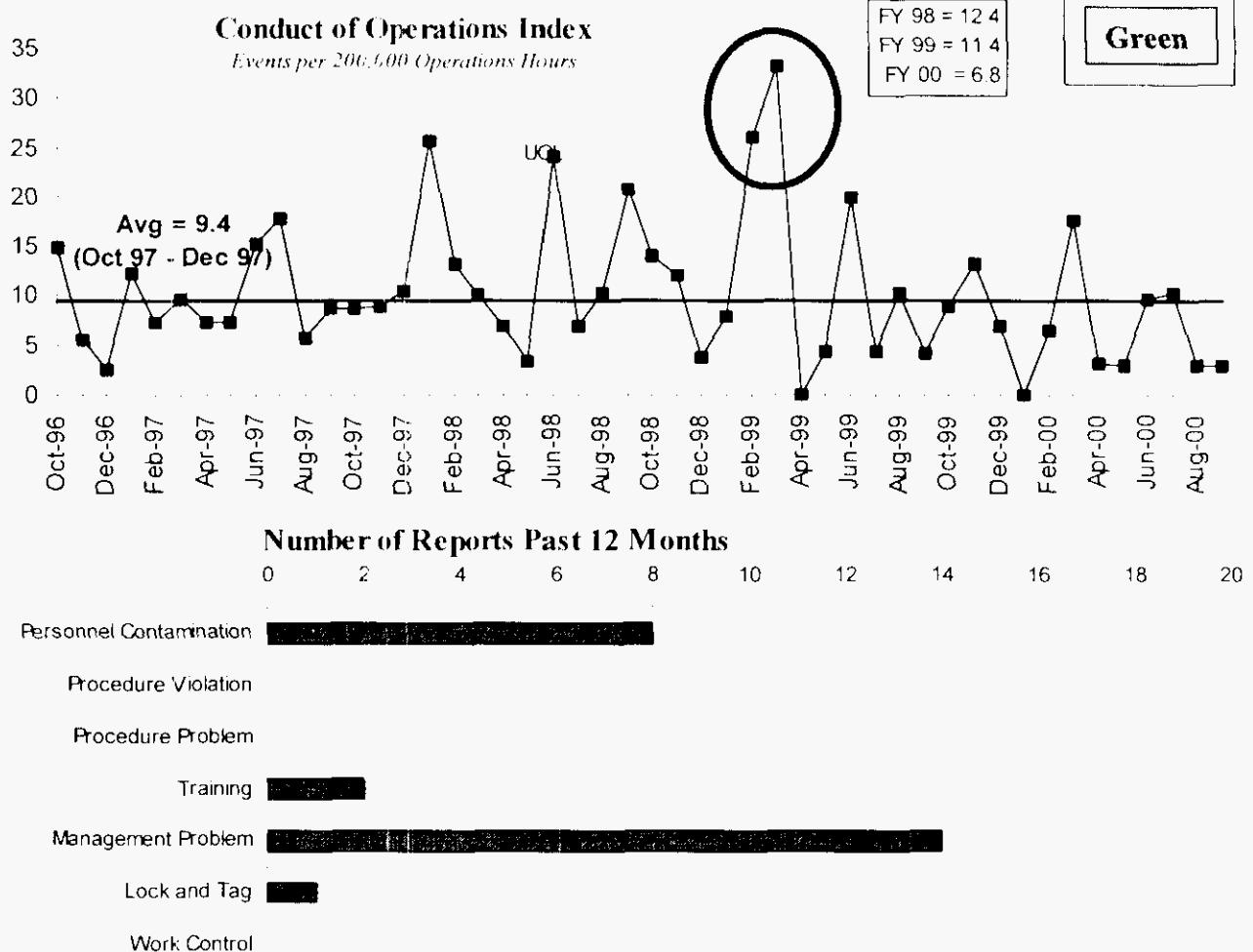
- Nondestructive examination of 44 drums (916 fiscal year total)
- Radiography on 12 boxes (59 fiscal year total)
- Nondestructive assays of 48 drums (992 fiscal year total)
- Processing of 5 drums through the Low Level Waste (LLW) repackaging/compaction glovebox (45 fiscal year total)

## SAFETY

WMP has achieved nearly one and a half million safe hours. Rates have been stable for over two years. During the month of September, the WMP experienced 1 Restricted Workday Case, 12 first aid cases and 3 "Report Only" cases. OSHA recordable injuries are down from previous levels. The Lost/Restricted workday case rate has been below average 7 months in a row, a significant improvement. The OSHA recordable case rate is showing a significant improving trend, with 4 of the past 5 months in a row at one standard deviation below average.



## CONDUCT OF OPERATIONS / ISMS STATUS



### Completed Activities in FY 2000:

- Established a multi-discipline Core Team of represented and professional staff to meet an 18 month accelerated schedule
- Identified process gaps through all-employee surveys and self-assessments
- Developed a System Description of ISMS processes and implementing mechanisms used by all WMP facilities
- Partnered with the PHMC Projects and RL to achieve an efficient implementation of integrated management systems
- Developed a WMP-wide document to clarify specific ISMS roles and responsibilities across the organization
- Developed and received DOE approval for Authorization Agreements for all five WMP Category 2 nuclear facilities

- Successfully completed ISMS Phase I (documentation) and Phase II (field implementation) verifications conducted by multi-discipline DOE teams
- Prepared and executed corrective action plans resulting from self-assessment, Phase I, and Phase II verification activities
  - Participated in development of PHMC ISMS Sustain and Maintain (Continuous Improvement) Plans for out-years

**Planned Action:**

Configuration Control of the WMP portion of the ISMS System Description (MP-003) document will be detailed and distributed as part of the Project level "sustain and maintain" efforts. The project will implement the Sustain and Maintain Plan for ISMS when approved.

## **BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT**

### **Breakthroughs**

An effort has begun to evaluate the potential for consolidation of planned mixed waste disposal facilities on the Hanford Site. It is possible that considerable savings can be realized if the construction/operations of the Solid Waste mixed waste disposal facility, Immobilized Low Activity Waste disposal facility, and the Spent Melter trench can be consolidated. A team is being formed to conduct the assessment of potential savings, and initial discussions are underway with CH2M HILL Hanford Group (CHG).

### **Opportunities for Improvement**

**Waste Management Strategic Planning** — Revision of the Waste Management Project Strategic Plan is underway. A series of workshops have been conducted with the Department of Energy, the Washington State Department of Ecology, and the US Environmental Protection Agency. The objective of the effort is to update and improve the Project strategy, to gain regulator "buy-in," to improve the format and presentation of the Strategy, and to develop a basis for the ongoing production of the Multi-Year Work Plan. A series of logic diagrams and an overall schedule graphic are being developed which will serve to improve the communication of the Waste Management Strategic Plan to users/stakeholders.

**Mixed Waste Focus Area (MWFA)** — Continue to work with the MWFA (Robotics Product Line) on a technology development/demonstration activity at Hanford. The details of a demonstration/deployment of size reduction technologies are being worked out. Initial plans are for a demonstration of size reduction at T Plant in FY 2001, using commercial technologies to size reduce the PUREX Towers (TRU) currently stored on the canyon deck. This activity supports development of technologies for later application in the M-91 Facility, and also clearing of the deck for sludge receipt. Funding for the activity will be provided by the MWFA.

## **UPCOMING ACTIVITIES**

**WIPP Certification and Waste Shipments** — Complete two shipments of Hanford TRU waste to Waste Isolation Pilot Plant (WIPP) before the end of the calendar year.

**Remote-Handled TRU Project Management Plan (PMP)** — Support RL meetings with Ecology to address Ecology's August 14, 2000 letter disapproving the PMP.

**Accelerate Readiness to Receive Spent Nuclear Fuel K Basin Sludge** —

- Complete entire T Plant deck clearing in FY 2001.
- Complete safety basis documentation and long lead procurements in FY 2001. Install handling, drying and loading equipment in FY 2001.
- Complete procedures, training, and Operations Readiness Review (ORR) by June 2001.

**Land Disposal Restriction (LDR) Report** — The 45-day primary document comment period on the Interim LDR report ended on September 14, 2000. A letter was received from Ecology requesting a two-week extension (to September 28, 2000) to the comment period. Comments were received and responses are being prepared. Not all of Ecology's comments will be resolved and the legal appeal over the Final Determination will continue.

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

	BCWP	ACWP	VARIANCE
<b>Waste Management</b>	\$115.0	\$102.2	\$12.8

The \$12.8 million (11 percent) favorable cost variances are primarily in RL-WM03 Solid Waste Storage and Disposal and RL-WM05 Liquid Effluents. Further information at the PBS level can be found in the following Cost Variance Analysis.

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

	BCWP	BCWS	VARIANCE
<b>Waste Management</b>	\$115.0	\$117.0	-\$2.0

The \$2.0 million (2 percent) unfavorable schedule variance is within established threshold. Further information at the PBS level can be found in the following Schedule Variance Analysis.

**PHMC Environmental Management Performance Report – November 2000**

**Section B: I – Waste Management**

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

FYTD

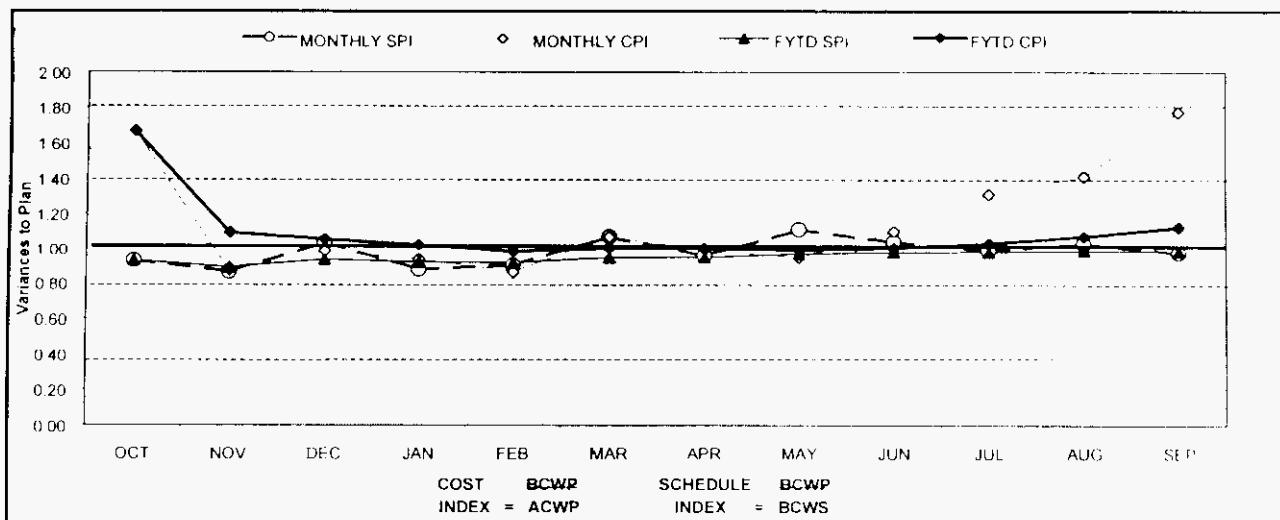
**Green**

By PBS		BCWS	BCWP	ACWP	SV	%	CV	%
PBS WM03 WBS 1.2.1	Solid Waste Storage & Disposal	\$ 38,855	\$ 38,374	\$ 32,470	\$ (482)	-1%	\$ 5,904	15%
PBS WM04 WBS 1.2.2	Solid Waste Treatment	\$ 36,271	\$ 35,476	\$ 33,031	\$ (795)	-2%	\$ 2,445	7%
PBS WM05* WBS 1.2.3	Liquid Effluents - 200/300 Area	\$ 28,909	\$ 28,344	\$ 24,437	\$ (565)	-2%	\$ 3,907	14%
PBS TP02 WBS 1.4.2	WESF	\$ 12,965	\$ 12,835	\$ 12,250	\$ (130)	-1%	\$ 585	5%
<b>Total</b>		<b>\$ 117,000</b>	<b>\$ 115,028</b>	<b>\$ 102,187</b>	<b>\$ (1,973)</b>	<b>-2%</b>	<b>\$ 12,841</b>	<b>11%</b>

\*PBS WM05 includes the 300 Area Liquid Effluent, which is part of the River Corridor Project.  
 RL-Directed costs (steam and laundry) are included in the Project Execution Module (PEM) BCWS.

**COST/SCHEDULE PERFORMANCE INDICES**  
**(MONTHLY AND FYTD)**

**Green**



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	1.02	0.96	1.11	1.04	0.99	1.03	1.07
MONTHLY CPI	1.66	0.87	0.98	0.94	0.86	1.07	0.94	0.94	1.10	1.31	1.41	1.59
FYTD SPI	0.93	0.89	0.91	0.92	0.91	0.95	0.95	0.95	0.98	0.98	0.98	0.98
FYTD CPI	1.66	1.09	1.05	1.02	0.98	1.00	0.96	1.00	1.00	1.03	1.03	1.13
MONTHLY BCWS	\$ 6,641	\$ 9,616	\$ 7,269	\$ 8,331	\$ 8,862	\$ 10,686	\$ 8,906	\$ 9,124	\$ 9,646	\$ 10,040	\$ 11,138	\$ 14,745
MONTHLY BCWP	\$ 6,163	\$ 8,277	\$ 7,499	\$ 7,291	\$ 7,973	\$ 11,406	\$ 8,514	\$ 10,136	\$ 10,012	\$ 9,913	\$ 13,371	\$ 14,333
MONTHLY ACWP	\$ 3,703	\$ 9,520	\$ 7,619	\$ 7,789	\$ 9,270	\$ 10,685	\$ 8,562	\$ 10,729	\$ 9,108	\$ 7,557	\$ 9,263	\$ 8,682
FYTD BCWS	\$ 6,641	\$ 16,257	\$ 23,526	\$ 31,857	\$ 40,719	\$ 51,404	\$ 60,310	\$ 69,431	\$ 79,076	\$ 89,117	\$ 102,255	\$ 117,000
FYTD BCWP	\$ 6,163	\$ 14,440	\$ 21,939	\$ 29,230	\$ 37,203	\$ 48,609	\$ 57,123	\$ 67,289	\$ 77,270	\$ 87,183	\$ 103,608	\$ 115,028
FYTD ACWP	\$ 3,703	\$ 13,223	\$ 20,842	\$ 28,631	\$ 37,901	\$ 48,586	\$ 57,148	\$ 62,827	\$ 76,085	\$ 84,842	\$ 93,705	\$ 102,187

## **COST VARIANCE ANALYSIS: (+\$12.8M)**

<b><u>WBS/PBS</u></b>	<b><u>Title</u></b>
<b>1.2.1/WM03</b>	<b>Solid Waste Storage &amp; Disposal</b>
<b>Description/Cause:</b>	The favorable cost variance of \$5.9M (15 percent) is primarily due to documented efficiencies, staff working on the CSB, favorable passbacks, and reduced fee accrual.
<b>Impact:</b>	No impact.
<b>Corrective Action:</b>	No action required.
<b>1.2.2/WM04</b>	<b>Solid Waste Treatment</b>
<b>Description/Cause:</b>	The favorable cost variance of \$2.4M (7 percent) is within the established threshold.
<b>Impact:</b>	No impact.
<b>Corrective Action:</b>	No action required.
<b>1.2.3.1/WM05</b>	<b>Liquid Effluents</b>
<b>Description/Cause:</b>	The favorable cost variance of \$3.9M (14 percent) is a result of the 200 and 300 Area documented efficiencies, procurements put on hold, favorable passbacks, and attrition.
<b>Impact:</b>	No impact.
<b>Corrective Action:</b>	No corrective action required.

<b><u>WBS/PBS</u></b>	<b><u>Title</u></b>
<b>1.4.2/TP02</b>	<b>WESF</b>
<b>Description/Cause:</b>	The favorable cost variance of \$0.6M (5 percent) is within the established threshold.
<b>Impact:</b>	No impact.
<b>Corrective Action:</b>	No corrective action required.

## **SCHEDULE VARIANCE ANALYSIS: (-\$2.0M)**

<b><u>WBS/PBS</u></b>	<b><u>Title</u></b>
<b>1.2.1/ WM03</b>	<b>Solid Waste Storage &amp; Disposal</b>
<b>Description /Cause:</b>	The unfavorable schedule variance of \$0.5M (1 percent) is within the established threshold.
<b>Impact:</b>	No Impact.
<b>Corrective Action:</b>	No corrective action required.
<b>1.2.2/ WM04</b>	<b>Solid Waste Treatment</b>
<b>Description /Cause:</b>	The unfavorable schedule variance of \$0.8M (2 percent) is within the established threshold.
<b>Impact:</b>	No Impact.
<b>Corrective Action:</b>	No corrective action required.

1.2.3.1/ WM05 Liquid Effluents

**Description /Cause:** The unfavorable schedule variance of \$0.6M (2 percent) is within the established threshold.

### **Impact: No Impact.**

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

1.4.2/ TP02 WESF

**Description /Cause:** The unfavorable schedule variance of \$0.1M (1 percent) is within the established threshold.

### Impact: No Impact.

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

**FUNDS MANAGEMENT**  
**FUNDS VS SPENDING FORECAST (\$000)**  
**FY TO DATE THROUGH SEPTEMBER 2000**  
**(FLUOR HANFORD, INC. ONLY)**

### \* Control Point

## ISSUES

## Technical Issues

None.

## DOE/REGULATOR/EXTERNAL ISSUES

## Interim Report for Hanford Land Disposal Restrictions (LDR) for Mixed Wastes —

Substantial areas of disagreement still exist between RL and the Washington State Department of Ecology (Ecology) on the required scope and content of the Annual LDR Submittal as delineated in the Final Determination issued by the Director of Ecology on March 29, 2000. RL is appealing certain aspects of the Ecology requirements, with formalized hearings scheduled for early in calendar year 2001. As a result of RL's July 31, 2000 submittal of the LDR report, Ecology responded with comments in August that stated the report fails to meet requirements of the Final Determination. Responses are currently being prepared.

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**Section B: I – Waste Management**

There are still major disagreements with Ecology over LDR reporting requirements. The most significant is the definition of "waste," where Ecology wants materials that have not yet been declared waste to be managed as waste including annual reporting. Ecology submitted "Motion for Partial Summary Judgment" on September 25, 2000 to the court in order to attempt to have our appeal of the Final Determination dismissed. In response, DOE submitted a legal document that argued against this position. Talks are underway with Ecology on LDR and several other issues in an attempt to reach resolution without litigation.

**Hanford Facility (HF) RCRA Permit** — The RI, Regulatory Compliance Analysis Division informally proposed to Ecology that the agency incorporate lessons learned from the 222-S Laboratory Complex Part B permit application negotiations into the Central Waste Complex (CWC) and Waste Receiving and Processing (WRAP) portions of the HF Resource Conservation and Recovery Act of 1976 (RCRA) Permit. This would further delay issuance of Modification E, but would be of great benefit to both facilities. Modification E will incorporate the CWC and the 616 Non-radioactive Dangerous Waste Storage Facility (NRDWSF) Closure Plan into the RCRA Permit.

**Remote-Handled TRU Project Management Plan (PMP)** — Ecology disapproved the PMP (TPA milestone M-91-03) on August 14, 2000 because the submittal did not meet the requirements set forth in Section 11.5 of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement). Internal meetings with RI are ongoing and meetings with Ecology occurred in mid-September; a path-forward for resolution of Ecology's concerns with the PMP is being developed based on these discussions.

**Impacts of Waste Management PEIS and ROD** — The Waste Management Programmatic Environmental Impact Statement (PEIS) was issued on February 25, 2000. The Records of Decision (ROD) for low-level waste and mixed low-level waste will affect Hanford's disposal role for the Complex and may have a significant impact on disposal volumes and rates at Hanford. DOE-HQ and Ecology negotiations continue; impacts depend upon the results of these negotiations.

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

PROJECT CHANGE NUMBER	DATE ORIGIN	BCR TITLE	FY00 COST IMPACT \$000	S	E	C	H	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
WM-2000-015	7/26/00	WMP FY 2001 MYWP Revision	\$0					8/31/00	9/25/00		At DOE-RI
EH-2001-001	9/12/00	Base Ops Reduction for PHMC Projects	-\$5,036		X						Draft Prepared
EH-2001-002	9/25/00	FY2001 Fee Reduction to 90%	-\$740								Draft Prepared
EH-2001-003	9/25/00	FY2001 Addition of High Priority Workscope	\$5,639		X						Draft Prepared
ADVANCE WORK AUTHORIZATIONS											
		Nothing to report at this time.									

## MILESTONE ACHIEVEMENT

Green

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
RL	7	1	0	0	0	0	0	8
<b>Total Project</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>

Only TPA/EA milestones and all FY2000 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY2000 TPA/EA milestone achievement and a Milestone Exception Report follows.

### Tri-Party Agreement / EA Milestones

Number	Milestone Title	Status
M-91-03 (WMH-00-001)	Issue TRU/TRUM Waste PMP	due 06/30/00 – Completed 6/29/2000 (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 Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
-------------------------	------------------------	----------------------	----------------------

**OVERDUE – 0**

**FORECAST LATE – 0**

**FY 1999 OVERDUE – 1**

TRP-98-709 RL      Complete Hot Cell Deactivation      03/31/99      03/30/01  
 1.4.2      WESF Facility (A-E)

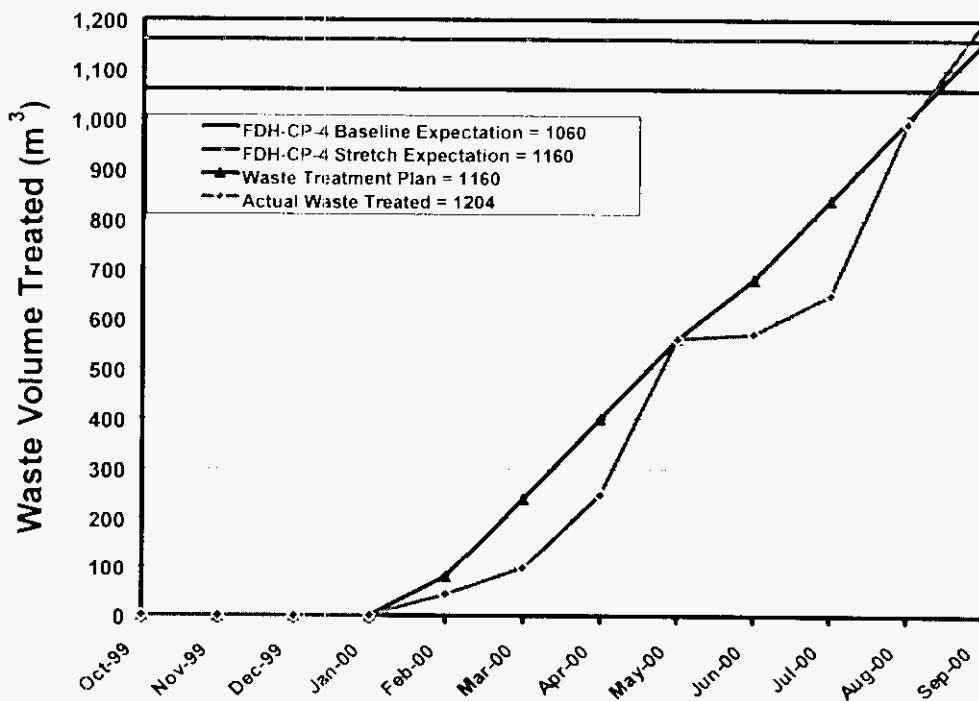
**Cause:** This milestone is not complete due to not being supported at the current funding level.

**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 March 30, 2001 established.

## PERFORMANCE OBJECTIVES MLLW TREATMENT

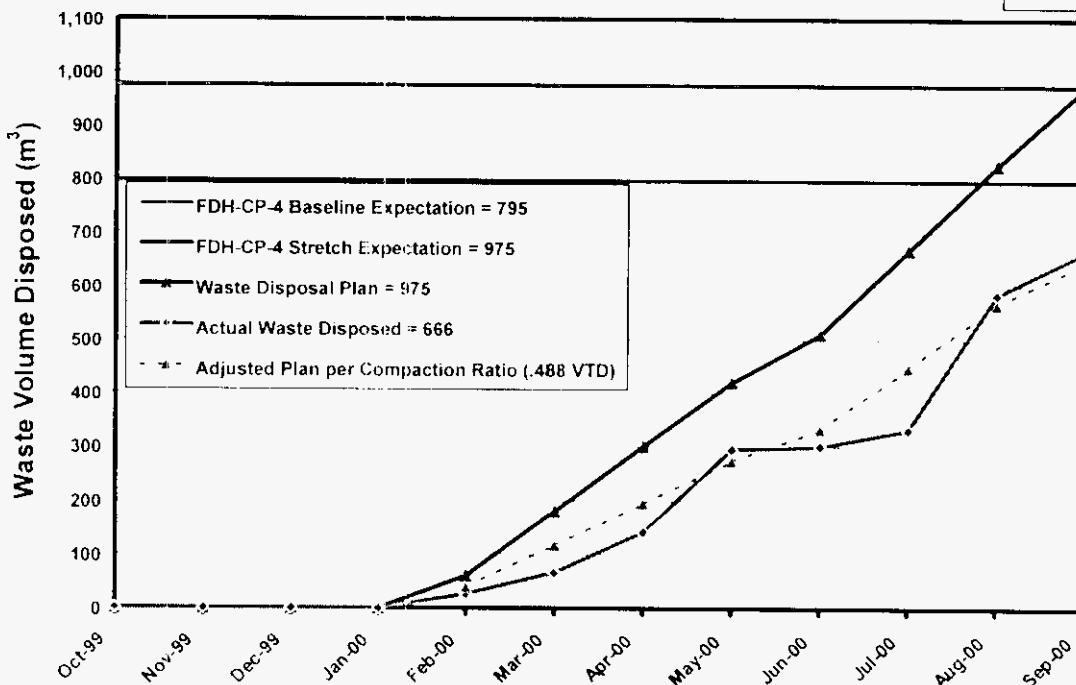
Green



Action Plans: Complete. A total of  $1,204 m^3$  were treated through September 2000.

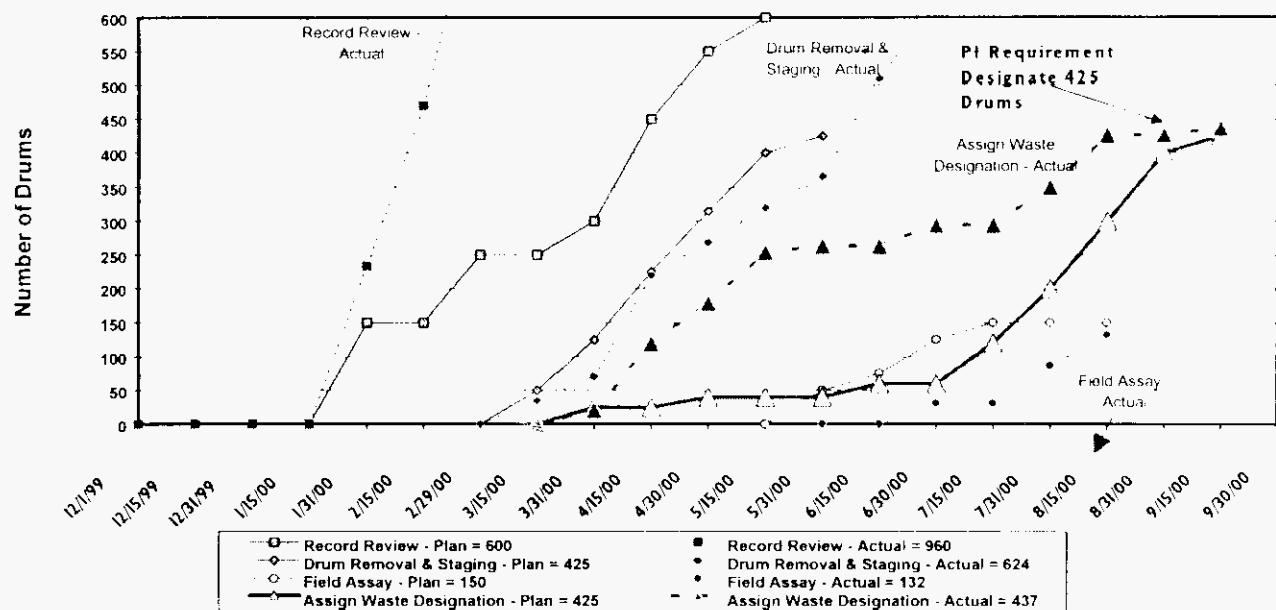
## MLLW DISPOSAL

Green



Action Plans: Complete.  $666 m^3$  disposed through September 2000 (volumes adjusted for compaction ratio).

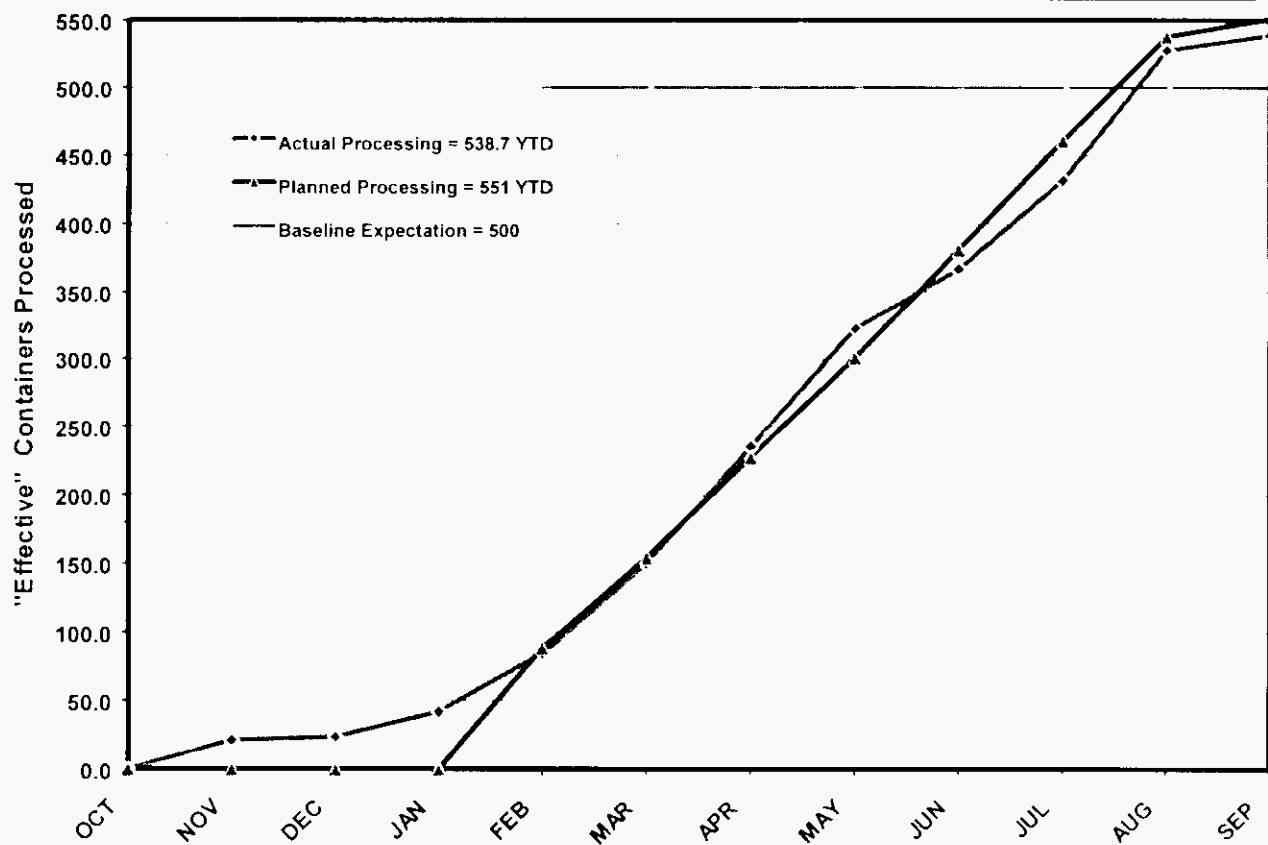
## TRU RETRIEVAL



Action Plans: Complete. 437 suspect TRU drums were designated through September 2000.

## TRU CONTAINER PROCESSING

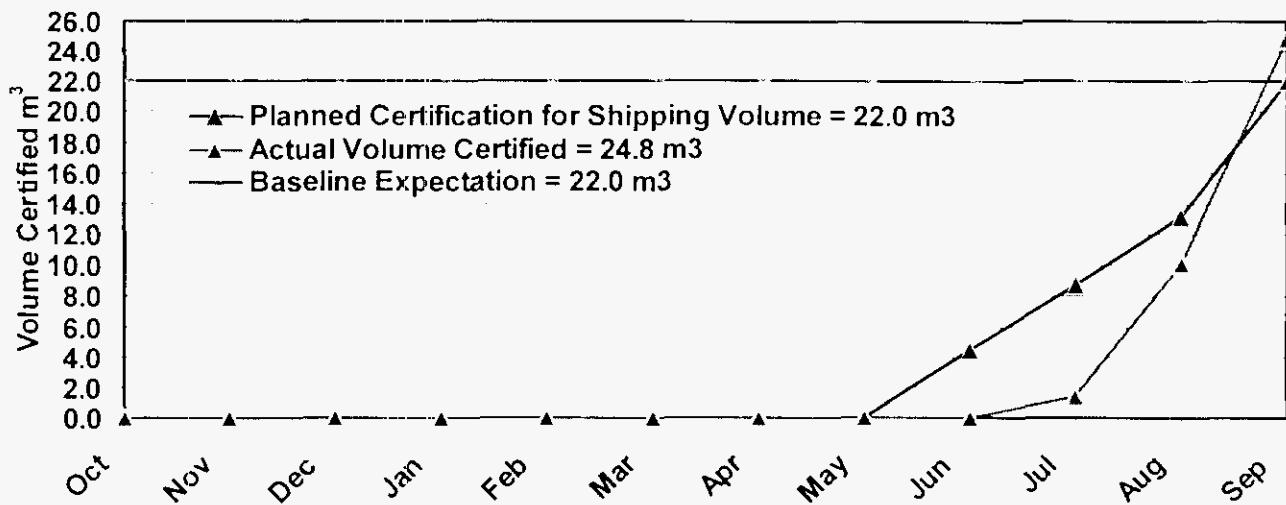
Green



Action Plans: Complete. 538.7 "effective" containers processed through September 2000.

## TRU CERTIFICATION FOR SHIPPING

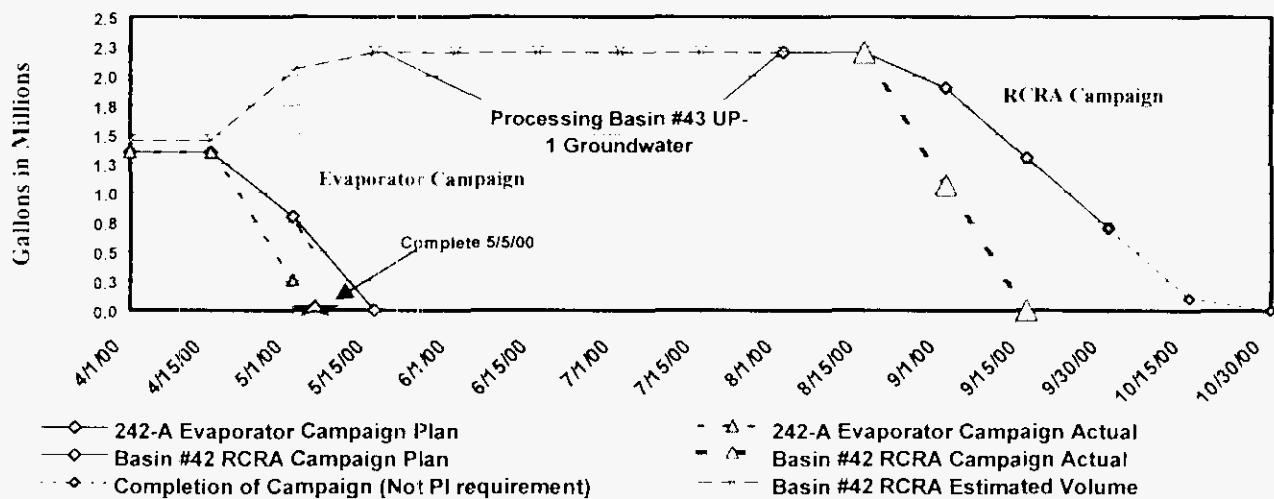
Green



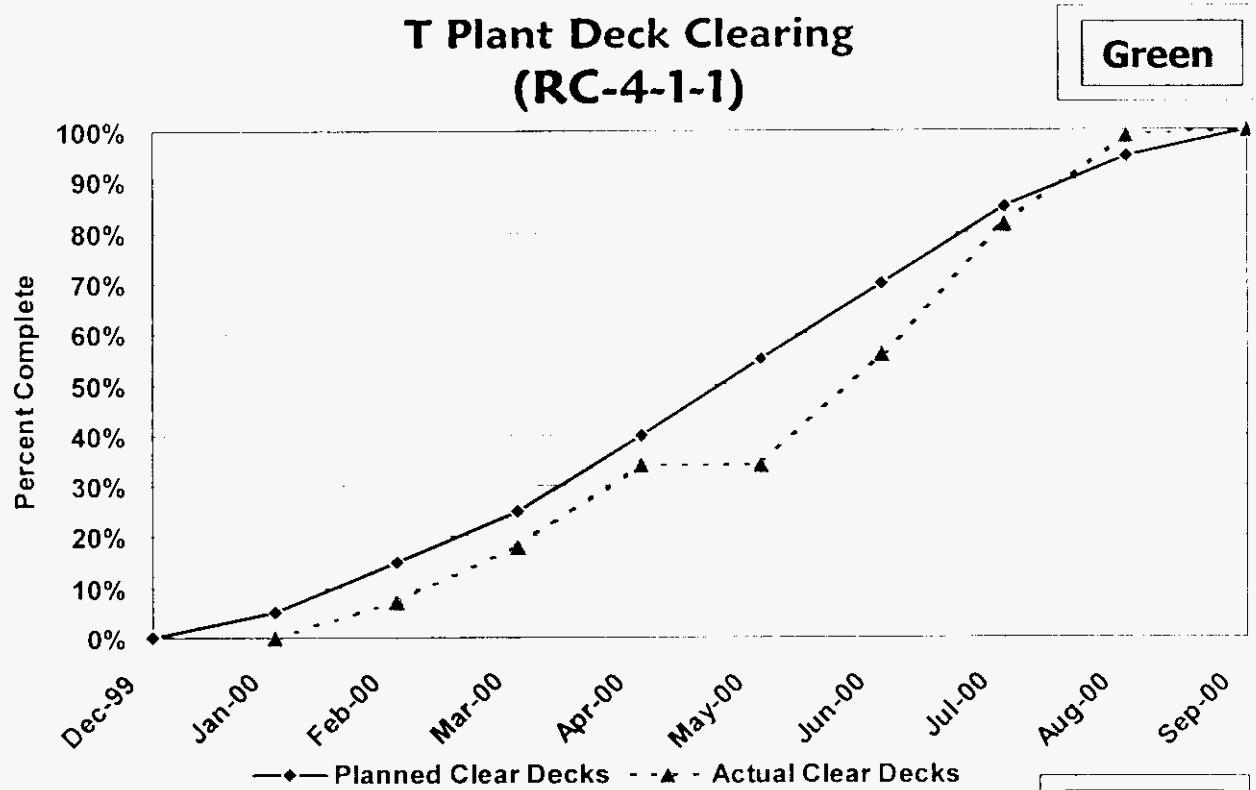
**Action Plans:** Complete 24.8 m<sup>3</sup> certified through September 2000.

## LIQUID WASTE PROCESSING

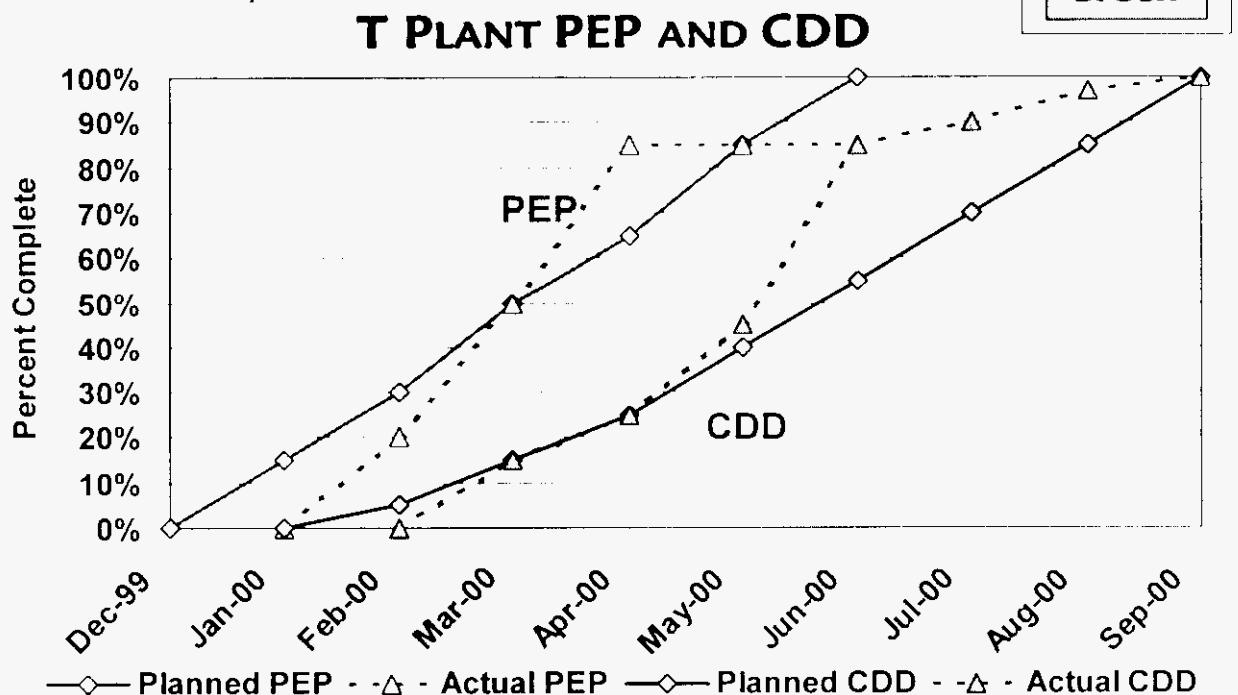
Green



**Action Plans:** Complete. The RCRA campaign was initiated on August 19, 2000 and completed in September 2000. Processing through September 2000 is 2.2 million gallons versus the 1.5 million gallon requirement.



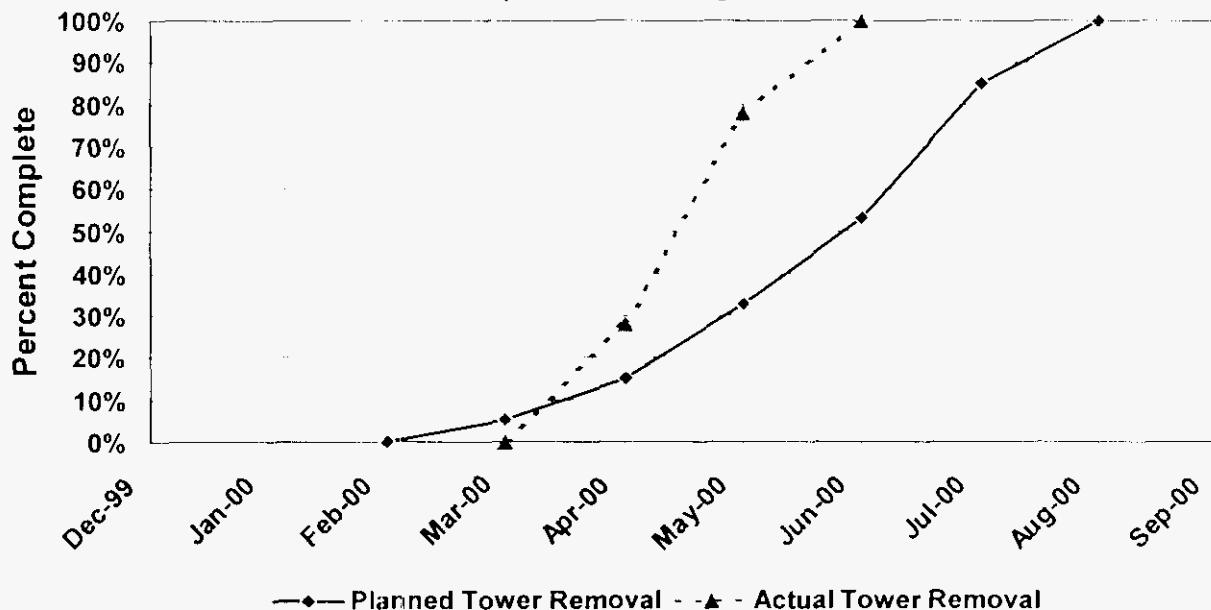
Action Plans: Complete.



Action Plans: Complete. The Project Execution Plan (PEP) and the Conceptual Design Document (CDD) both completed in September 2000.

Green

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



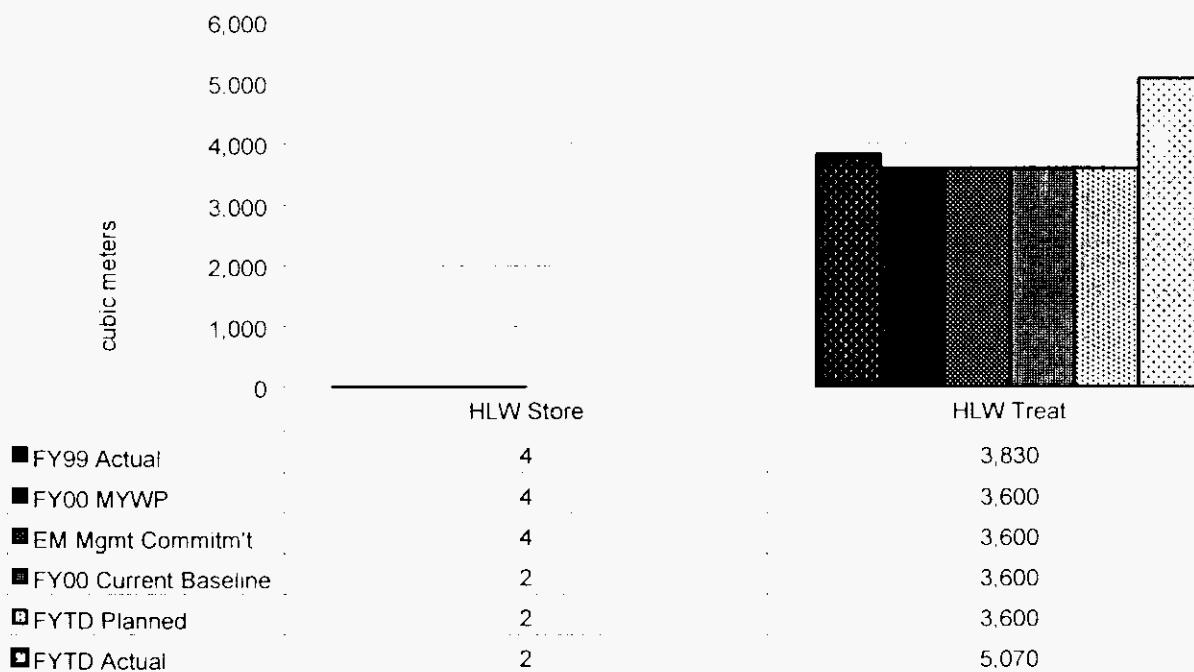
**Action Plans:** Complete. Two towers removed and disposed of in the low level burial grounds (LLBG).

## KEY INTEGRATION ACTIVITIES

- Preparing T Plant to receive Spent Nuclear Fuel K Basin sludge.
- Issuance of Records of Decision for Low-Level Waste (LLW) and Mixed Low-Level Waste (MLLW) is expected to affect Hanford's role in disposing of waste from other sites. Working with DOE-RL, DOE-HQ 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.
- Support the ORP Waste Treatment Plant.
- Continue 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- RI, -Oakland, and -Ohio to support resolution of TRU small quantity site disposition issues.
- Support visits from both the DOE-Idaho Program Office and the Office of the Inspector General in regards to opportunities for treatment/disposal of Idaho National Engineering Environment Laboratory (INERL) wastes at Hanford.

## HIGH LEVEL WASTE (HLW): STORAGE AND TREATMENT

High Level Waste Store/Treatment as of September 30, 2000

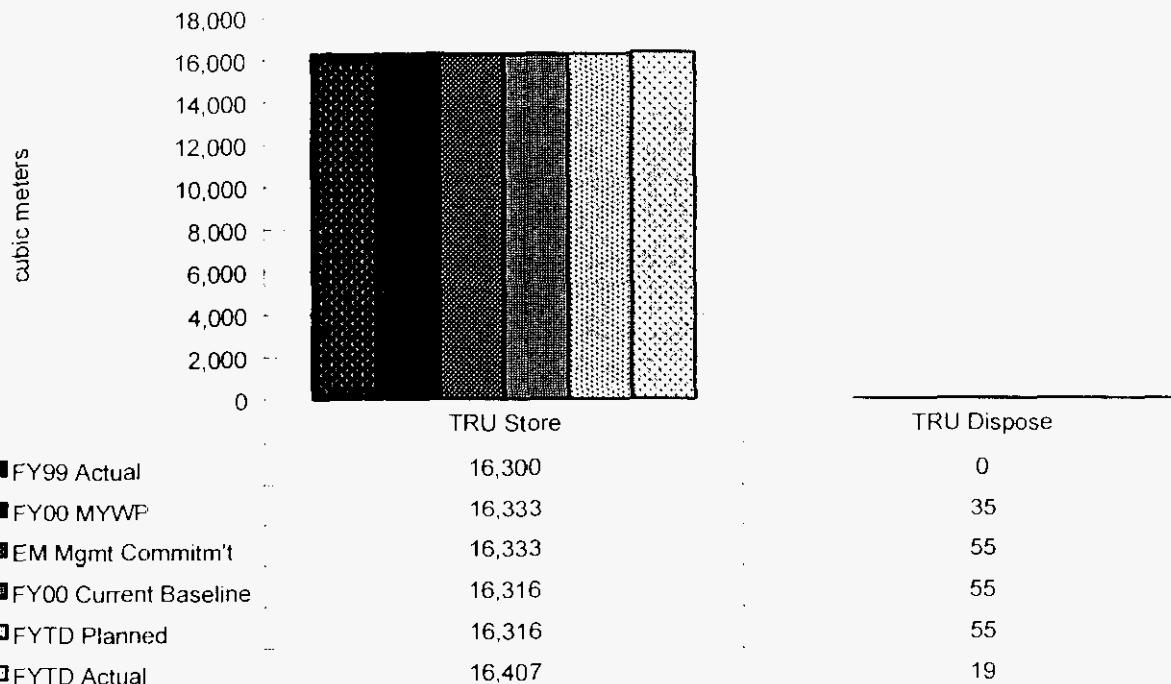


**Storage:** The HLW inventory of the Cesium (Cs) and Strontium 90 (Sr) stored in the Waste Encapsulation and Storage Facility (WESF) pool cells has been adjusted to provide a consistent reporting basis. The four (4) cubic meters above was based on the capsule dimensions. However, the reported HLW inventory should have included the volume that is HLW (i.e., the Cs and Sr salt) which is two (2) cubic meters.

**Treatment:** One evaporator campaign for treatment of high-level tank waste in FY2000 was completed during the 3rd quarter, treating 34 percent more than planned. Additional volume treated through the evaporator was necessary to support RPP in achieving a Performance Incentive for waste volume reduction in the Tank Farms underground storage tanks.

## **TRANSURANIC (TRU) WASTE: STORAGE, TREATMENT AND DISPOSAL**

### **TRansUranic (TRU) Waste as of September 30, 2000**

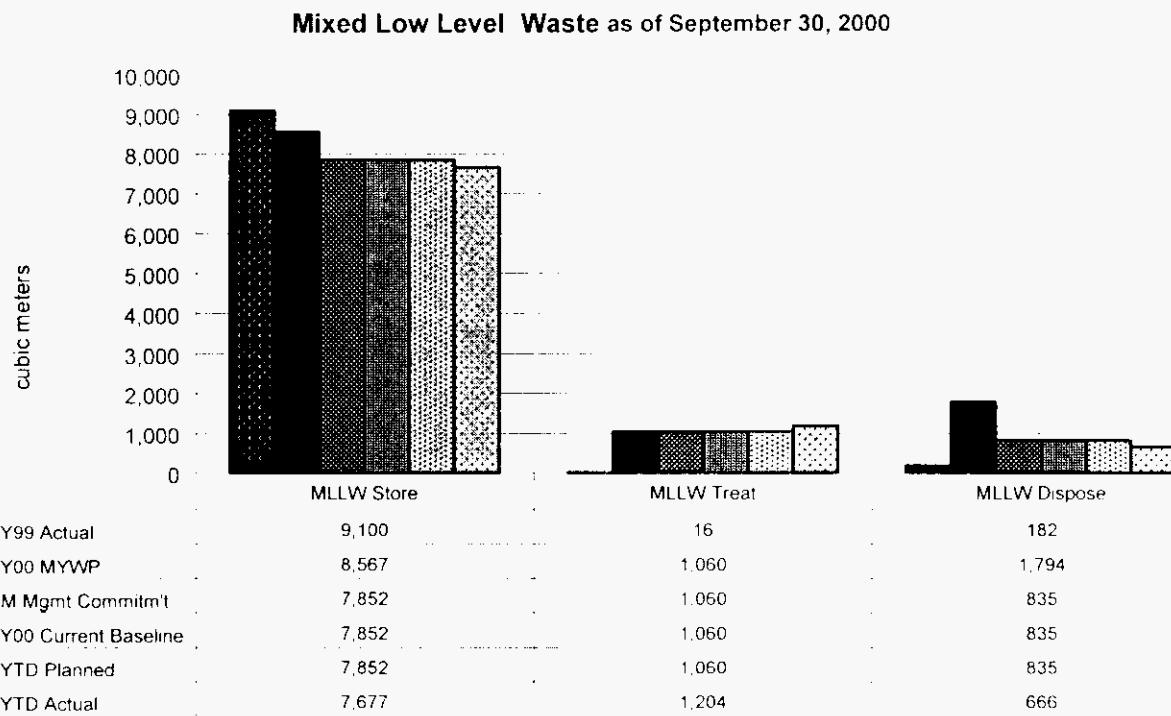


**Storage:** Storage continues to be provided for existing and newly generated TRU waste. The current volume of TRU in storage is within 10 percent of the planned amount.

**Treatment:** Based on DOE/RL interpretation, TRU processing at WRAP does not meet the revised TRU treatment definition. Therefore, TRU treatment volumes previously identified in the FY00 MYWP have been set to zero.

**Disposal:** Less TRU was shipped to Waste Isolation Pilot Plant (WIPP) this year than planned due to delays at Carlsbad for WIPP certification for Hanford waste receipts.

## MIXED LOW LEVEL WASTE: STORAGE, TREATMENT, AND DISPOSAL

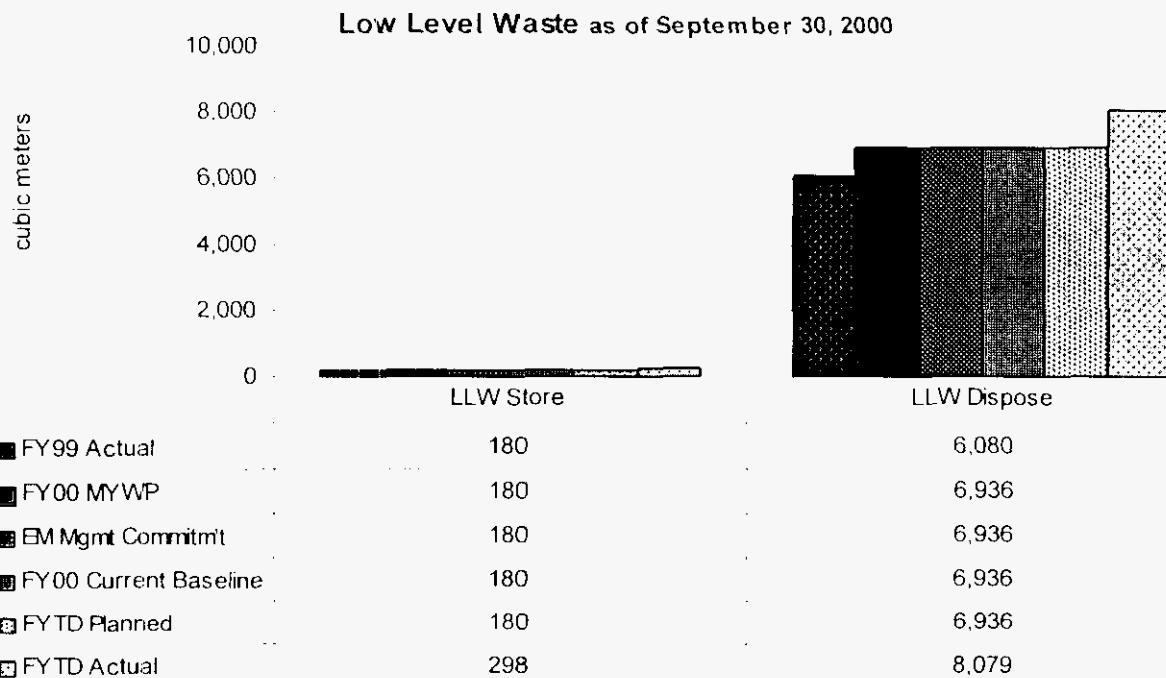


**Storage:** Storage continues to be provided for existing and newly generated MLLW waste. The current volume of MLLW in storage is within 10 percent of the planned amount.

**Treatment:** The MLLW treated exceeded the planned by approximately 13 percent. This stretch performance demonstrates increased progress towards disposition of MLLW inventory on the site. The increased treatment volume also meets the internal RI performance incentive for treating MLLW.

**Disposal:** Allied Technology Group (ATG) achieved greater volume reductions than planned (1 to .5 versus 1 to .75) in treating the MLLW. The current volume of treated MLLW is therefore, approximately 20 percent less than the planned volume to be disposed in FY2000.

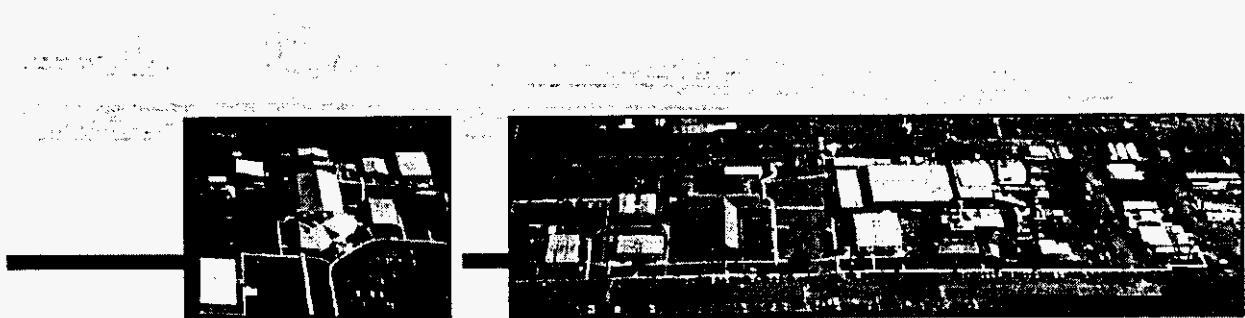
## LOW LEVEL WASTE (LLW): STORAGE, TREATMENT, AND DISPOSAL



**Storage:** An additional 118 cubic meters of LLW was placed in storage at the Central Waste Complex for certification.

**Treatment:** No treatment of LLW is planned until after FY2006 when a treatment alternative has been selected. All newly generated LLW receipts are prepared and packaged to the waste acceptance criteria for disposal of LLW in the burial grounds and no further treatment is required.

**Disposal:** Considerably more waste was received in the fourth quarter than planned resulting in 16 percent more LLW disposed in FY 2000. Major contributors included Parks Township, Argonne National Labs and General Atomics.



## **Section B:2**

### *Analytical Services*

### **(222-S, HASP, WSCF)**

#### **PROJECT MANAGERS**

S.H. Wisness, RL  
(509) 373-9337

D.L. Renberger, FH  
(509) 372-0877

## **SUMMARY**

The Analytical Services (AS) Project [222-S, Hanford Analytical Services Program (HASP), Waste Sampling and Characterization Facility (WSCF)] consists of Analytical Services, PBS WM06, WBS 1.2.4.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of September 30, 2000. Other information is updated as noted.

### **Top 5 Accomplishments for FY 2000**

Operations at the Waste Sampling and Characterization Facility (WSCF) exceeded 2500 days without a lost time injury in August 2000 (Progress).

The Project completed the FY 2000 milestone commitment of 11 Analytical Equivalency Unit (AEUs) in August, ahead of schedule. A total of 13.2 AEUs were completed in FY 2000 in support of the RPP (TWRS) tank characterization program. A total of nine core reports, fifteen grab sample reports, and four vapor reports were issued in FY 2000. (Momentum).

All analytical reports were completed in support of CH<sub>2</sub>M Hill Hanford Group (CHG) Performance Incentives affected by laboratory support. Support to development of the CHG Waste Treatment Plant, including providing 147 laboratory procedures and design documentation (approximately 100 drawings) of the 222-S hot cells (Momentum).

Certification of the Hanford Transuranic (TRU) Program and waste shipments to the Waste Isolation Pilot Plant (WIPP) were supported with headspace analysis. Procedures, methods, equipment and training were significantly revised to meet the new WIPP permit from the State of New Mexico (Completion and Removal).

A total of 17,735 analyses were performed in FY 2000 at the Waste Sampling and Characterization Facility (WSCF) for a wide variety of customers as planned (Progress).

### **Additional FY 2000 Accomplishments**

#### **Momentum**

The DOE-RL was assisted with the declaration of Readiness-to-Proceed in support of the ORP Waste Treatment Plant Contract.

The Hanford Analytical Services Program (HASP) developed an Instrument Capital Plan for the 222-S and WSCF laboratories, based on instrument age, utilization, efficiency, and sample forecasts. A national survey on instrument utilization rates was obtained and compared to the AS laboratories.

A Facility Evaluation Board (FEB) audit of the 222-S and WSCF laboratories was completed.

The final FEB report was issued in February 2000 with improvements in nine of ten areas and an overall rating of "3".

Quoting from the Defense Nuclear Safety Board Site Rep Report: "The Site Rep observed the transfer of a neutron source to the 222-S Californium Activation Analysis Facility (CAAF). The new 23 Ci Cf-252 source is extremely radioactive (1082 rem/hr fast neutron, 93 rem/hr gamma at 30 cm), and will be used for neutron activation of tank wastes. The neutron capsule was drawn out of a 4.5-ton transportation cask and moved through a transfer tube to an underground storage position in a dry well inside the CAAF irradiation tank. Movement was by manual crank on a continuous cable with a magnetic end effector. Several mockups and dry runs had been conducted prior to the evolution and worker involvement was significant. This planning resulted in a good pre-job brief and a smooth transfer."

Ecology inspected the 222-S Laboratory in August 2000 with the intent to closeout the 222-S Settlement Agreement. The agreement expired in June 2000 but states that Ecology will issue a letter vacating the fine. Ecology was satisfied that we had a system and could identify the controls necessary to adequately manage our waste. The State of Washington Pollution Control Hearing Board issued a letter closing the issue on August 24, 2000.

Analytical Services won awards for booth displays in two categories, "Most Interactive" and "Kid's Favorite" at the Health and Safety Expo 2000.

### **Completion and Removal**

The successful completion of the 242A Evaporator campaign, including expedited feed tank analysis for ORP was supported.

Fiscal-year-to-date-milestone performance (EA, DOE-HQ and RL) shows one milestone completed ahead of schedule.

## **ACCOMPLISHMENTS THIS REPORTING PERIOD**

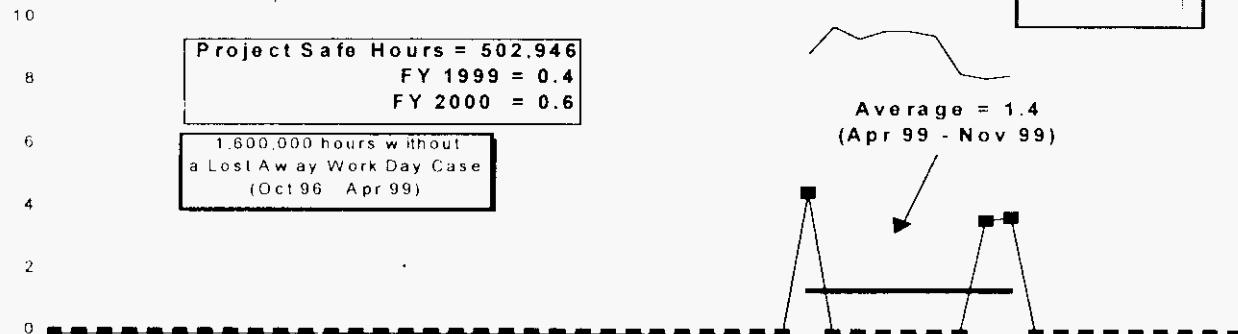
- Processed a total of 1.4 AEUs at the 222-S Laboratory in September in support of the RPP (TWRS) tank characterization program and issued eight characterization reports in support of RPP.
- Performed 1,128 analyses in September at WSCF for a wide variety of customers as planned. Through October 23, 2000, production for FY 2001 is 800 analyses.
- Hosted the executive director (Dr. Ghassemi) of the Waste Management Education and Research Consortium (WERC) on October 3-4, 2000. Opportunities to leverage WERC expertise and experience in environmental education, technology development and outreach were explored in meetings with RL, the contractors, and with universities and community colleges. RL is very pleased at the progress to date and supports continued efforts with WERC at Hanford.

## SAFETY

In September, there were 2 OSHA recordable cases, no Restricted Workday Cases, and four First Aid Cases. The OSHA recordable case rate is increasing, with 2 of the past 3 months at two standard deviations above average, and the DOE Safety Cost Index has been rebaselined upwards due to recent increasing trends. Analytical Services continues to focus on ergonomic issues, and has brought HEHF expertise to 222-S to assist in ergonomic evaluations.

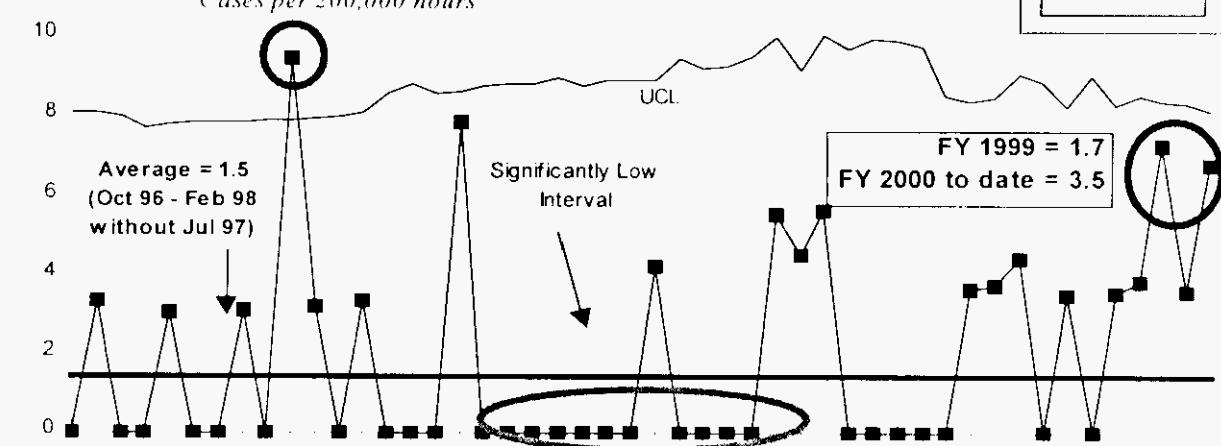
### 12 Lost Away Workday Case Rate

Cases per 200,000 hours



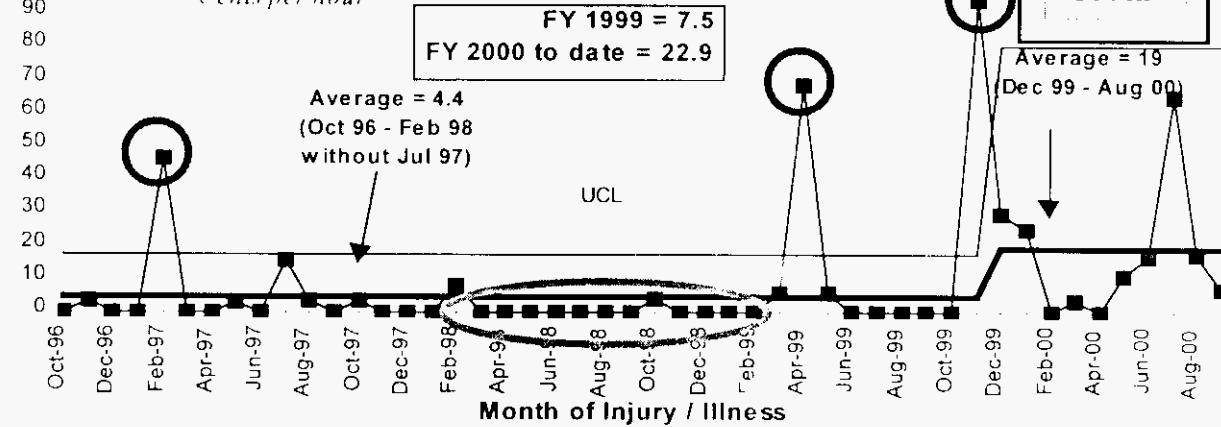
### 12 OSHA Recordable Case Rate

Cases per 200,000 hours

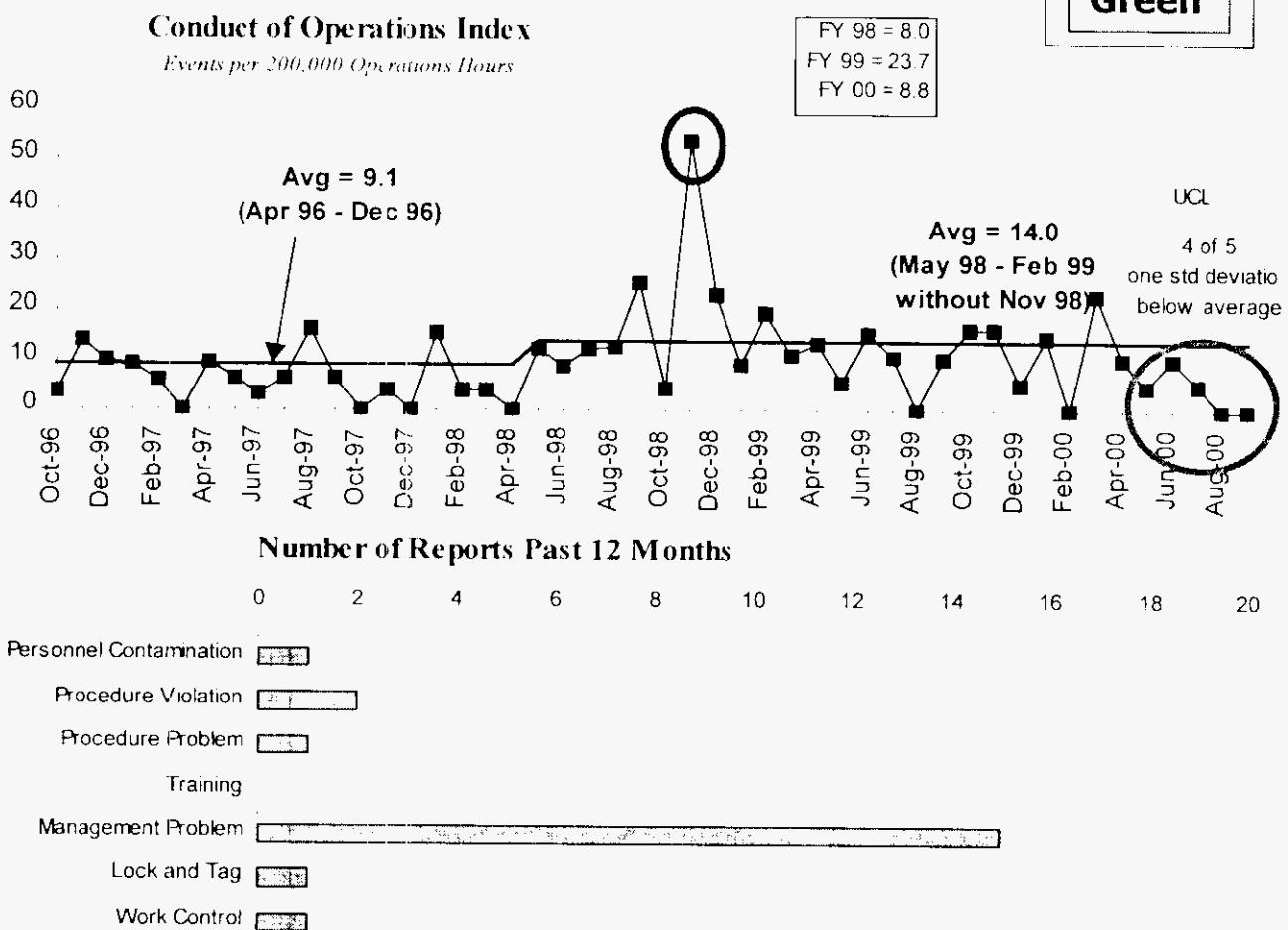


### DOE Safety Cost Index

Cents per hour



## CONDUCT OF OPERATIONS / ISMS STATUS



## ISMS STATUS

Analytical Services ISMS status is included in the Waste Management Project Section of this report.

Green

## BREAKTHROUGHS

Nothing to report at this time.

## OPPORTUNITIES FOR IMPROVEMENT

Green

**Analytical Services Facility and Equipment Upgrades Team:** RL is assessing the framework under which cleanup can be maximized while working to incorporate a “realistic” funding profile over the next ten to fifteen years. Consistent with the RL outcomes, the priority is achieving the River Corridor Outcome by 2010 or shortly thereafter. This approach necessitates a probable resequencing of the current baseline activities in the 200 Areas. An Analytical Services Facility and Equipment Upgrades Team have identified required facility and equipment work scope to

**PHMC Environmental Management Performance Report – November 2000**  
**Section B: 2 – Analytical Services (222-S, HASP, WSCF)**

support the RI outcomes. Presentations were made to FH and RI to detail risks and impacts associated with the work scope to the Site cleanup mission. Related activities:

A long-term laboratory instrument capital plan, including analytical reliability requirements, was prepared in response to concerns over the lack of adequate funding in FY01 and future years for Capital equipment not related to construction (CENRTC), facility repair and Laboratory Information Management System (LIMS) upgrades. RPP recognizes the need and is indicating a willingness to fund a portion of the upgrades needed to provide for reliability of analytical services.

Analytical Services provided input to a DOE-HQ Infrastructure Restoration Plan to incorporate long-term Hanford laboratory needs.

## **UPCOMING ACTIVITIES**

**WIPP Waste Shipments** — Continue to support the production goal of headspace analysis in support of waste shipments to WIPP.

**ORP Waste Treatment Plant** — A recommendation from the 200 Areas Option Study is to determine Analytical Services support requirements to the ORP Waste Treatment Plant. This includes technical support to the WTP design, cold testing and startup support, process control and monitoring, and troubleshooting. Options for long-term high-activity laboratory support to the Site cleanup mission (i.e. 222-S, WTP laboratory, a new laboratory, etc.) are also to be evaluated. These potential areas of support to the ORP WTP were compiled and submitted to RI.

**222-S RCRA Part B Application** — Issue Modification E (222-S) of the Hanford Facility (HF) RCRA Permit for public review after issuance of Modification E. Ecology is planning on issuing Modification E (WRAP and CWC) by the end of the calendar year. Prepare and deliver the remaining permit application items (Dangerous Waste Training Plan and the updated WIDS input) to Ecology, after issuance of Modification E.

**PCB Management** — Continue to work with RI and ORP on PCB management and regulatory issues.

**Bioassay, Analytical, and Environmental Radiochemistry (BAER) Conference** — Dr. Steven Bakhtiar of Analytical Services is chairing the 46<sup>th</sup> Annual BAER Conference in Seattle in mid-November 2000.

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

	BCWP	ACWP	VARIANCE
<b>Analytical Services</b>	\$27.6	\$26.5	\$1.1

The \$1.1 million (4 percent) favorable cost variance is within established thresholds.

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

	BCWP	BCWS	VARIANCE
<b>Analytical Services</b>	\$27.6	\$28.3	-\$0.7

The \$0.7 million (2 percent) unfavorable schedule variance is within the established threshold.

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

**Green**

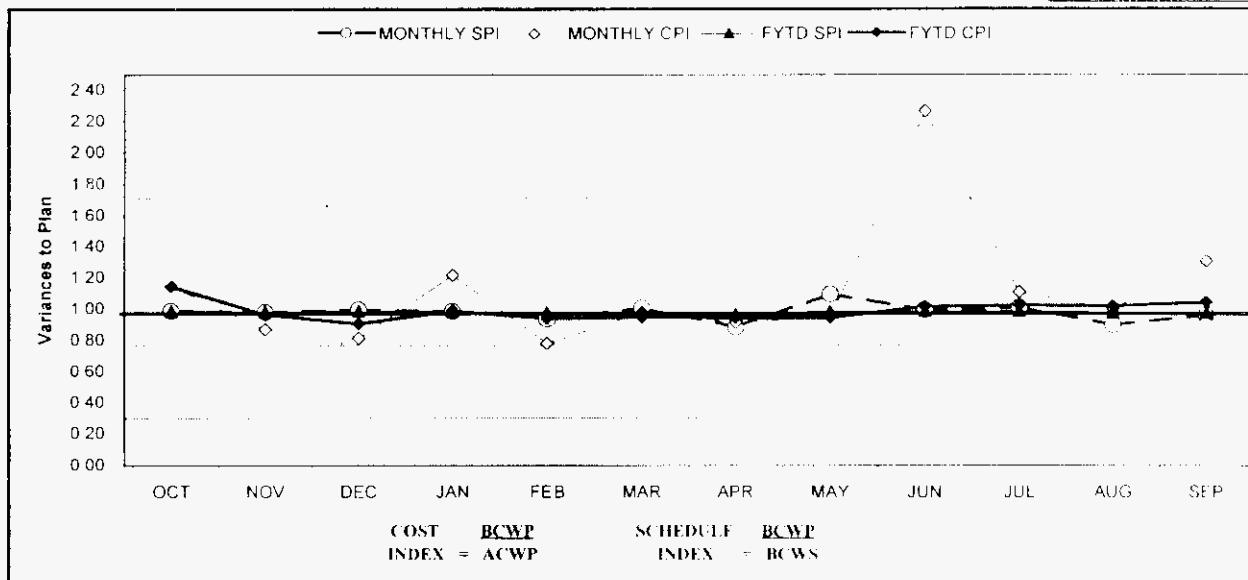
**FYTD**

By PBS	BCWS	BCWP	ACWP	SV	%	CV	%
WBS 1.2.4 Analytical							
PBSWM06 Services	\$ 28,334	\$ 27,626	\$ 26,524	\$ (708)	-2%	\$ 1,101	4%
<b>Total</b>	<b>\$ 28,334</b>	<b>\$ 27,626</b>	<b>\$ 26,524</b>	<b>\$ (708)</b>	<b>-2%</b>	<b>\$ 1,101</b>	<b>4%</b>

Note: RI-Directed costs (steam and laundry) are included in the PEM BCWS/ACWP/EAC.

## COST/SCHEDULE PERFORMANCE INDICES (MONTHLY AND FYTD)

Green



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.99	0.98	0.99	0.98	0.94	1.00	0.88	1.09	0.99	1.01	0.90	0.96
MONTHLY CPI	1.14	0.87	0.81	1.22	0.78	0.98	0.91	0.94	2.26	1.11	1.00	1.31
FYTD SPI	0.99	0.98	0.99	0.98	0.97	0.98	0.93	0.98	0.98	0.99	0.98	0.98
FYTD CPI	1.14	0.96	0.91	0.99	0.94	0.98	0.94	0.94	1.01	1.02	1.02	1.04
MONTHLY BCWS	\$1,588	\$2,340	\$1,973	\$2,896	\$2,283	\$2,613	\$2,279	\$2,358	\$2,493	\$2,069	\$2,588	\$2,853
MONTHLY BCWP	\$1,566	\$2,288	\$1,960	\$2,848	\$2,135	\$2,624	\$2,010	\$2,578	\$2,473	\$2,086	\$2,320	\$2,777
MONTHLY ACWP	\$1,369	\$2,640	\$2,414	\$2,342	\$2,741	\$2,686	\$2,208	\$2,733	\$1,093	\$1,885	\$2,319	\$2,092
FYTD BCWS	\$1,588	\$3,928	\$5,901	\$8,797	\$11,080	\$13,693	\$15,973	\$18,330	\$20,823	\$22,892	\$25,481	\$28,334
FYTD BCWP	\$1,566	\$3,854	\$5,814	\$8,662	\$10,797	\$13,421	\$15,431	\$18,009	\$20,482	\$22,568	\$24,889	\$27,626
FYTD ACWP	\$1,369	\$4,009	\$6,423	\$8,765	\$11,506	\$14,193	\$16,401	\$19,134	\$20,228	\$22,113	\$24,432	\$26,524

## COST VARIANCE ANALYSIS: (\$1.1M)

### WBS/PBS

### Title

#### 1.2.4/WM06

#### Analytical Services

**Description/Cause:** The favorable cost variance of \$1.1 million (4 percent) is within established thresholds.

**Impact:** None.

**Corrective Action:** None required.

## SCHEDULE VARIANCE ANALYSIS: (-\$0.7M)

### WBS/PBS

### Title

#### 1.2.4/WM06

#### Analytical Services

**Description /Cause:** The unfavorable schedule variance of \$0.7M (2 percent) is within established threshold.

**Impact:** None.

**Corrective Action:** None required.

**FUNDS MANAGEMENT**  
**FUNDS VS SPENDING FORECAST (\$000)**  
**FY TO DATE THROUGH SEPTEMBER 2000**  
**(FLUOR HANFORD, INC. ONLY)**

	Project Completion *			Post 2006 *			Line Items *		
	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance
The Plateau				\$ 26,457 \$ 25,779 \$ 678					
124 Analytical Svcs (222-S,HASP,WSCF)									
WM06									
Line Item									
Total Analytical Serv. Operating				\$ 26,457 \$ 25,779 \$ 678					
Total Analytical Serv. Line Item									

\* Control Point

**ISSUES**

**Technical Issues**

Nothing to report at this time.

**DOE/Regulator/External Issues**

Nothing to report at this time.

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

PROJECT CHANGE NUMBER	DATE ORIGIN	BCR TITLE	FY00 COST IMPACT \$000	S C H	T E C H	DATE TO CCB	CCB APRVD	RL APRVD	CURRENT STATUS
FH-2001-001	9/12/00	Base Ops Reduction for PHMC Projects	-\$610		X				Draft Prepared
FH-2001-002	9/25/00	FY2001 Fee Reduction to 90%	-\$190						Draft Prepared
ADVANCE WORK AUTHORIZATIONS									
		Nothing to report at this time.							

**Green**

## **MILESTONE ACHIEVEMENT**

<b>MILESTONE TYPE</b>	<b>FISCAL YEAR-TO-DATE</b>				<b>REMAINING SCHEDULED</b>			<b>TOTAL FY 2000</b>
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	0	0	0	0	0	0	0	0
DOE-HQ	0	0	0	0	0	0	0	0
FO	0	0	0	0	0	0	0	0
RL	1	0	0	0	0	0	0	1
<b>Total Project</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

### **Tri-Party Agreement / EA Milestones**

Nothing to report at this time.

### **DNFSB Commitments**

Nothing to report at this time.

## **MILESTONE EXCEPTION REPORT**

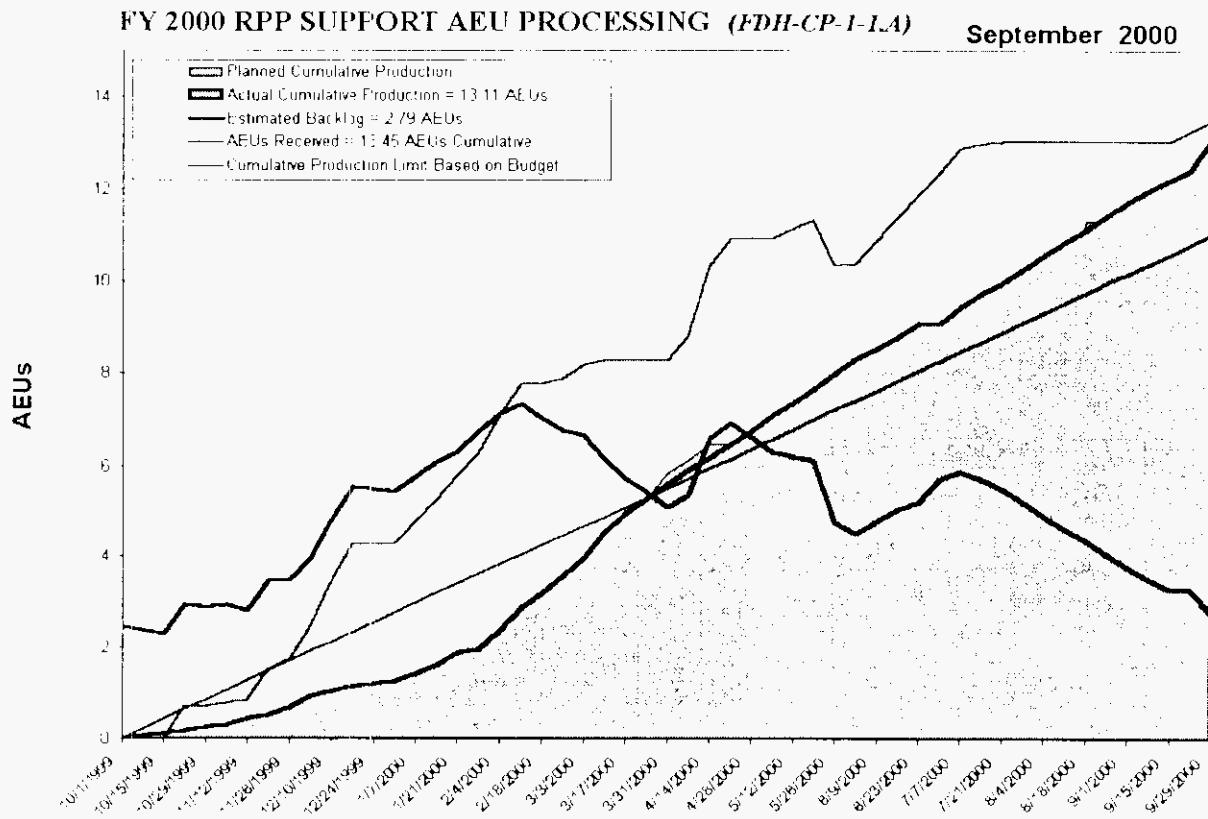
<u>Number/WBS Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
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**OVERDUE – 0**

**FORECAST LATE – 0**

## PERFORMANCE OBJECTIVES

Green





## **Section C:1**

### *Nuclear Material Stabilization*

**PROJECT MANAGERS**  
P.M. Knollmeyer, RL  
(509) 376-7435

G.W. Jackson, FH  
(509) 373-6622

## **SUMMARY**

The Nuclear Material Stabilization mission consists of the Plutonium Finishing Plant (PFP). WBS 1.4.5 and 1.4.6.1. (PBS TP05 & TP12)

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of September 30, 2000. All other information is as of October 9, 2000 unless otherwise stated.

### **Top 5 Accomplishments for FY 2000**

The NMS has worked over 1,000,000 safe hours since the last lost time injury, equivalent to 323 days, since the last workday injury in December 1999 (Progress).

Process improvements and installation of three additional muffle furnaces in March 2000 resulted in the thermal stabilization of more than 650 plutonium-bearing items during FY 2000. Additionally, emergent safety concerns led to the oxidation or repackaging of thirteen (13) additional “higher risk” metal items. This year’s results represent a four-fold increase over last year’s production level. Additionally, limited off-site shipment of stabilized material has been initiated (Progress).

The accelerated startup of the residue packaging process in September, initially packaging imported Rocky Flats ash, was accomplished through successful negotiations between the Department of Energy, Fluor Hanford Inc., and the Washington State Department of Ecology. This resulted in a Tri-Party Agreement that established: 1) an interim Tri-Party Agreement milestone for an April 30, 2001 completion of Rocky Flats ash packaging; and 2) authorized temporary storage of packaged ash in the PFP. Packaged residue materials are scheduled for future shipment to the Waste Isolation Pilot Plant (WIPP) in New Mexico (Progress).

The startup operation of the magnesium hydroxide precipitation process, initiated in September, is converting potentially volatile plutonium nitrate acid solutions to a stable oxide form thereby reducing a significant safety risk. The PFP’s accredited Integrated Environment, Safety and Health Management System (ISMS) was an integral factor in the system design that optimized efficiency and safety through employee involvement (Progress).

Operation of an automated state-of-the-art system known as the Bagless Transfer System (BTS) began September 30, 2000, at the PFP. This system, designed and fabricated by Westinghouse Savannah River Company, accelerates packaging capabilities and reduces radiation exposure through automated packaging of plutonium-bearing material in welded stainless steel containers (Department of Energy Standard, DOE-STD-3013-99) for long term storage. The outer container packaging welder system is scheduled for operation in spring of 2001, providing the complete DOE-STD-3013-99 packaging capability. A second inner container packaging system, currently scheduled for operation in late summer of 2001, will double the thermal stabilization capability and eliminate “building to building” material transfers (Progress).

## **Additional FY 2000 Accomplishments**

### **Progress**

The Defense Nuclear Facilities Safety Board (DNFSB) noted substantial improvements in the PFP criticality safety program. Areas of improvement include independent assessment and oversight, training, and better contractor ownership with strong formal self-assessments.

The Facility Evaluation Board (FEB) conducted an annual assessment of the PFP and concluded that overall plant performance has improved during the past 2 years. Areas making significant progress include radiation protection, OSHA, emergency management, and engineering.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, and RL) shows that seven of thirteen milestones (54 percent) were completed on or ahead of schedule, four (31 percent) were completed late, and two (15 percent) are overdue. Further details can be found in the milestone exception report following the cost and schedule variance analysis.

## **ACCOMPLISHMENTS THIS REPORTING PERIOD**

### **Maintain Safe and Compliant PFP**

- Through October 18, 2000, there have been more than 1,000,000 hours, equivalent to 323 days, since the last workday injury in December 1999.
- Installation and testing of backflow preventers within the Plutonium Finishing Plant (PFP) continued. Currently backflow preventers have been installed, tested, and are operating on fire risers #5, #6, #8, and #9. This FY 2001 milestone activity (TRP-01-511) remains on schedule to a June 2001 completion.

### **Oxides/Metals/Polycubes Stabilization**

- Thermally stabilized over 135 items during September contributing to the thermal stabilization of more than 650 plutonium-bearing items during FY 2000.
- Thermal Stabilization successfully opened, brushed, and transferred two metal items to the BTS for placement into a welded can and return to vault storage. Stabilization of one item and transfer out using a BTS can was one of the stretch goals for PFP.
- Milestone TRP-00-503, "Complete Air Operating Permit/Environmental Protection Agency (AOP/EPA) review for alloy processing and issue the Notice of Construction by September 30, 2000", was completed September 26. The muffle furnace Notice of Construction (NOC) has been revised and was approved by the Washington State Department of Health. This NOC includes brushing and repackaging as a stabilization process that may be used for metals and alloys. A new source review applicability evaluation was completed which showed submittal to the Washington State Department of Ecology was not required.

### **Residue Stabilization**

- Startup of the Pipe-n-Go process was achieved September 11, 2000. This milestone effort was preceded by discussions between RL, FH and the Washington State Department of

Ecology (Ecology), that established 1) an interim Tri-Party Agreement milestone for an April 30, 2001 completion of Rocky Flats ash packaging, and 2) authorized temporary storage of packaged ash in the PFP.

## **Solutions Stabilization**

- Completed DOE ORR.
- DOE authorization to begin operation received on September 18, 2000
- Initiated Phase 1 of the Startup Plan, Start Hot Runs, on September 20, 2000
- Conducted hot runs through October 5, 2000 (includes extension due to Site Fire)
- Met the threshold amount identified in the Performance Incentive, to allow earning stretch fee
- Supplement Analysis to the Environmental Impact Statement (EIS) approved by the RL Manager
- Revision to the NOC was approved, permitting processing of solutions up to a molarity of five

## **Safe and Secure SNM**

- Finalized NDA confirmatory measurements of five ash standards for Pipe-n-Go
- Completed NDA measurements of five metal standards using neutron coincidence counter in support of BTS

## **Project W-460**

- Startup operation of the 234-5Z BTS was initiated September 30, 2000 following a successful readiness review and authorization by RL. This system accelerates packaging capabilities and reduces radiation exposure through automated packaging of plutonium-bearing material in welded stainless steel containers (Department of Energy Standard, DOE-STD-3013) for long term storage.

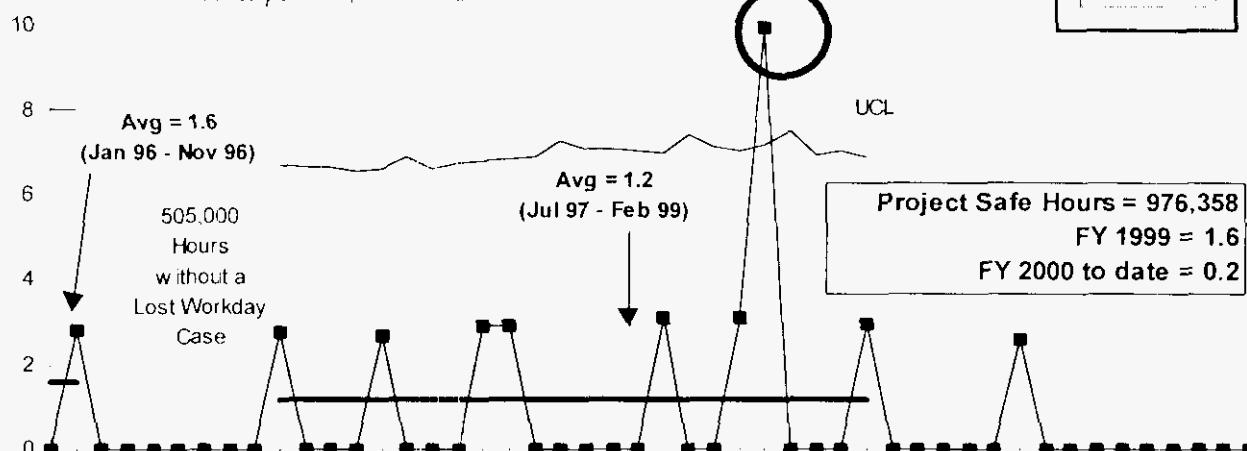
## **SAFETY**

Lost Away Workday Case Rate has had a significant decrease, with fourteen of fifteen months at zero. The current rate is exceptionally low. Occupational Safety and Health Act (OSHA) recordable case rate is stable and there have been more than 1,000,000 hours since the last OSHA recordable case. They have steadily reduced their OSHA recordable case rate through FY 1999 and FY 2000. This is a significant improvement in comparison to the adverse trend of spring 1999.

FY 2000 OSHA case rate and DOE Safety Cost Index are very favorable. DOE Safety Cost Index has been below average for eight months in a row. The Index has a new average and new control line reflecting the significant decrease noted earlier in the year.

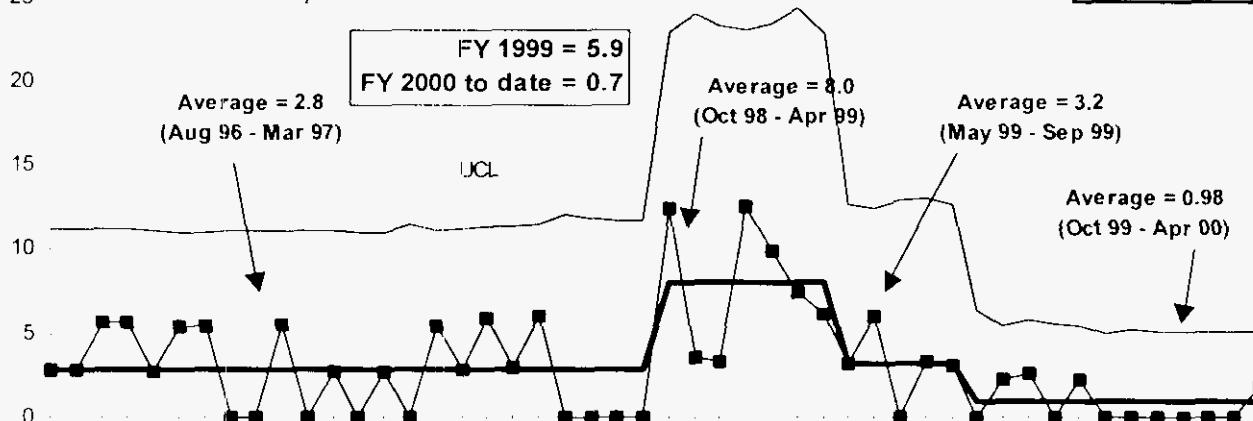
12 **Lost Away Workday Case Rate**

Cases per 200,000 hours



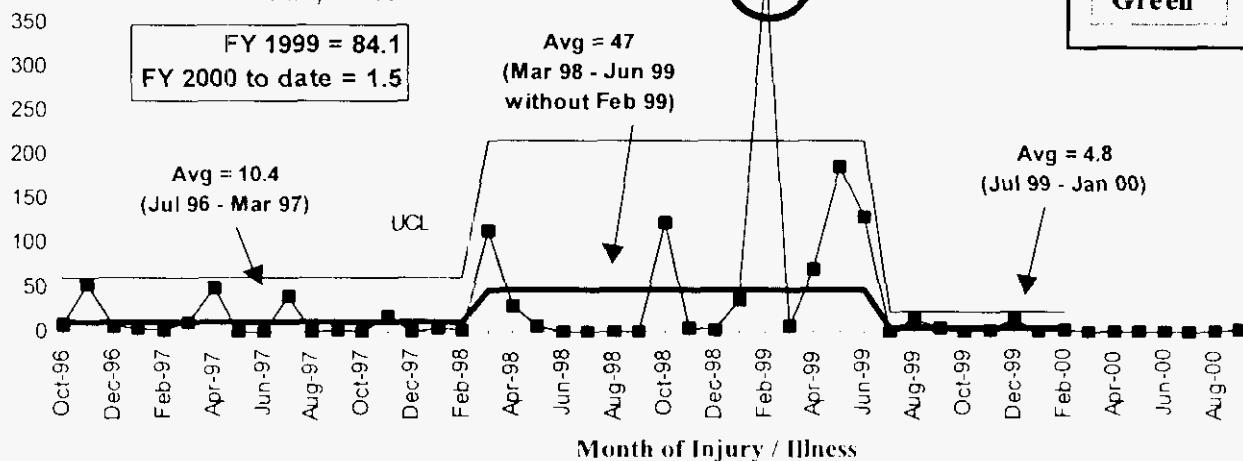
30 **OSHA Recordable Case Rate**

Cases per 200,000 hours

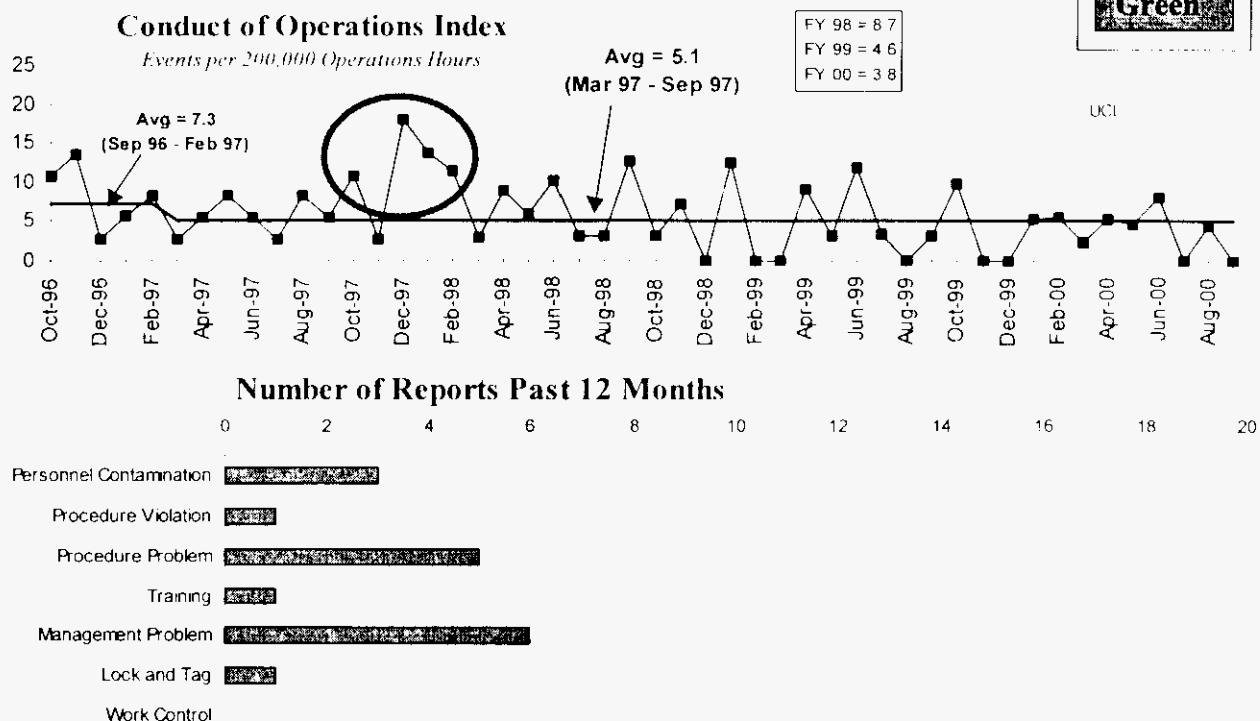


450 **DOE Safety Cost Index**

Cents per hour



## CONDUCT OF OPERATIONS / ISMS STATUS



## ISMS STATUS

Continued safety improvements at PFP through ISMS:

- Refinement of the Automated Job Hazards Assessment (AJHA) tool and increased worker involvement.
- Continued improvement in pre-job safety briefings.
- Improved field walk down of job sites.
- Improved metrics for work management and document development.

## BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

### Breakthroughs

- Facilitated an agreement with Rocky Flats Environmental Test Site to purchase Outer Cans from Vendor and replace later. This resulted in avoiding a two-month schedule delay on the Outer Can Welder (OCW).

## Opportunities for Improvement

- FH has scheduled an early November, 2000 visit to the Westinghouse Savannah River Company (WSRC) to explore further opportunities for accelerated delivery of the 2736-ZB Bagless Transfer System and the OCW. Currently these items are expected to be shipped on January 8, 2001 and February 14, 2001, respectively.
- **Exposure Reduction** – Work continues on the ability to allow multiple tasks to be completed during a single zone entry. Ergonomic investigations reduced the likelihood of using heavy lead vests to reduce exposure. Development of new shielding and monitoring equipment continues.



## UPCOMING ACTIVITIES

- Complete installation and startup of the Supercritical Fluids Extraction equipment for Loss-on-Ignition moisture measurement in the first quarter of FY 2001.
- Delivery of the 2736-ZB BTS and OCW is expected during the second quarter of FY 2001.
- Stabilization and packaging of polycubes consistent with DOE Standard DOE-STD-3013-99 is scheduled to begin in the third quarter of FY 2001.

## COST PERFORMANCE (\$M):

	BCWP	ACWP	VARIANCE
<b>Nuclear Materials Stabilization</b>	\$123.1	\$124.5	-\$1.4

The \$1.4 million (1 percent) unfavorable cost variance is below the established variance reporting threshold. This performance does not reflect the NMS portion of PBS TP-12. The overall cost variance, if TP-12 were factored in, would be a slightly favorable cost variance.

## SCHEDULE PERFORMANCE (\$M):

	BCWP	BCWS	VARIANCE
<b>Nuclear Materials Stabilization</b>	\$123.1	\$123.9	-\$0.8

The \$0.8 million (1 percent) unfavorable schedule variance is below the established variance reporting threshold.

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

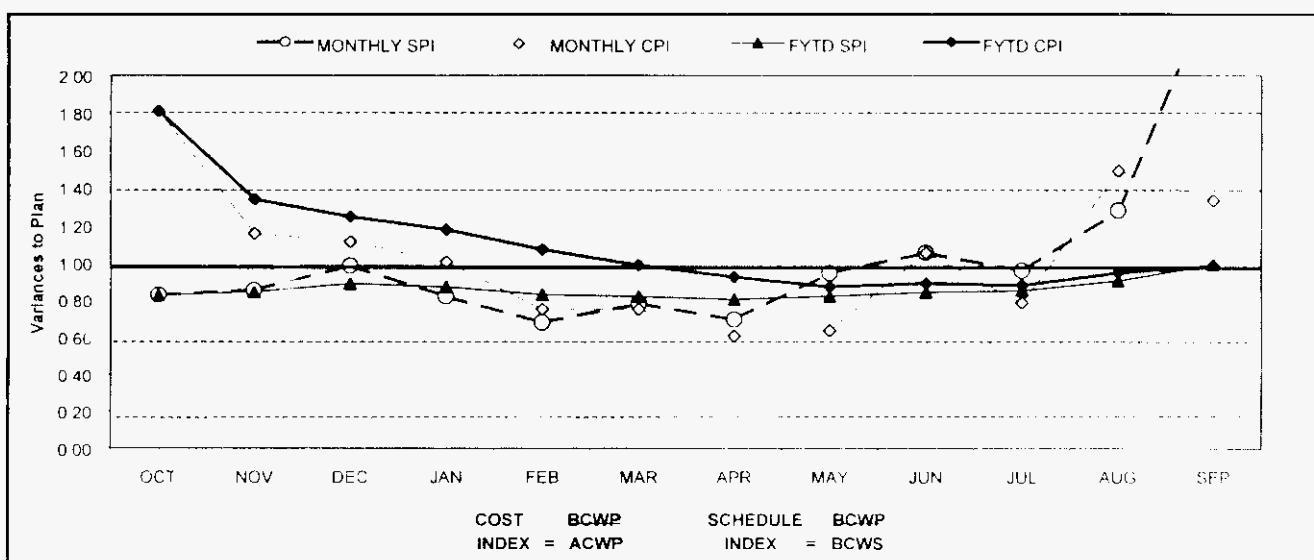
Green

		FYTD						
By PBS		BCWS	BCWP	ACWP	SV	%	CV	%
WBS 1.4.5	PPF	\$ 123,869	\$ 123,054	\$ 124,473	\$ (815)	-1%	\$ (1,419)	-1%
PBS TP05	Deactivation							
<b>Total</b>		<b>\$ 123,869</b>	<b>\$ 123,054</b>	<b>\$ 124,473</b>	<b>\$ (815)</b>	<b>-1%</b>	<b>\$ (1,419)</b>	<b>-1%</b>

Authorized baseline as per the Integrated Planning Accountability, and Budget System (IPABS) – Project Execution Module (PEM). RL-Directed Costs (steam) are included in the PEM BCWS.

**COST/SCHEDULE PERFORMANCE INDICES  
 (MONTHLY AND FYTD)**

Green



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.83	0.85	0.98	0.82	0.68	0.78	0.70	0.95	1.06	0.96	1.28	2.48
MONTHLY CPI	1.81	1.16	1.11	1.01	0.75	0.75	0.61	0.63	1.06	0.79	1.49	1.34
FYTD SPI	0.83	0.84	0.89	0.87	0.83	0.82	0.81	0.82	0.85	0.85	0.91	0.99
FYTD CPI	1.81	1.34	1.25	1.18	1.07	0.99	0.93	0.87	0.89	0.88	0.95	0.99
MONTHLY BCWS	\$7,913	\$12,725	\$9,999	\$10,540	\$11,128	\$13,401	\$9,632	\$9,999	\$9,275	\$7,978	\$11,326	\$6,854
MONTHLY BCWP	\$6,543	\$10,873	\$9,849	\$8,638	\$7,567	\$10,480	\$6,704	\$9,474	\$9,910	\$7,694	\$18,379	\$16,922
MONTHLY ACWP	\$3,613	\$9,386	\$8,845	\$8,587	\$10,085	\$13,961	\$10,988	\$14,876	\$9,283	\$9,783	\$12,335	\$12,711
FYTD BCWS	\$7,913	\$20,638	\$30,637	\$41,177	\$52,305	\$65,706	\$25,348	\$85,336	\$94,711	\$102,690	\$117,015	\$123,869
FYTD BCWP	\$6,543	\$17,416	\$27,265	\$35,203	\$43,470	\$53,950	\$60,654	\$70,128	\$80,038	\$87,702	\$106,082	\$123,054
FYTD ACWP	\$3,613	\$14,090	\$21,844	\$30,431	\$40,516	\$51,477	\$65,465	\$80,292	\$89,675	\$99,427	\$111,762	\$123,473

## **COST VARIANCE ANALYSIS: (-\$1.4M)**

### **WBS/PBS**      **Title**

#### **1.4.5.1.13/TP05      Stabilization of Nuclear Materials (-\$3.3M)**

**Description and Cause:** The unfavorable cost variance is due to additional resources required to support incremental design and installation workscope associated with the Mg(OH)<sub>2</sub> project that was not in the original basis of estimate.

**Impact:** Delays in completion of construction activities have occurred but were remediated through judicious use of supplemental staff.

**Corrective Action:** No corrective action necessary. Construction has been completed and startup operation of this process was initiated September 20, 2000. This variance is offset by under runs in Project Integration & Business Management (IP-012), positive credit variances (passbacks), fee allocation, and efficiencies in Safeguards & Security of nuclear material.

## **SCHEDULE VARIANCE ANALYSIS: (- \$0.8M)**

### **WBS/PBS**      **Title**

#### **1.4.5.1.14/TP05      Disposition of Nuclear Material (-\$1.5M)**

**Description and Cause:** The unfavorable schedule variance is primarily due to delays in obtaining NOC approval from the Washington Department of Health for 2736-ZB facility construction modifications required to support installation of the second Bagless Transfer System.

**Impact:** A potential delay is possible in the startup of the 2736-ZB BTS that may impact stabilization objectives in FY 2001.

**Corrective Action:** Peripheral 2736-ZB construction activities and continued discussions to accelerate BTS delivery with fabricator WSRC are expected to at least partially mitigate this variance. This schedule variance is offset by the FY 2000 record setting performance in thermal stabilization.

**FUNDS MANAGEMENT**  
**FUNDS VS ACTUALS (\$000)**  
**FY TO DATE THROUGH SEPTEMBER 2000**  
**(FLUOR HANFORD, INC. ONLY)**

	Project Completion *			Post 2006 *			Line Items *		
	Expected Funds	FYSF	Variance	Expected Funds	FYSF	Variance	Expected Funds	FYSF	Variance
<b>The Plateau</b>									
145 Nuclear Materials Stabilization TP05 Operating Line Item	115,637	113,770	1,867						
<b>Total Nuclear Mat. Stab. Operating</b>	<b>\$ 115,637</b>	<b>\$ 113,770</b>	<b>\$ 1,867</b>						
<b>Total Nuclear Mat. Stab. Line Item</b>							<b>\$ 18,178</b>	<b>\$ 11,383</b>	<b>\$ 6,795</b>

\* Control Point

## ISSUES

### Technical Issues

Nothing to report at this time.

### DOE/Regulator/External Issues

Nothing to report at this time.

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

PROJECT CHANGE NUMBER	DATE ORIGIN.	BASELINE CHANGE REQUEST TITLE	COST IMPACT \$'000	S C H	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
FSP-2000-001	13-Oct-99	Delete TRP-99-419: Complete Install of Production Scale Vertical Calorimeter	\$0		Canceled			On Hold
FSP-2000-043	1-May-00	Video Control Camera	\$67	X X		Deferred to FY 2001		On hold due to budget constraints
FSP-2000-045	30-Nov-99	Realign PFP De-Inventory SNM Shipments (Addendum I Revisions)	\$0	X X	13-Sep-00	13-Sep-00	29-Sep-00	Complete
FSP-2000-050	8-Jun-00	Project W-460: Procure Calorimeters/Outer Can Welder	<\$1,640>	X X	16-Jun-00	31-Aug-00	29-Sep-00	Complete
FSP-2000-051	15-Jun-00	HEPA Filter Vulnerability Assessment	\$38	X X		Cancelled		
FSP-2000-053	1-May-00	Backflow Preventers	\$0	X X	31-Jul-00	2-Aug-00	22-Aug-00	Complete
FSP-2000-061	13-Jul-00	Badgehouse X-ray Machine	\$400	X X	31-Jul-00	31-Aug-00	N/A	Complete
FSP-2000-063	17-Jul-00	Rebaseline Project W-460	<\$5,456>	X X	7-Sep-00	7-Sep-00	29-Sep-00	Complete
FSP-2000-069	20-Jul-00	Rebaseline TP 12: Transition Project Management (life cycle)	TBD	X X		Deferred to FY 2001 with Phase II		In work
FSP-2000-062	20-Jul-00	PFP Residue Stabilization FY00 Rebaseline	<\$343>	X X	13-Sep-00	13-Sep-00	In Work with RL	In work
FSP-2000-074	20-Jul-00	Rebaseline PFP Polycube Stabilization	<\$612>	X X	13-Sep-00	13-Sep-00	29-Sep-00	Complete
FSP-2000-079	15-Aug-00	FY 2001 MYWP & Baseline Revisions	\$0	X X	29-Aug-00	31-Aug-00	At RL	Approved 26-Oct-00
FSP-2000-088	21-Sep-00	Mg(OH)2 Precipitation Workscope Increases	\$1,672	X	28-Sep-00	14-Sep-00	29-Sep-00	Complete
FH-2001-001	12-Sep-00	Base Ops Reduction for PHMC Projects	(\$6,790)	X			At RL	Draft Prepared
FH-2001-002	25-Sep-00	FY2001 Fee Reduction to 90%	(\$600)					Draft Prepared
FH-2001-003	25-Sep-00	FY2001 Addition of High Priority Workscope	\$9,707	X				Draft Prepared
<b>ADVANCED WORK AUTHORIZATION</b>								
AWA-01-001		Tanks 241-Z-361 Incremental Work	\$250	X X	10-Oct-00	10-Oct-00	18-Oct-00	Complete
AWA-01-002		PFP Parking Lot Enhancements	\$150	X X				

## 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	1	0	0	0	0	0	2
DOE-HQ	0	0	0	1	0	0	0	1
RL	5	0	4	1	0	0	0	10
<b>Total Project</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>

Only TPA/EA milestones and all FY2000 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY2000 TPA/EA milestone achievement and a Milestone Exception Report follows.

Tri-Party Agreement / EA Milestones	
Tri-Party Agreement Milestone M-15-37A (TRP-00-501), "Deliver Two (2) Tank Z-241-Z-361 Core Samples to 222-S", due 10/30/99	
• Completed 1 month early (9/28/99)	
Tri-Party Agreement Milestone M-015-37B (TRP-00-511), "Deliver Core Sample Data Packages for Tank 241-Z-361 Disp", due 5/31/00	
• Completed On Schedule	
DNFSB Commitments	
DNFSB Milestone IP-113 (TRP-00-500), "Install 2 LANL Pyrolysis Units for Stabilization of Polycubes at PFP", due 12/31/99	
• The Defense Nuclear Facility Safety Board (DNFSB) 2000-1 Implementation Plan update deletes this milestone in favor of stabilization via muffle furnaces.	

## MILESTONE EXCEPTION REPORT

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

### OVERDUE – 2

**TRP-00-500 HQ 1.4.5** Install Two Los Alamos National Laboratory (LANL) Pyrolysis Units for Stabilization of Polycubes  
**Cause:** See DNFSB Commitment above.  
**Corrective Action:** Baseline Change Request (BCR) FSP-2000-074 was approved on September 29 and authorizes removal of pyrolysis stabilization of polycubes and implements thermal stabilization in its stead has been approved by RL and implemented into the baseline.

**TRP-00-504 RL 1.4.5** Restart Cementation Operations  
**Cause:** Stabilization processing has been re-sequenced. Startup of the Pipe-N-Go process packaged 29 Kg bulk residue (Rocky Flats Ash) in FY 2000. This milestone has been cancelled via BCR FSP-2000-079.  
**Corrective Action:** None, as the global stabilization end point will remain the same.

### FY 1999 OVERDUE – 2

**TRP-99-419 RL 1.4.5** Complete Installation of Production Scale Vertical Calciner  
**Cause:** The production scale vertical calciner has been replaced with the Magnesium Hydroxide Precipitation process.  
**Impact:** No impact. This milestone is obsolete.  
**Corrective Action:** Since installation and testing of the production scale vertical calciner is an EM-65 Management Commitment; the RL change control process cannot remove this milestone. Solution stabilization began on September 20, 2000.

**PHMC Environmental Management Performance Report – November 2000**  
**Section C: I – Nuclear Materials Stabilization**

**TRP-99-500 HQ** Complete Installation & Testing of  
**1.4.5** Production Vertical Calciner

09/30/99 Deleted

**Cause:** The production scale vertical calciner has been replaced with the Magnesium Hydroxide Precipitation process.

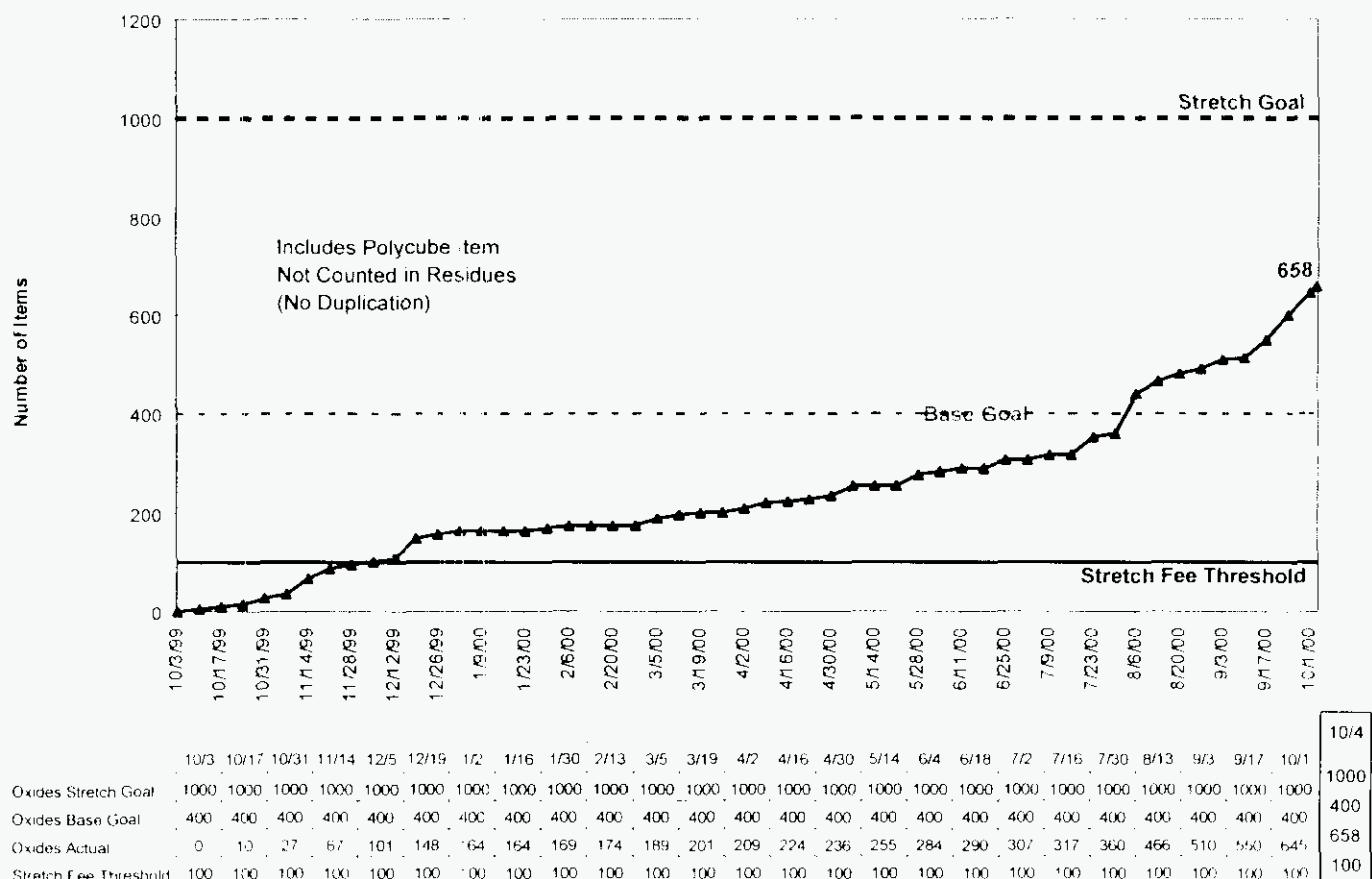
**Impact:** No impact. This milestone is obsolete.

**Corrective Action:** The Defense Nuclear Facility Safety Board (DNFSB) 2000-1 Implementation

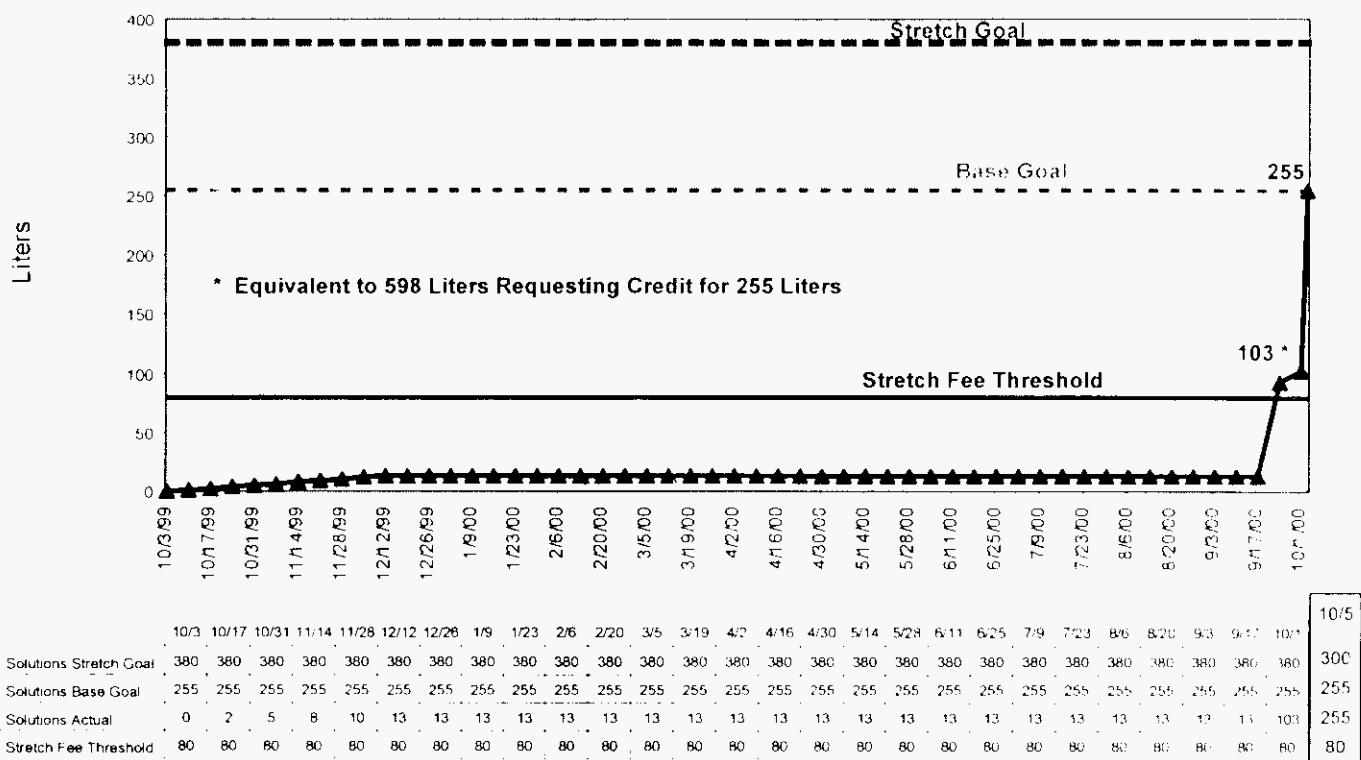
Plan update deletes this milestone.

## PERFORMANCE OBJECTIVES

### Oxides/Metals/Polycubes Stabilization

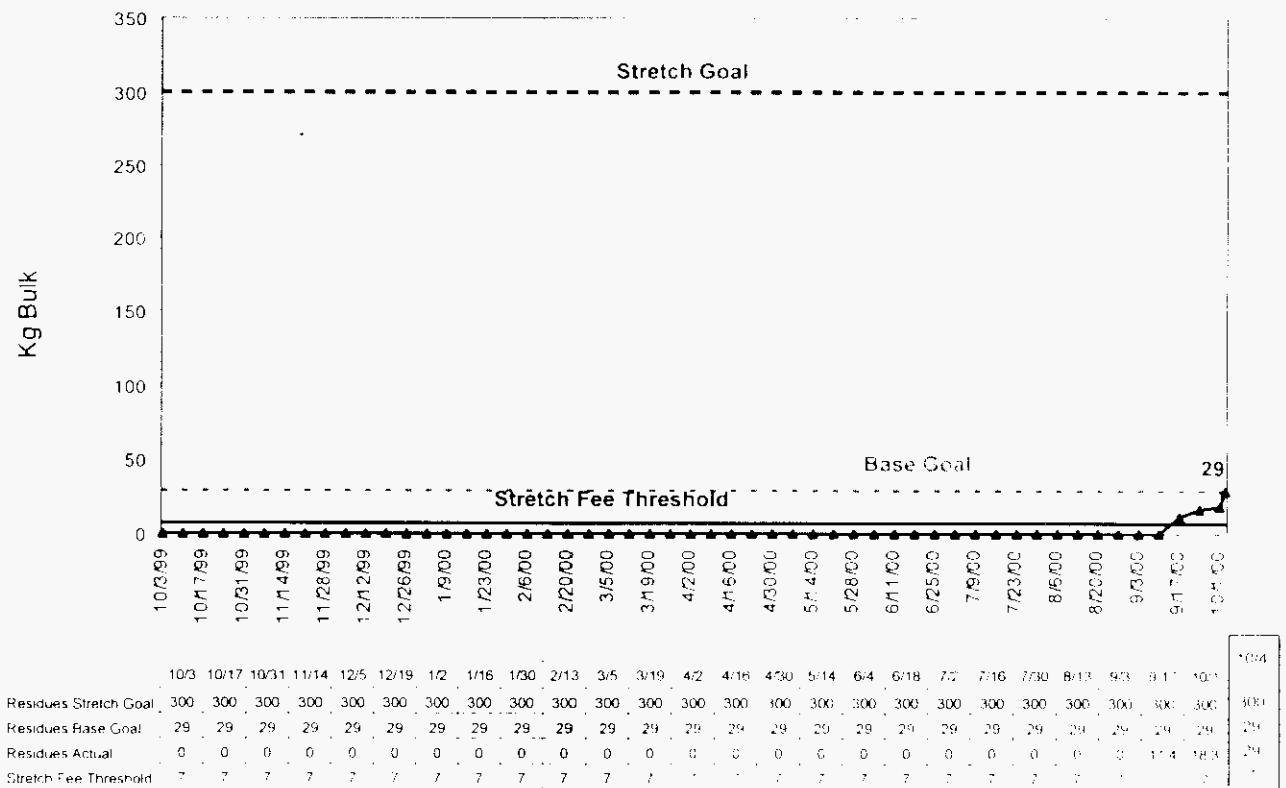


## Solution Stabilization



Operation of the Mg(OH)<sub>2</sub> process began September 20, 2000, and met the stretch goal gateway criteria.

## Residues Stabilization

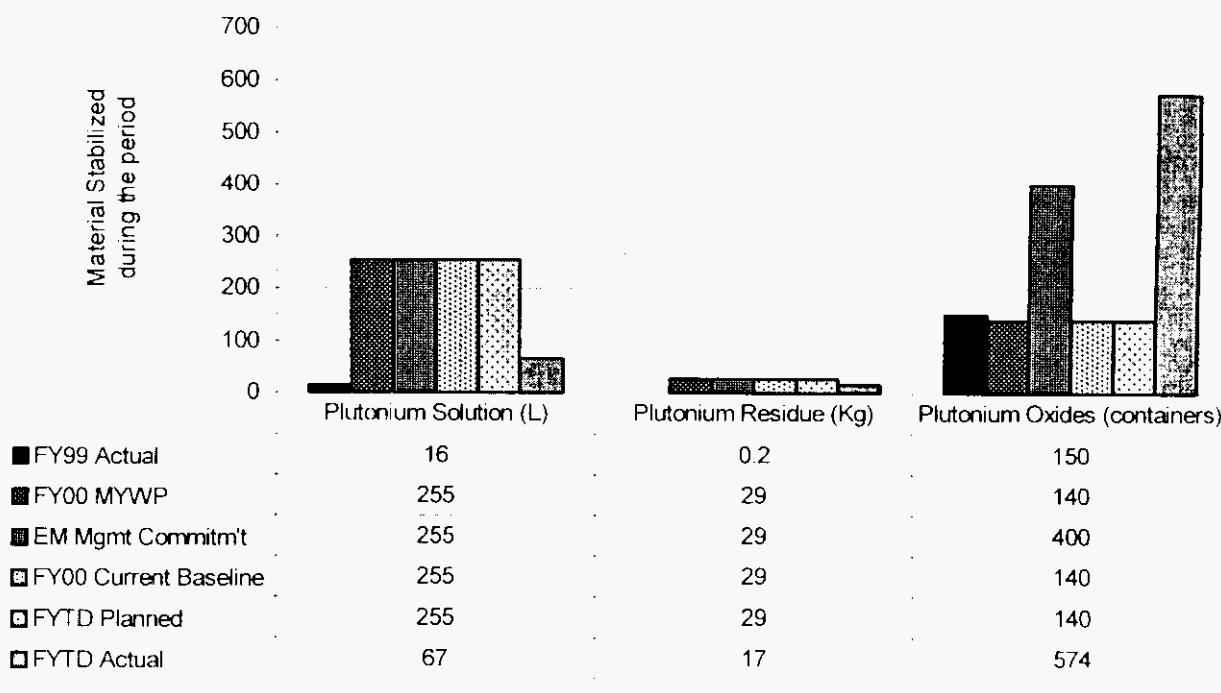


Repackaging of plutonium-bearing residues began September 11, 2000, and met the base goal target.

## KEY INTEGRATION ACTIVITIES

- Continued support to the Central Waste Complex in completing activities necessary to allow acceptance of packaged residues. This support included security upgrades and issuance of Criticality Safety Evaluation (CSER) and SARP documentation.
- FH has scheduled an early November 2000 visit to the WSRC to explore further opportunities for accelerated delivery of the 2736-ZB BTS and the OCW. Currently, these items are expected to be shipped on January 8, 2001, and February 14, 2001, respectively.

## NUCLEAR MATERIALS STABILIZED DURING THE CURRENT PERIOD

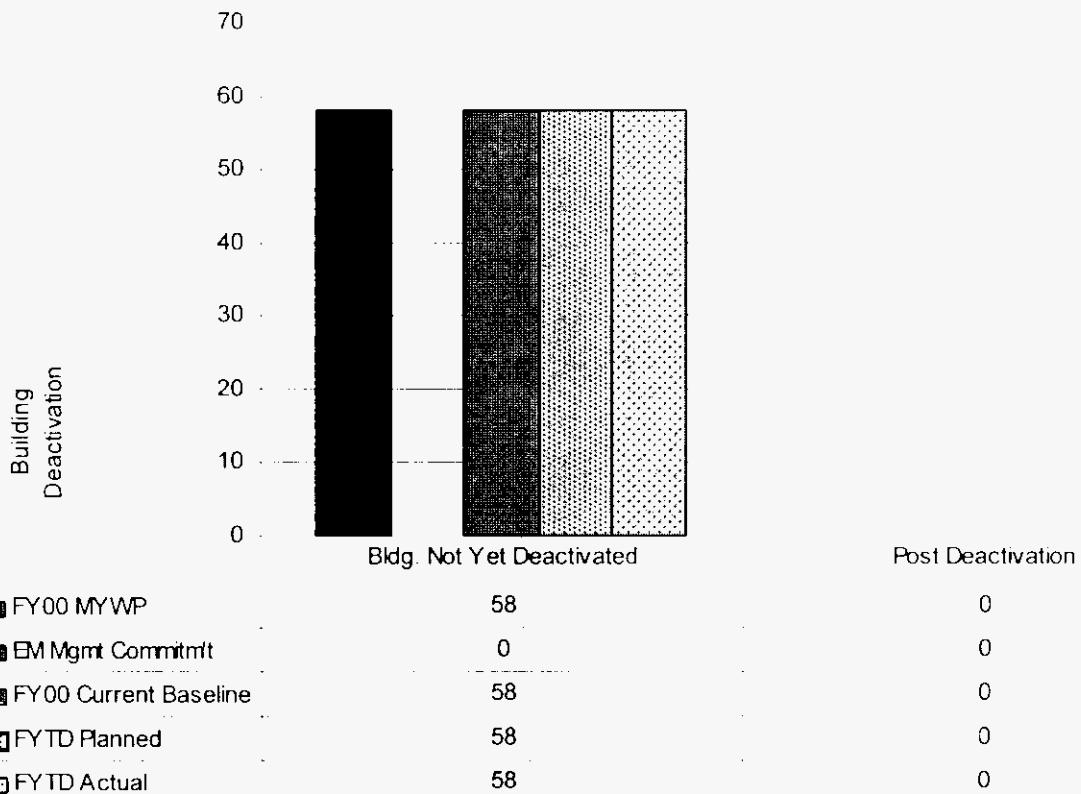


**Plutonium Solution:** Implementation of the Mg(OH)<sub>2</sub> process was 9 weeks later than planned resulting in less processing.

**Plutonium Residue:** Repackage of plutonium resides was initiated 8 weeks late after PFP implemented a pipe-n-go process method.

**Plutonium Oxides:** Approval of EIS via supplement analysis increasing charge size of furnaces by a factor of 4 and increasing the number of furnaces from 2 to 5 has allowed the actual stabilization to proceed faster than planned. In addition, metal/oxide stabilization was extended thru the fourth quarter as stabilizing the other forms of plutonium were implemented later than planned.

## BUILDING DEACTIVATION



**Buildings Not Yet Deactivated:** Deactivation of buildings will not begin until FY2009 as documented in the Integrated Project Management Plan for the River Corridor

**Post Deactivation:** There are no buildings in post deactivation.



## **The River**

Restoring the river corridor is one of the outcomes Hanford must focus on to move forward with cleanup. The PHMC supports this outcome with activities such as moving the spent nuclear fuel, cleaning up the waste sites, and taking down surplus facilities. Projects supporting this effort are Facility Stabilization (River Corridor), Spent Nuclear Fuel, and Science & Technology (EM-50) activities.



## **Section C:2**

### *River Corridor*

**PROJECT MANAGERS**  
P.M. Knollmeyer, RL  
(509) 376-7435

N. Boyter, FH  
(509) 373-3725

## **SUMMARY**

The River Corridor Project consists of the following projects: 300 Area Liquid Effluent Facility (LEF) WBS 1.2.3.2, Project Baseline Summary (PBS) WM05; B-Plant, WBS 1.4.1, PBS TP01; 300 Area/Special Nuclear Materials, WBS 1.4.4, PBS TP04; Transition Project Management, WBS 1.4.6, PBS TP12; Accelerated Deactivation, WBS 1.4.8, PBS TP10; 324/327 Facility Transition, WBS 1.4.10, PBS TP08; and Hanford Surplus Facility Program (300 Area Revitalization), WBS 1.4.11, PBS TP14.

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 incorporated in their baseline.

NOTE: Unless otherwise noted, all information is as of September 30, 2000.

### **Top 5 Accomplishments for FY 2000**

All 184 T-hoppers containing approximately 667 metric tons of low-enriched uranium in the form of uranium trioxide powder were shipped to the DOE Portsmouth site in Ohio by September 28, 2000, an accelerated target date (Completion and Removal).

Key 327 Building cleanup accelerated from the out years was accomplished during FY 2000. These activities included packaging and shipping 32.5 m<sup>3</sup> of bulk waste (exceeding the fiscal-year target), packaging and shipping 103 legacy waste buckets to compliant storage (28 more than planned); and packaging and shipping to the 200 Areas Waste Complex 90 percent of the 297 sample cans of radioactive materials from dry storage. All eight fuel pins were packaged and shipped; cleanout of H Cell was completed; and all accountable fissile material in hot cells was packaged and shipped (Momentum).

324 B Cell Cleanout - Milestone RI, TRP-99-936, "2A Rack Removal and Size Reduction...." was completed three weeks early, and RI, Milestone TRP-99-907, "1A 3-82B Cask Shipments...." was completed seven days early, with all 17 grout containers scheduled for this year shipped (Momentum).

On June 30, 2000 the 300 Area Accelerated Closure Project Plan was submitted to RI. The submittal completed the deliverable to develop an innovative and integrated plan, schedule, and cost estimate for the accelerated closure of a significant portion of the 300 Area (Momentum).

Over 57 million gallons of wastewater were treated at the 300 Area Treated Effluent Disposal Facility (TEDF) (Progress).

## **Additional FY 2000 Accomplishments**

### **Momentum**

River Corridor Project and COGEMA Engineering worked together on the design and procurement of a robotic crawler to be used for the cleanup of the 324 Building. Hot-cell technicians will use the crawler, which has a light duty arm and vacuum system, to collect material from the sump, trench and floor of B Cell. There were no existing tools able to complete the task. The versatility for multiple tool deployment allows access to hard-to-reach areas within the cell.

### **Progress**

The RCP has worked an estimated 1,308,000 safe hours since the last lost time injury.

The Fuel Supply Shutdown Waste Acid Treatment System (WATS) Resource Conservation and Recovery Act of 1976 (RCRA) Closure Project was selected as the Project Management Institute's Regional Project of the Year award winner at the Awards Banquet on March 15, 2000.

Two steel waste disposal boxes containing mixed waste were shipped to the Central Waste Complex (CWC) in support of Tri-Party Agreement Interim Milestone M-89-02, 2000, "Complete removal of 324 Building Radiochemical Engineering Cell (REC) B Cell Mixed Waste (MW) and Equipment," due November 30. The 324 staff successfully shipped 80 of 88 backlog low-level waste drums, and completed lead shield plug size reduction and packaging.

A biological clean-up procedure for 200 Area Accelerated Deactivation Project was cited as a major strength by ISMS assessors, and as a positive observation per RL surveillance.

Additionally, installation of the second backflow preventor at 231-Z Facility was completed one month ahead of schedule.

The 300 Area Liquid Effluent Facility received and processed eleven 33-gallon drums of sodium hydroxide, which resulted in avoidance of a \$31.6K disposal cost. Additionally, eight 55-gallon drums of sulfuric acid were unloaded into the 310 Facility sulfuric acid storage tank. This acid was excess product from the 200 Area Effluent Treatment Facility. Use of the excess acid will eliminate the need for disposal of the product as hazardous waste and result in a cost avoidance of \$112.7K.

### **Completion and Removal**

B Plant closeout activities were completed 10 days ahead of the Washington Department Of Health (WDOH) due date of July 28, 2000. Bechtel Hanford, Inc. assumed full responsibility for surveillance and maintenance of B Plant and the associated ventilation system on August 9.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, and RL) shows that four of five milestones (80 percent) were completed on or ahead of schedule and one milestone is overdue. The Milestone Achievement details, found following cost and schedule variance analysis, provide further information on all milestone types.

## **ACCOMPLISHMENTS THIS REPORTING PERIOD**

- For the month of September the 327 Building personnel shipped an additional 12 lead-lined drums and 9 concrete-lined drums to the Central Waste Complex. One box of bulk waste was shipped to the burial grounds, 63 legacy waste buckets and 240 grams of Dry Storage/Metallurgical Mount fissile material was shipped to compliant storage, and the cleanout of H Cell was completed.
- The Uranium Disposition Project (TP-14) completed shipment of 36 T-hoppers to the DOE Portsmouth site in Ohio this reporting period. Additionally, 200 Area personnel recovered approximately \$100K worth of scaffolding materials from PUREX for reuse.
- The 300 Area Treated Effluent Disposal Facility treated 5.2M gallons of wastewater for the month of September. In addition, the Process Sewer cleanout and the precipitation testing process were completed.
- The 324 Building personnel loaded out and shipped the first two steel waste disposal boxes, replaced HEPA filters, replaced oil in 23 Hot Cell windows, and completed size reduction of rectangular grout container-3. In addition, grout container-120 was dose profiled and transferred to A Cell.

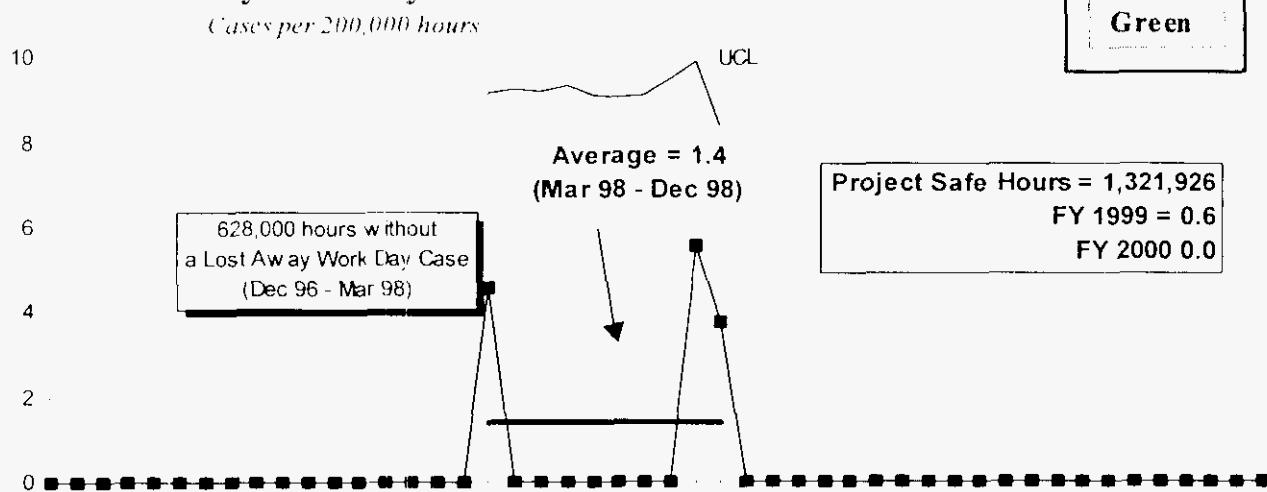
## **SAFETY**

The project has exceeded 1,321,926 hours without a Lost Away Work Day Case (21 months, since January, 1999).

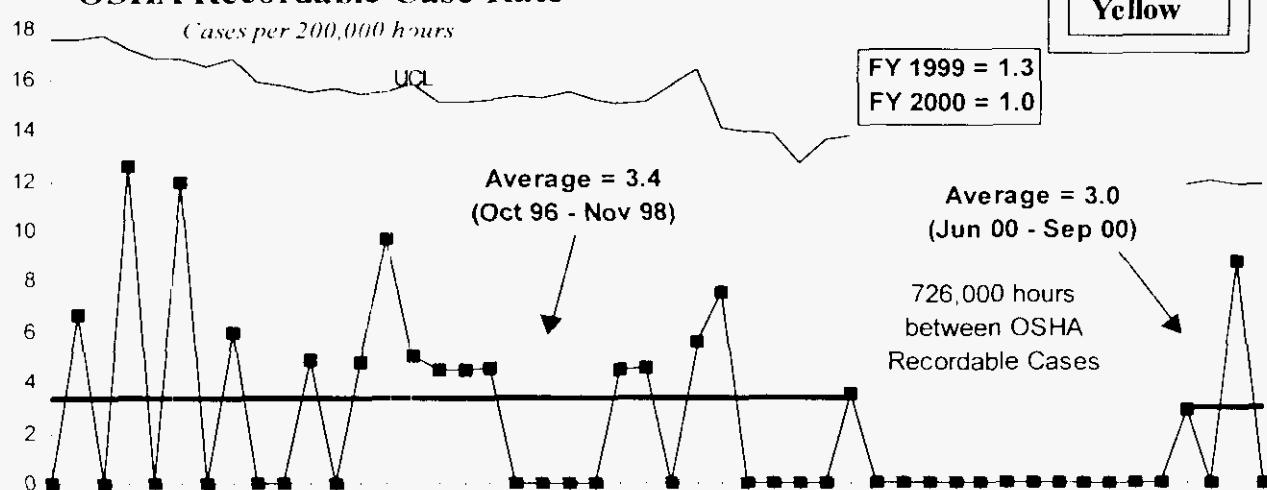
As of September, four OSHA recordable cases were recorded, breaking the run of no OSHA recordable cases since May 1999. One case was a report from June 1999 that reclassified to OSHA recordable, and three new cases in August. Although the OSHA recordable case rate is still low, the sudden arrival of four cases after such a long lull in injuries should be examined to see if it is an adverse trend.

There were also four first aid cases in September, a relatively high number for RCP. The project had 726,000 hours from August 1999 through July 2000 between OSHA Recordable Cases. The project has an overall green rating.

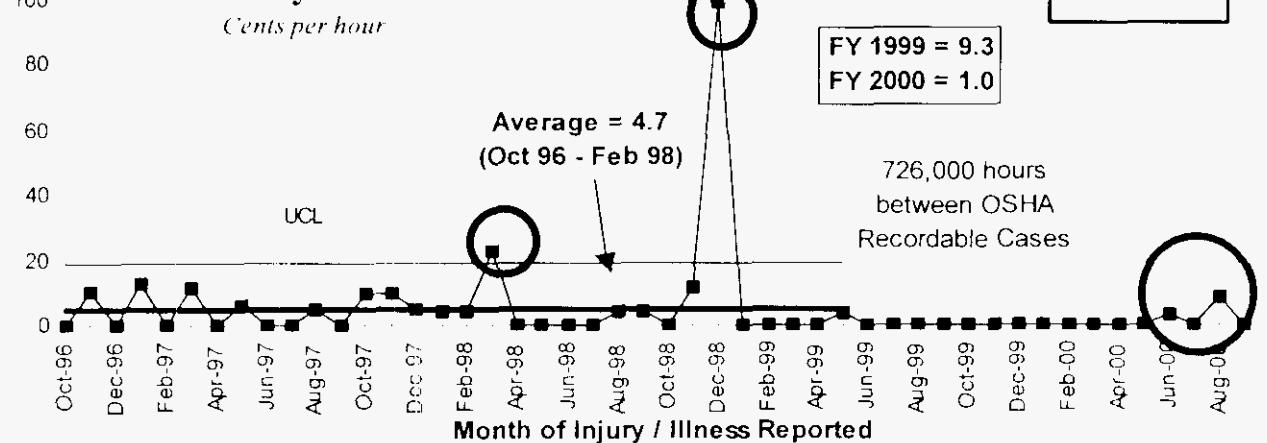
## 12 Lost Away Workday Case Rate



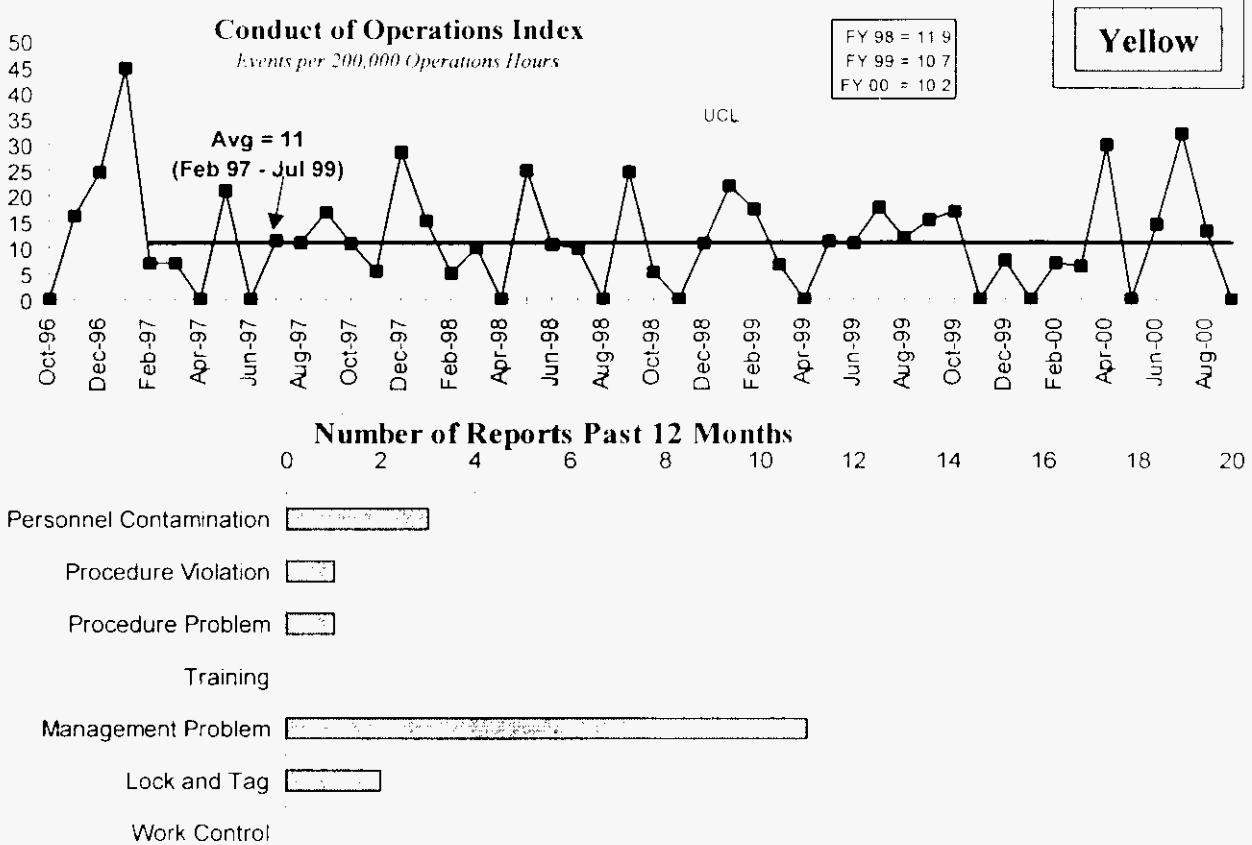
## 20 OSHA Recordable Case Rate



## 100 DOE Safety Cost Index



## CONDUCT OF OPERATIONS / ISMS STATUS



Analyzing occurrence reports to determine contributing factors and subsequent appropriate action(s) to address the number of Management Problems reported.

## ISMS STATUS

Green

- ISMS Internal Readiness Review (IRR) completed.
- Phase I Verification successfully completed April 28, 2000.
- Declared Readiness for ISMS Phase II Verification May 2, 2000.
- ISMS Phase II Verification successfully completed July 13, 2000.
- Hazard Analysis Management Assessment completed; Lessons Learned developed.

## BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

### Breakthroughs

- **Savings Through Alternative Disposition Strategy** - Final disposition of Unirradiated Uranium fuel elements to low-level waste burial grounds vs. packaging and transportation to Portsmouth, Ohio for interim storage will save in excess of \$1 million. Yellow
- **300 Area Accelerated Closure Plan** - Based on the preparation of the 300 Area Accelerated Closure Plan an opportunity exists to accelerate closure of a significant portion of the 300 Area nearly four decades ahead of the current deactivation plan for an estimated savings of over \$1.0 billion. Provided basis for new “Done-in-a-Decade” closure project. Green

### Opportunities for Improvement

- **324 Project Planning / Execution** — An emphasis on improved schedule management to ensure that critical path negative float is recovered to positive float continues. Although two steel waste disposal boxes (SWDBs) were successfully shipped in FY 2000, the Tri-Party Agreement Milestone M-89-02 (due November 30, 2000) critical path schedule now reflects a 21-day negative float for shipment of the remaining SWDBs. Higher than anticipated SWDB bottom plate doses have added additional work scope to the schedule. Yellow
- **327 Building Conduct of Operations** — Deactivation project work activities were temporarily curtailed by the facility management to focus efforts on procedure upgrades and Conduct of Operation concerns. After a five-week effort, two months of successful deactivation work was initiated utilizing the new procedures. Senior management reviewed the daily work planning and work evolutions in the facility for areas of continued improvement. Significant facility cleanup progress was made during the last two months of the fiscal year as a result of the management action taken. Green

## UPCOMING ACTIVITIES

- **TPA Milestone M-89-02** — Complete Removal of 324 Building Radiochemical Engineering Cell (REC) B Cell Mixed Waste (MW) and Equipment. Delays incurred by higher than assumed dose readings for the SWDBs, recently identified operational issues, and emerging issues; e.g., 30-ton crane repair, indicates the work to complete the milestone will not finish until beyond the November 30, 2000 milestone date. A plan for completing the remaining scope is in development. Finalization of the plan will be done in conjunction with DOE and the Department of Ecology.
- **Facility Evaluation Board Review** — Complete Facility Evaluation Board review during first quarter of FY 2000.

- **324/327 Authorization Basis** — Implement technical update of 324 Authorization Basis (Safety Analysis Report) by mid-December, 2000 and implement technical update of 327 Authorization Basis (Basis of Interim Operation) by March 2001.
- **Uranium Disposition** — Complete shipment of approximately 235 metric tons of excess uranium billets and approximately 5 metric tons of uranium dioxide to the DOE Portsmouth site in Ohio by March 31, 2001 and disposition approximately 140 metric tons of surface contaminated uranium fuel by June 30, 2001.
- **324 B Cell Cleanup** — Complete shipment of B Cell waste currently stored in A Cell to the 200 Areas by July 31, 2001.

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

	BCWP	ACWP	VARIANCE
<b>River Corridor Project</b>	\$60.5	\$51.9	\$8.6

The \$8.6 million (14 percent) favorable cost variance is primarily from underruns in min safe 324 and 327 budgets and the Fluor Project Management Team re-structuring. Further information at the PBS level can be found in the following Cost Variance Analysis details.

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

	BCWP	BCWS	VARIANCE
<b>River Corridor Project</b>	\$60.5	\$58.1	\$2.4

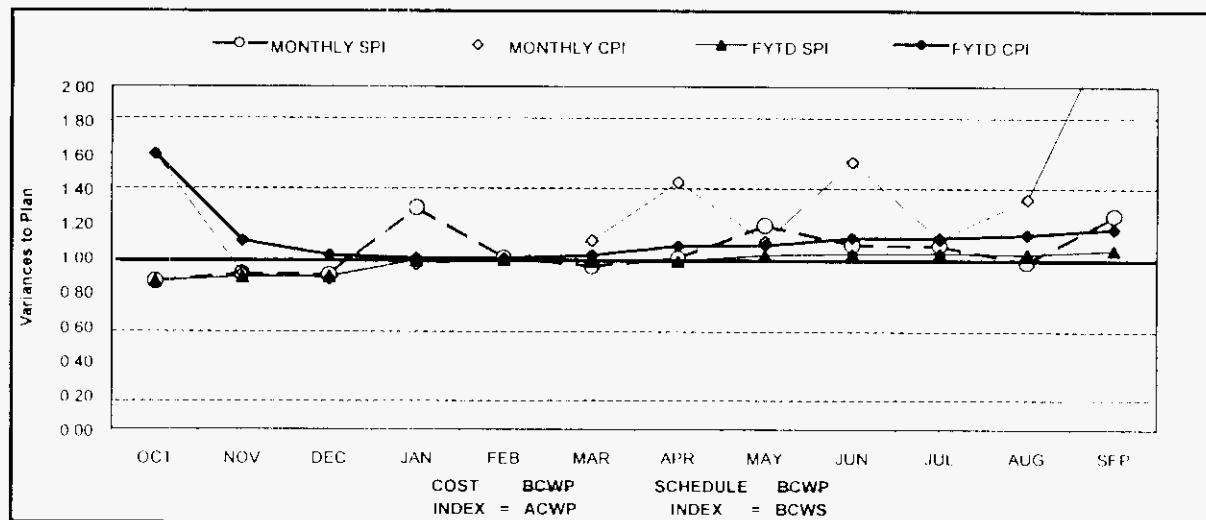
The \$2.4 million (4 percent) favorable schedule variance is within the established threshold. Further information at the PBS level can be found in the following Schedule Variance Analysis details.

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

		FYTD							
By PBS		BCWS	BCWP	ACWP	SV	%	CV	%	
PBS TP01	B-Plant	\$ 460	460	\$ 575	\$ 0	0%	\$ (115)	0%	
WBS 1.4.1									
PBS TP04	300 Area/ Special Nuclear Materials	\$ 3,278	\$ 3,252	\$ 2,876	\$ (26)	-1%	\$ 376	12%	
WBS 1.4.4									
PBS TP12	Transition Program Management	\$ 16,708	\$ 16,707	\$ 13,065	\$ (2)	0%	\$ 3,642	22%	
WBS 1.4.6									
PBS TP10	Accelerated Deactivation	\$ 2,123	\$ 2,123	\$ 2,023	\$ (0)	0%	\$ 100	5%	
WBS 1.4.8									
PBS TP08	324/327 Facility Transition	\$ 34,798	\$ 37,249	\$ 32,804	\$ 2,451	7%	\$ 4,445	12%	
WBS 1.4.10									
PBS TP14	Hanford Surplus Facility Program (300Area Revitalization)	\$ 708	\$ 696	\$ 543	\$ (12)	-2%	\$ 153	22%	
WBS 1.4.11									
<b>Total</b>		<b>\$ 58,076</b>	<b>\$ 60,486</b>	<b>\$ 51,886</b>	<b>\$ 2,411</b>	<b>4%</b>	<b>\$ 8,600</b>	<b>14%</b>	

Notes: RL-Directed costs (steam and laundry) are included in the PEM BCWS. Transition Project Management includes NMS portion of TP12. 310 TEDF/340 Facility performance data is reported under PBS WM05 (Waste Management).

**COST/SCHEDULE PERFORMANCE INDICES  
 (MONTHLY AND FYTD)**



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.86	1.90	0.39	1.29	1.00	0.94	0.99	1.19	1.07	1.07	0.97	1.24
MONTHLY CPI	1.60	0.90	0.37	0.96	0.98	1.10	1.44	1.09	1.56	1.11	1.34	2.42
FYTD SPI	0.86	1.88	0.39	0.98	0.98	0.97	0.98	1.01	1.02	1.02	1.02	1.04
FYTD CPI	1.60	1.10	1.01	0.99	0.99	1.01	1.07	1.02	1.11	1.11	1.13	1.77
MONTHLY BCWS	\$1,649	\$5,158	\$4,089	\$1,855	\$4,296	\$5,986	\$5,233	\$6,651	\$5,259	\$4,304	\$5,736	\$5,838
MONTHLY BCWP	\$3,131	\$4,646	\$3,654	\$4,973	\$4,270	\$5,635	\$5,398	\$7,894	\$5,644	\$4,601	\$5,545	\$7,261
MONTHLY ACWP	\$1,954	\$5,141	\$4,195	\$5,206	\$4,337	\$5,135	\$3,750	\$7,221	\$3,626	\$4,161	\$4,136	\$3,005
FYTD BCWS	\$3,649	\$8,807	\$12,896	\$16,751	\$21,041	\$27,021	\$32,354	\$39,105	\$44,364	\$48,068	\$54,404	\$58,026
FYTD BCWP	\$3,131	\$7,772	\$11,431	\$16,404	\$20,674	\$26,309	\$31,707	\$39,601	\$45,245	\$49,846	\$55,991	\$60,486
FYTD ACWP	\$1,954	\$7,095	\$11,290	\$16,496	\$20,853	\$25,988	\$29,738	\$36,958	\$40,584	\$44,745	\$48,880	\$51,886

NOTE: September Monthly CPI reflects approved BCR, which transferred 300 Area Closure Plan from PBS TP14 to PBS 0101.

## **COST VARIANCE ANALYSIS: (+ \$8.6M)**

### **WBS/PBS**

### **Title**

#### **1.4.4/TP04 300 Area SNM**

**Description and Cause:** The favorable cost variance is primarily due to lower than planned S&M costs due to personnel working on other priority work related to Uranium Disposition. In addition, a favorable passback contributed to the variance.

**Impact:** None.

**Corrective Action:** Any underruns in funding were utilized to support super stretch activities and emerging work scope.

#### **1.4.10/TP08 324/327 Facility Transition**

**Description and Cause:** The favorable cost variance is from underruns in min safe 324 and 327 budgets and through work scope deletions and efficiencies.

**Impact:** None. Out year work scope was completed ahead of schedule.

**Corrective Action:** None.

#### **1.4.6/TP12 Transition Project Management**

**Description and Cause:** The favorable cost variance is primarily due to the Fluor Project Management Team re-structuring, which has mapped personnel from the sub-project to other sub-projects (i.e. Nuclear Material Stabilization), resulting in underruns in labor and contractor support.

**Impact:** None.

**Corrective Action:** None.

#### **1.4.11/TP14 HSFP 300 Area Revitalization**

**Description and Cause:** The favorable cost variance is primarily due to the receipt of favorable passbacks.

**Impact:** No impact.

**Corrective Action:** Any underruns in funding were utilized to support super stretch activities and emerging work scope.

All other PBS variances are within established thresholds.

## **SCHEDULE VARIANCE ANALYSIS: (\$2.4M)**

All PBS variances are within established thresholds.

**FUNDS MANAGEMENT**  
**FUNDS VS SPENDING FORECAST (\$000)**  
**FY TO DATE THROUGH SEPTEMBER 2000**  
**(FLUOR HANFORD, INC. ONLY)**

	Project Completion *			Post 2006 *			Line Items *		
	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance
<b>The River</b>									
14    River Corridor	46,198	44,404	1,794	5,168	4,323	845			
TP01 TP04 EP04 TP10 EP12 TP14 WM05							279	154	125
Line Item									
<b>Total River Corridor Operating</b>	<b>\$ 46,198</b>	<b>\$ 44,404</b>	<b>\$ 1,794</b>	<b>\$ 5,168</b>	<b>\$ 4,323</b>	<b>\$ 845</b>			
<b>Total River Corridor Line Item</b>							<b>\$ 279</b>	<b>\$ 154</b>	<b>\$ 125</b>

\* Control Point

This reflects FH Project structure, which divides certain PBS's between projects (WM05 – WM and RCP, TP12 – RCP and NMS). Consequently, these figures will differ from others reported elsewhere in this report (as generated in the PEM system).

## ISSUES

### Technical Issues

**Issue:** 324 Building — Hot spots on the bottom of Steel Waste Disposal Boxes (SWDBs) loaded with Rectangular Grout Containers are more radioactive than the current Central Waste Complex (CWC) acceptance criteria of one rem per hour.

**Impacts:** Shipment schedule/in-cell work schedule has been delayed.

**Corrective Action:** Pursuing several actions:

— CWC evaluating an authorization basis change to allow increased dose rates. This may require shielding provided by 324 Building at CWC.

— 324 Building evaluating SWDB loading to optimize sequence of individual items to minimize dose rates.

— 324 Building staff evaluating “short loading” SWDBs to limit dose rates. This will require purchase of additional SWDBs.

### DOE/Regulator/External Issues

**Issue:** Approval by DOE-HQ of the Unirradiated Uranium (UU) billet Safety Analysis Report for Packaging (SARP), Revision K, was requested by August 15, 2000, in order to make shipments during FY 2000.

**Impacts:** DOE-HQ has approved Revision K of the uranium billet Safety Analysis Report for Packaging (SARP) with a Certificate of Compliance (COC) that allows shipment of only 3 billet boxes per trailer instead of the 5 boxes per trailer that was analyzed in the revision. Using this COC will increase the billet transportation cost by approximately \$200K.

**Corrective Action:** DOE-HQ has been informed of the impact, and a COC allowing five

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billet boxes per trailer is expected to be issued prior to shipment of the billets.

**Issue:** An opportunity exists for transfer of PNNL facilities into TP-14, pending resolution of the current DOE-HQ guidance to EM (pipeline suspension). PNNL has funds for FY 2001/2002 Surveillance and Maintenance (S&M) identified for transfer to FH, but these funds may no longer be available when the suspension ends.

**Impacts:** Efficiencies realized through combining these facilities into TP-14 may be jeopardized.

**Corrective Action:** PNNL has drafted a Memorandum of Agreement (MOA) to define a path forward and mechanism for doing business while FH performs necessary assessments to estimate surveillance and maintenance costs for the buildings that are being considered for transfer. Initial response received from internal review of this MOA is favorable. FH is continuing to gather information regarding out-year funding sources.

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

PROJECT CHANGE NUMBER	DATE ORIGIN	BCR TITLE	FY00 COST IMPACT \$000	S C H	I C H	DATE TO CCB	CCB APR'YD	RL APR'YD	CURRENT STATUS
FSP-00-002	11/2/99	Mark-42 Project Completion	\$0	X		04/05/00			Add'l funding req'd
FSP-2000-068	7/20/00	224-T Characterization	\$180	X		N/A	N/A	N/A	Cancelled
FSP-2000-072	7/27/00	MYWP Submittal (Phase I)	\$0	X	X	08/25/00		08/31/00	Pending RL Approval
FSP-2000-075	8/3/00	Uranium Disposition Project	\$400		X	09/13/00		09/13/00	Approved
FSP-2000-077	8/8/00	Install Back-Flow Prevention	\$0		X	08/29/00		N/A	Withdrawn
FSP-2000-080	8/15/00	Defer 324 Building Scope	-\$487	X	X	08/28/00		09/11/00	Approved
FSP-2000-081	8/15/00	Add Award Fee BCWS for Stretch Goal Workscope	\$450			09/05/00		09/11/00	Approved
FSP-2000-082	8/16/00	Delete 324 Building Scope	-\$115	X	X	08/28/00		09/11/00	Approved
FSP-2000-083	8/30/00	Delete 300 Area ACP Development from TP14	-\$2,170			09/05/00		09/11/00	Approved
FSP-2000-084	8/31/00	Transfer 209E facility	\$0		X	09/14/00		09/14/00	Pending RL Approval
FII-2001-001	9/12/00	Base Ops Reduction for PHMC Projects	-\$3,263		X				Draft Prepared
FII-2001-002	9/25/00	FY2001 Fee Reduction to 90%	-\$413						Draft Prepared
FII-2001-003	9/25/00	FY2001 Addition of High Priority Workscope	\$14,951		X				Draft Prepared
<b>ADVANCE WORK AUTHORIZATIONS</b>									
AWA	10/2/00	FY01 Uranium Disposition Act	\$371		X	10/3/00			

## 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	0	0	1
DOE-HQ	0	0	0	0	0	0	0	0
RL	2	1	0	1	0	0	0	4
<b>Total Project</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>

Only TPA/EA milestones and all FY 2000 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY 2000 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the first six months of FY 2001 TPA/EA milestones.

FY 2001 Tri-Party Agreement / EA Milestones			
<b>M-92-13 (TRP-00-902)</b>	<b>“Submit 300 Area SCW Project Management Plan to Ecology Pursuant to Agreement Action Plan Section 11.5,” due 9/29/00</b>	• Completed 6 months early (3/28/00).	
<b>M-92-14 (TRP-02-901)</b>	<b>“Complete Removal of Phase I 300 Area Special Case Waste and Materials,” due 9/30/02</b>	• Completed 30 months early (03/28/00) pending acceptance of the plan by Ecology.	
DNFSB Commitments			
Nothing to report at this time.			

## MILESTONE EXCEPTION REPORT

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

### OVERDUE – 1

TRP-99-933 RL Containerize Dispersible Under 2A Rack 04/30/00 11/24/00  
 1.4.10

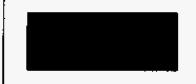
**Cause:** It has been determined it is more efficient to complete dispersible collection once size reduction of miscellaneous items is completed.

**Impact:** No impact. This milestone will complete with M-89-02.

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

### FORECAST LATE – 0

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<b>FY 2001 Tri-Party Agreement / EA Milestones</b>		
<b>M-89-02 (TRP-99-901),</b>	<b>“Complete Removal of 324 Building Radiochemical Engineering Cells (REC) B Cell Mixed Waste (MW) and Equipment,”</b>	<b>Due 11/30/00 - Work towards completion of M-89-02 is 21 days behind schedule.</b> 
<b>DNFSB Commitments</b>		
Nothing to report.		

## **PERFORMANCE OBJECTIVES**

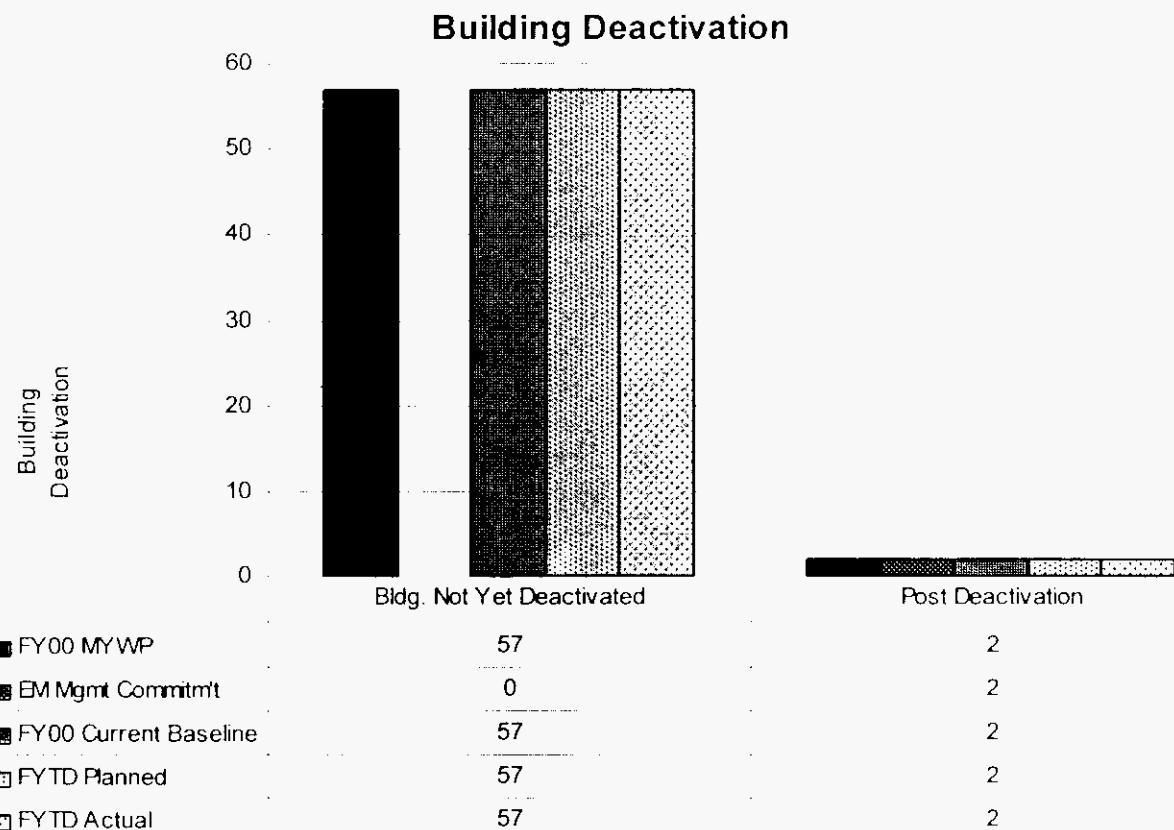
<b>Outcome</b>	<b>Performance Indicator</b>	<b>Status</b>
Restore the River Corridor for Multiple Uses	FDH-RC-2 Accelerate 324/327 Deactivation.	Current Life Cycle Schedule Variance 1.14% and Life Cycle Cost Variance 1.9%. Total float is at 72 days. RCP believes that PI RC-2 was accomplished.
	FDH-RC-2SS Continue Acceleration of 324/327 Deactivation – Complete 327 Facility accelerated deactivation activities by September 2000.	Completed shipment of 103 legacy buckets, 474.7 grams of fissile material, 32.5 m <sup>3</sup> of bulk waste, 8 fuel pins, as well as cleanout of H Cell. This accelerated workscope accomplishes ~80% of the expectations for this super-stretch PI.
	FDH-RC-3SS Disposition Uranium Complete: disposition of ~1865 Metric Tons (MT) of Hanford Uranium by September 2000.	Unrecoverable – RL directed the shipment of UO <sub>2</sub> and billets with RL identified funds. (Note: 667 MTU's of UO <sub>2</sub> was shipped to the DOE Portsmouth site in Ohio.)
	FDH-RC-5SS Accelerate 300 Area Closure Project.	Plan issued June 30, 2000. Feedback received in DOE Executive Evaluation Report is positive. RCP believes that PI RC-5SS was accomplished.
	FDH-RC-5SS-2 Accelerate Cleanup of zone 4 of 300 Area.	Unrecoverable – No funds identified to support completion of physical work.
Multiple	Comprehensive performance	All baseline work projected to be complete per PI requirements. Additionally, NFDI performance for the year has met or exceeded the Comprehensive PI criteria.

## **KEY INTEGRATION ACTIVITIES**

- **National Facility Deactivation Initiative (NFDI) Support to DOE Complex** — In FY 2000 implementation of NFDI DOE-complex objectives was completed. Key accomplishments included a deactivation plan for Savannah River Site's F Canyon; evaluation of buildings for transfer into DOE-EM at Oak Ridge, Pantex, and Hanford; stabilization assistance for Brookhaven's High Flux Beam Reactor; and deactivation assistance for facilities at INEEL, Nevada Test Site and Hanford's 300 Area.

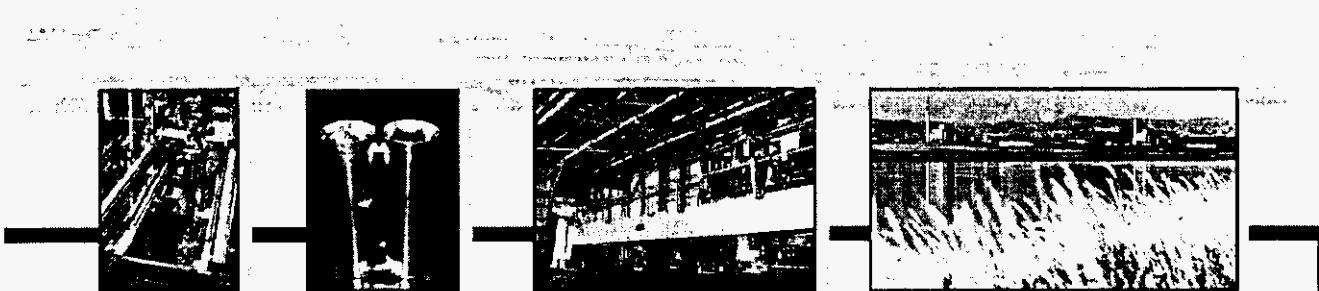
- **324 SNF Project Savings** — In FY 2000 the River Corridor Project (RCP) 324 Building B Cell project, along with the Spent Nuclear Fuel Project (SNF), developed an alternative plan for the fuel removal activity. Agreement to use a longer inner canister for the fuel permits greater end shielding and allows manual welding and testing in the Cask Handling Area (CHA), rather than the more expensive remote effort in B Cell. The Programmatic Agreement, which outlines the responsibilities and general items for this fuel transfer, was approved by both RCP and SNF on October 6, 2000. The 200 Area Interim Storage Area Acceptance Criteria (HNF-4894) is undergoing final review and comment by RCP. Comments will be forwarded to SNF and the revised document is expected about November 30, 2000.
- **EM-50 Support** — With support from EM-50, AEA Technology has completed two draft reports in FY 2000 which support future RCP deactivation tasks: (1) *Option Study for Inspection, Sampling and Remediation for Tank T-105 in the HLW Vault in Building at Hanford*; and (2) *Options Study for B Cell HVAC Duct Remediation*. Final reports should be issued within the next month. Other topics proposed by RCP for 2001 funding are:
  - Demonstration and Deployment of the AEA Artisan-100 Arm for Hot Cell Deactivation
  - Options Study on Intact Removal and Disposal of 327 Facility Hot Cells
  - Dry Decontamination of 327 Hot Cells
  - 340 Vault Tank Heel RemovalDOE-HQ is in the process of prioritizing all projects suggested for assignment to AEA Technology. RCP has received preliminary indications that the funding/support to the Tank T-105 and HVAC Duct Remediation tasks will be supported in FY 2001.
- **New Hanford-Rocky Flats-Savannah River Joint Deactivation Proposal** — Through involvement with NFDI, Hanford, Rocky Flats, and Savannah River completed and submitted in FY 2000, a joint proposal focused on demonstration and deployment of large equipment size reduction systems.
- **Participation in West Valley Demonstration Project** — In FY 2000 RCP issued a letter of support to DOE-RL to participate as a "non-host deployment site" in a proposal led by PNNL Technology Development and West Valley. The West Valley (NY) Demonstration Project is deactivating hot cell facilities with similar decontamination and decommissioning challenges to RCP facilities. The project would fund FH on an Integrated Contractor Team (ICT). The ICT will influence the identification and selection of technologies. Based on successful demonstration at West Valley, FH will consider the best technologies for use at RCP. Nine proposals from throughout the DOE-Complex were submitted in response to EM-50's Large Scale Demonstration and Deployment Program call for proposals, with FH involvement in three of the nine.

## BUILDING DEACTIVATION



**Buildings Not Yet Deactivated:** Current approved budget does not fund building deactivation in the 300 area. Therefore, plans for deactivation have been deferred to FY2002.

**Post Deactivation:** These are two storage building to be turned over to BHI when the 324/327 Transition Project is completed in FY 2007.



## **Section D**

### ***Spent Nuclear Fuel***

#### **PROJECT MANAGERS**

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## **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 does not start until FY 2004.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of September 30, 2000. All other information is as of October 19, 2000.

### **Top 5 Accomplishments for FY 2000**

**Phased Startup Initiative (PSI)** – Implemented a strategy to conduct early testing of the K West (KW) Fuel Retrieval System (FRS) and the Integrated Water Treatment System (IWTS). This reduced the schedule risk to fuel movement from KW basin by validating the fuel cleaning process, provided early identification of problems to provide maximize time available for correction, and accelerated personnel training and procedure preparation to maximize readiness preparations. Results from the PSI are expected to improve the fuel production rates in FY 2001 (Progress).

**Sludge Strategy** – Successfully implemented a Baseline Change Request, which accelerates the completion of sludge removal by one year from August 2005 to August 2004 and reduces total project life cycle cost by \$16 million (Momentum).

**Construction Projects** – Completed construction and testing on 2 facilities; Canister Storage Building (CSB) and Cold Vacuum Drying Facility (CVDF). These facilities were subsequently turned over to the Operations organizations. Also completed major renovations on KW Basin in preparation for fuel movement activities. Completed construction of the Interim Storage Area (ISA) adjacent to the CSB to facilitate storage of Hanford Site SNF on 200 Area Plateau (Progress).

**Safety** – The SNF Project twice achieved one million safe manhours worked during a time when construction was at a peak (Progress).

**SNF Storage Projects** - Completed integrated testing of the Cask Transport System (CTS) with other key components of the fuel-removal process and formally turned over to CSB Operations. Fabrication and testing activities for MCOs continues. To date, a total of 38 MCOs have been delivered ahead of schedule. Fabrication of the MCO baskets continues at the 328 shop at the Hanford Site. Assembly is complete on 216 Mark 1A baskets (with the exception of the outside posts). Delivery of the completed baskets is expected in December 2000 (Progress).

## **Additional FY 2000 Accomplishments**

### **Progress**

**Safety Analysis Documentation** – Obtained DOI approval of over 4,000 pages of safety documentation crucial to Project operations, including final safety analyses for the Canister Storage Building (CSB), the Cold Vacuum Drying Facility (CVDF), work in the K Basins, and Project transportation systems. Authorization basis documents have been implemented for CSB, CVDF, and Project transportation systems.

**HANSF analysis tool** – The HANSF analysis tool has been used effectively to consider a wide variety of phenomena inside a Multi-Canister Overpack such as fuel oxide type, convective and radiant heat transfer, and the potential for fission product release.

Fiscal year-to-date milestone performance (EA, DOE-HQ, and RL) shows that three out of five milestones (60 percent) were completed on or ahead of schedule, one RL milestone (20 percent) was completed late and one RL milestone (20 percent) is overdue.

The Milestone Achievement details, found following the cost and schedule variance analysis, provide further information on all milestone types.

## **ACCOMPLISHMENTS THIS REPORTING PERIOD**

- Successfully completed Contractor Operations Readiness Review (ORR) on CSB, K West Basin, and Project transportation systems.
- Commenced Contractor ORR for the CVDF.
- Completed cold testing in the K West Basin with pieces of pipe designed to resemble irradiated, or spent, fuel.
- Initiated hot testing on September 30 by decapping a select number of actual canisters containing spent fuel, washing the fuel, and sorting the fuel utilizing the Fuel Retrieval System (FRS) and the Integrated Water Treatment System (IWTS).
- Began DOE Operational Readiness Review.

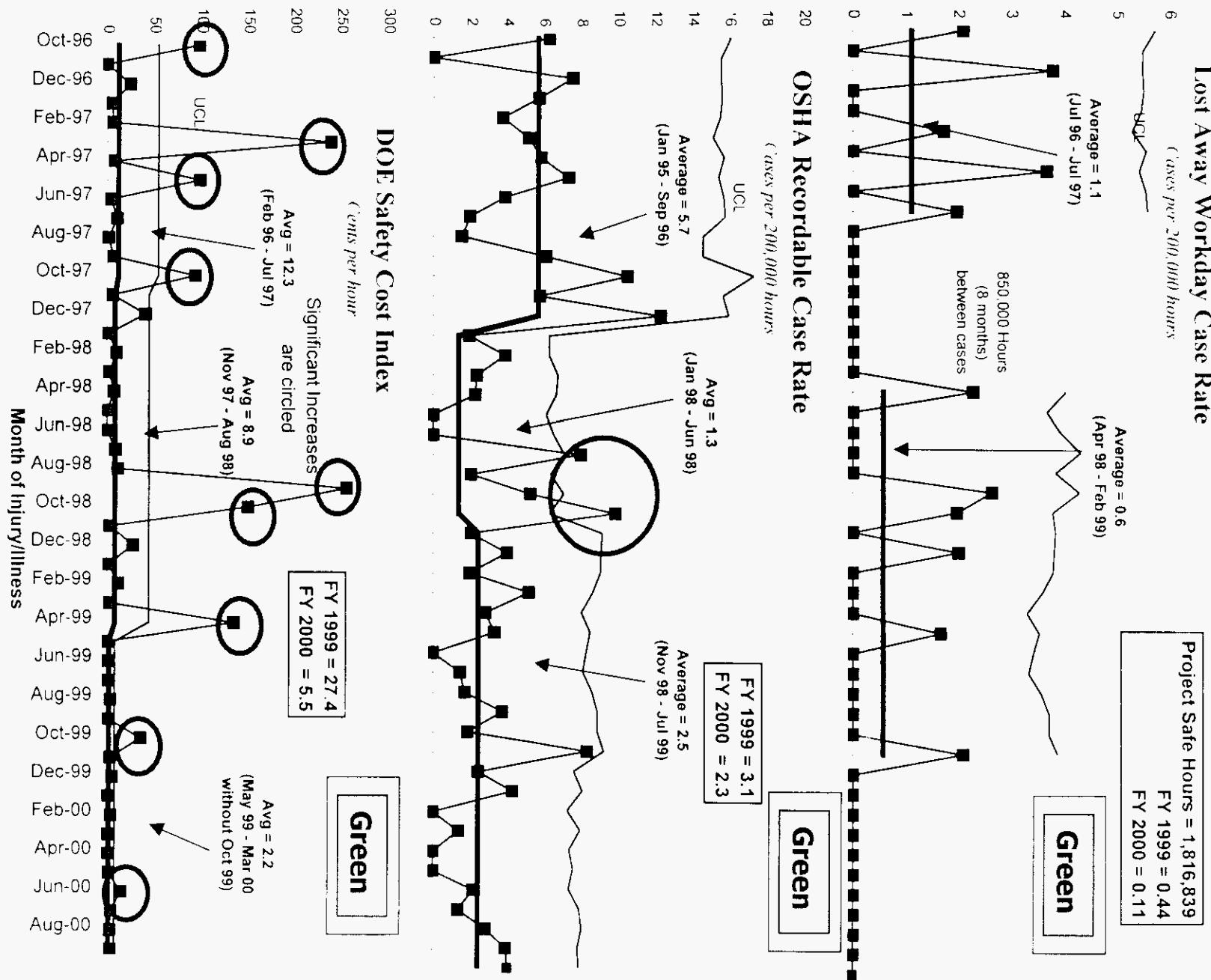
## **SAFETY**

The project has achieved over 1,800,000 safe work hours, and no Lost Away Workday Cases have been reported in the last eleven months. The number of safe hours has significantly improved over FY 1999. Although the SNF Project experienced some safety performance degradations with the start of FY 2000, performance continues to improve.

Two OSHA cases in July raised the trend above the average. The project continues to monitor the rising trend over the last four month. However, the case rate has improved 25 percent in FY 2000 over FY 1999.

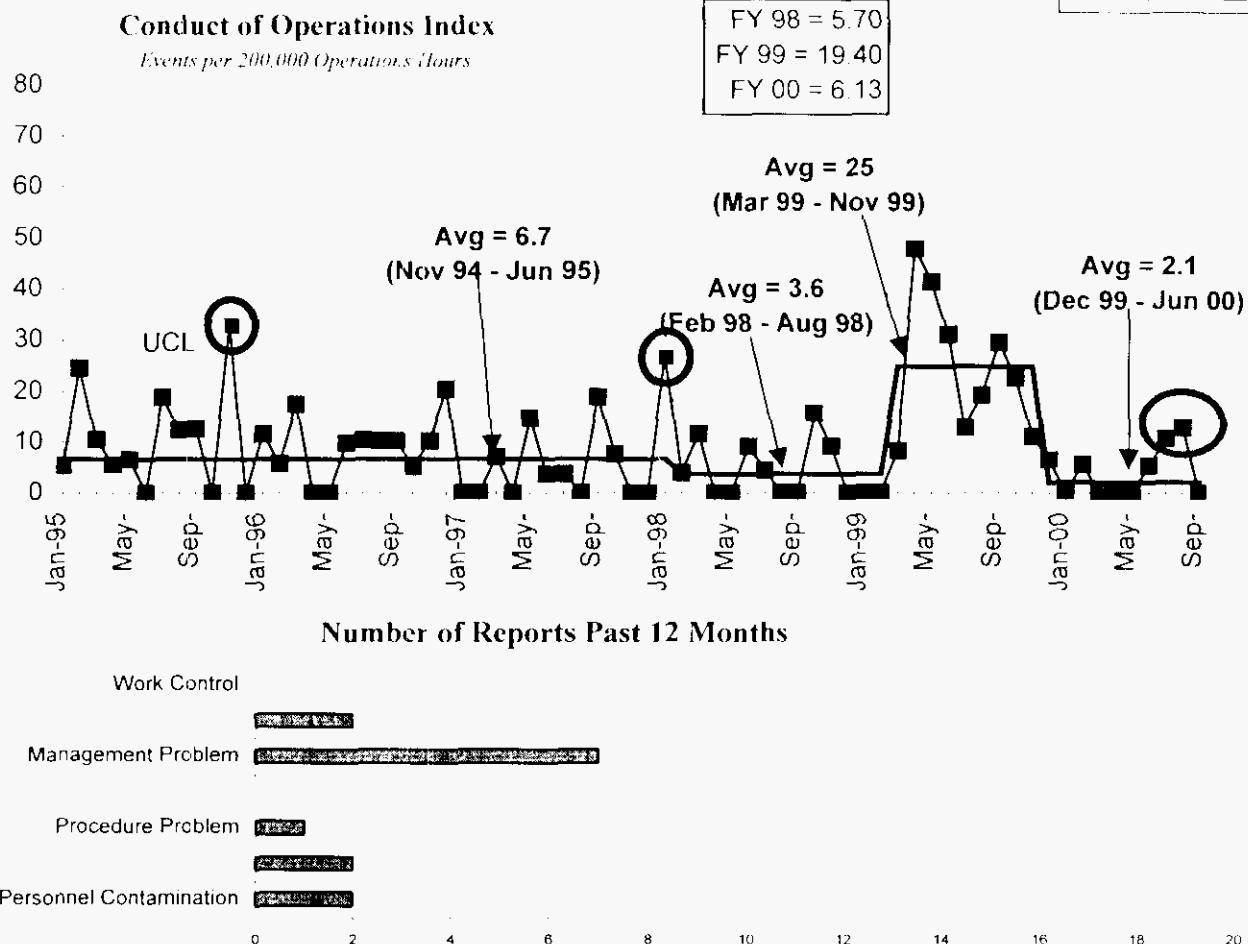
The past fifteen of seventeen months for the DOE Cost Index have been below average.

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## CONDUCT OF OPERATIONS / ISMS STATUS

Green



From June through September, there were six Conduct of Operations incidents reported: four Management Problems, one Lock and Tag, and one Procedure Problem.

## ISMS STATUS

Green

- The Integrated Safety Management System (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 RI on January 10, 2000.
  - The actions required to enable ISMS implementation to be declared March 31, 2000 are complete. Documentation packages were transmitted to the Environmental, Safety and Health organization. Three of the four packages were reviewed as part of the Project Hanford Management Contract (PHMC) Phase I verification. These items are now complete. The one remaining item needing RI verification (dealing with Chemical Management Implementation) was reviewed by RI on August 11, 2000.

On September 7, 2000, FH received a letter from Keith Klein, DOE-RL, indicating all corrective action packages were sufficient and considered closed. The letter stated, "FH can now consider the ISMS verification successfully completed."

## **BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT**

### **Breakthroughs**

**Green**

Baseline Change Request SNF-2000-009, which documents acceleration of the completion of sludge removal by one year from August 2005 to August 2004 and reduction in total project life cycle cost by \$16 million, was implemented.

### **Opportunities for Improvement**

**Operational Readiness Review Sequence** – In collaboration with DOE, FH has developed a sequenced ORR process. The initial contractor ORR commenced September 28 covering KW Basin, CSB and CTS. The second contractor ORR kickoff was October 17 at the CVD. In parallel, the DOE ORR starts at KW, CSB and CTS in November.

## **UPCOMING ACTIVITIES**

- Complete Contractor Operational Readiness Review in October 2000.
- Continue receipt of MCO shipments.
- K Basins Projects
  - Begin K West Basin fuel removal drying and storage operations in November 2000.
  - Complete K East Basin Sludge Loadout conceptual design January 2001.
  - Complete K East Basin IWTS definitive design April 2001.
- Initiate K West Basin canister cleaning December 2000.
- Submit Annual Debris Report to Department of Ecology/EPA in May 2001.

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

	BCWP	ACWP	VARIANCE
<b>Spent Nuclear Fuel</b>	\$198.2	\$201.7	-\$3.5

The unfavorable cost variance of \$3.5 million (2 percent) is primarily due to Hanford Site assessments higher than baseline and additional facility start up and engineering required as a result of first-of-a-kind equipment issues at K Basins and the CVD Facility.

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

	BCWP	BCWS	VARIANCE
<b>Spent Nuclear Fuel</b>	\$198.2	\$201.8	-\$3.6

The unfavorable schedule variance of \$3.6 million (2 percent) is primarily a result of the following: fabrication and installation of the KE floor sludge retrieval system postponed until FY01; the KW canister cleaning work scope has been placed on hold pending a path forward decision; KE IWTS design behind schedule due to rebid for competitive price evaluation and integrated sludge/fuel strategy; and the procurements of the CSB impact absorbers and some MCO plugs have been postponed until FY01.

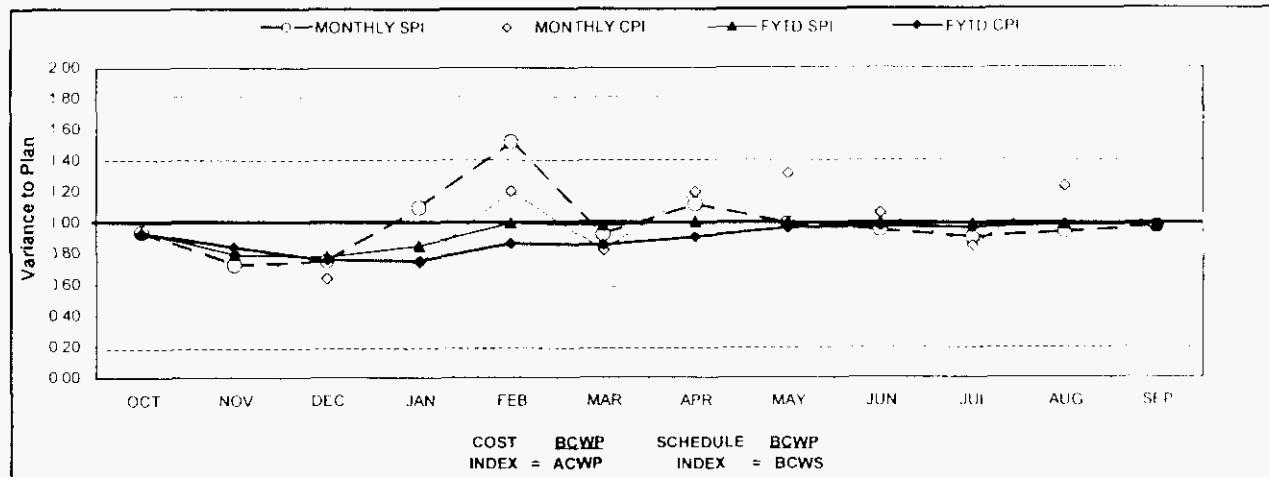
## **FY 2000 COST/SCHEDULE PERFORMANCE – ALL FUND TYPES CUMULATIVE TO DATE STATUS – (\$000)**

By PBS	FYTD							
	BCWS	BCWP	ACWP	SV	%	CV	%	
PBS WM01 Spent Nuclear WBS 1.3 Fuel Project	\$ 201,764	\$ 198,178	\$ 201,710	\$ (3,586)	-2%	\$ (3,533)	-2%	
<b>Total</b>	<b>\$ 201,764</b>	<b>\$ 198,178</b>	<b>\$ 201,710</b>	<b>\$ (3,586)</b>	<b>-2%</b>	<b>\$ (3,533)</b>	<b>-2%</b>	

Authorized baseline as per the Integrated Planning Accountability, and Budget System (IPABS) Project Execution Module (PEM)

Green

## COST/SCHEDULE PERFORMANCE INDICES (MONTHLY 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	1.52	0.92	1.12	0.99	0.95	0.90	0.93	0.93
MONTHLY CPI	0.93	0.79	0.64	0.74	1.20	0.87	1.19	1.31	1.06	0.85	1.23	0.96
FYTD SPI	0.94	0.79	0.78	0.85	0.99	0.98	1.00	1.00	1.00	0.99	0.98	0.98
FYTD CPI	0.93	0.84	0.76	0.75	0.86	0.85	0.90	0.96	0.97	0.96	0.98	0.98
MONTHLY BCWS	\$8,574	\$19,209	\$15,681	\$12,081	\$15,753	\$20,085	\$19,582	\$20,731	\$14,112	\$11,781	\$10,330	\$16,646
MONTHLY BCWP	\$8,049	\$13,963	\$11,770	\$13,221	\$23,909	\$18,511	\$21,838	\$28,517	\$13,561	\$10,596	\$18,066	\$16,172
MONTHLY ACWP	\$8,626	\$17,581	\$18,170	\$17,831	\$19,906	\$22,611	\$18,286	\$21,703	\$12,818	\$12,521	\$14,689	\$16,769
FYTD BCWS	\$8,574	\$27,783	\$43,463	\$55,544	\$71,297	\$91,382	\$110,963	\$139,694	\$154,007	\$165,788	\$185,718	\$201,764
FYTD BCWP	\$8,049	\$22,016	\$13,786	\$47,008	\$70,917	\$89,428	\$111,265	\$139,783	\$153,344	\$163,939	\$182,006	\$198,728
FYTD ACWP	\$8,626	\$26,207	\$44,577	\$62,408	\$82,314	\$104,925	\$123,210	\$144,913	\$157,731	\$170,253	\$181,642	\$201,715

## COST VARIANCE ANALYSIS: (- \$3.5M)

### WBS/PBS

### Title

#### 1.3.1/WM01

#### Spent Nuclear Fuel Project

Description/Cause: Ended fiscal year 2000 within threshold.

Impact: None.

Corrective Action: None.

## SCHEDULE VARIANCE ANALYSIS: (- \$3.6M)

### WBS/PBS

### Title

#### 1.3.1/ WM01

#### Spent Nuclear Fuel Project

Description /Cause: Ended fiscal year 2000 within threshold.

Impact: None.

Corrective Action: None.

**FUNDS MANAGEMENT**  
**FUNDS VS SPENDING FORECAST (\$000)**  
**FY TO DATE THROUGH SEPTEMBER 2000**  
**(FLUOR HANFORD, INC. ONLY)**

	Project Completion *			Post 2006 *			Line Items *		
	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance
<b>The River</b>									
13 Spent Nuclear Fuel									
WM01 Operating	\$ 179,045	\$ 178,640	\$ 405						
Line Item									
<b>Total Spent Nuclear Fuel Operating</b>	<b>\$ 179,045</b>	<b>\$ 178,640</b>	<b>\$ 405</b>						
<b>Total Spent Nuclear Fuel Line Item</b>									

\* Control Point

Above chart reflects FH Project structure, which divides certain PBS's between projects (e.g., TP12 – NMS and the River Corridor project). Consequently, these figures may differ from those shown elsewhere in this report (as generated in the PEM system).

**ISSUES**

None.

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

Green

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	FY00 COST IMPACT \$000	S C H	T E C H	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
SNF-2000-019	5/9/00	FRS/TWTS Phased Startup Initiative - Adding Hot Testing	\$2,816	Y	Y	8/21/00	8/24/00	9/19/00	Approved
SNF-2000-021	7/27/00	SNF Project FY 2001 MYWP Rate Impacts			Y	Y	8/1/00	8/30/00	9/29/00
FII-2001-002	9/25/00	FY2001 Fee Reduction to 90%	-\$1,030						Draft Prepared
ADVANCE WORK AUTHORIZATIONS									
		Nothing to report at this time							

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## **MILESTONE ACHIEVEMENT**

<b>MILESTONE TYPE</b>	<b>FISCAL YEAR-TO-DATE</b>				<b>REMAINING SCHEDULED</b>			<b>TOTAL FY 2000</b>
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	1	1	0	0	0	0	0	2
DOE-HQ	0	0	0	0	0	0	0	0
RL	1	0	1	1	0	0	0	3
<b>Total Project</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>

Only TPA/EA milestones and all FY2000 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY2000 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the first six months of FY2001 TPA/EA milestones.

**STATUS AS OF 9/30/2000**

### **FY 2000 Tri-Party Agreement / EA Milestones**

<b>Number</b>	<b>Milestone Title</b>	<b>Status</b>
<b>M-34-14A (S06-97-009)</b>	<b>"Complete K West Basin Cask Facility Modifications"</b>	<b>Due 2/29/00</b> Completed on schedule.
<b>M-34-04 (S01-99-124)</b>	<b>"Submit Remedial Design Report/Remedial Action Work Plan for the K Basins"</b>	<b>Due 3/31/00</b> – Completed over one month early (February 10, 2000).
<b>M-34-05 (T01)</b>	<b>"Submit Report on Quantities, Character, and Management of K Basins Debris"</b>	<b>Due 5/31/00</b> – Completed on schedule.

### **DNFSB Commitments**

Nothing to report at this time.

## **MILESTONE EXCEPTION REPORT**

<b>Number/WBS</b>	<b>Level</b>	<b>Milestone Title</b>	<b>Baseline Date</b>	<b>Forecast Date</b>
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### **OVERDUE – 1**

**S03-98-602**      **RL**      Contractor Operational Readiness Review      09/07/00      11/15/00  
**1.3.1**

**Cause:** Unforeseen delays in construction and testing brought on from technical issues within the facilities.

**Impact:** None.

**Corrective Action:** Complete construction and testing to allow conducting the ORRs.

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**FY 2001 Tri-Party Agreement / EA Milestones**

Number	Milestone Title	Status
<b>M-34-16 (S00-01-900)</b>	<b>"Initiate removal of K West Basin Spent Nuclear Fuel"</b>	<b>Due 11/30/00</b> – On schedule.
<b>M-34-06-T01</b>	<b>"Initiate K West Basin Spent Nuclear Fuel Canister Cleaning Operations"</b> TPA Change request in preparation to extend due date.	<b>Due 12/31/00</b> – TPA Change request in preparation to extend due date.

**DNFSB Commitments**

Nothing to report at this time.

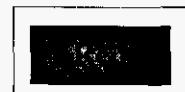
**PERFORMANCE OBJECTIVES**

**Readiness for Fuel Movement (RC-1-1.a-I)** — Contractor completion of construction and operational testing, Management Self-Assessment (MSA), and Independent Operational Readiness Review (ORR) by September 14, 2000, to begin moving fuel by November 30, 2000.



- Start of fuel movement is currently behind schedule to the November due date. The Contractor ORR started on September 28, 2000

**Phased Startup Initiative (PSI) (RC-1-1.a-II)** — Complete PSI Phases 1 and 2 by April 15, 2000. Includes successful Cold Testing of Integrated Water Treatment System (IWTS) & Fuel Retrieval System (FRS).



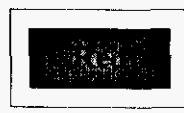
- This activity was completed late.

**Accelerate Fuel Movement (RC-1SS-1)** — Accelerate start of fuel movement.

- Pre-positioning of fuel processed in PSI Phase III will allow early loading of Multi-Canister Overpacks (MCOs).



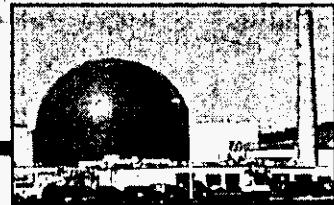
**Phased Startup Initiative (PSI) (RC-1SS-2)** — Complete Phases 3 and 4 by August 15, 2000. Includes completion of FRS/IWTS system testing using SNF (real fuel) and Completion of Construction Documentation Phase 2 (CCD2).



- Hot testing began October 18, 2000.

## **KEY INTEGRATION ACTIVITIES**

- Spent Nuclear Fuel (SNF) final disposition interface activities, including Office of Civilian Radiation Waste Management (OCRWM) Quality Assurance (QA) Program implementation, are ongoing with the National SNF Program. The SNF Project submitted eight Corrective Action Closure packages to RI for National SNF Program approval.
- The SNF Project and Waste Management Project continued preparations for K Basins' sludge removal and Shippingport (PA) Pressurized Water Reactor Core 2 SNF removal.
- The Programmatic Agreement between the River Corridor Project and the SNF Project for 324 Building (B Cell) SNF removal was approved.
- Neutron Radiography Facility Training Research and Isotope Production General Atomics (TRIGA) and Fast Flux Test Facility (FFTF) SNF relocation planning is ongoing with the FFTF Project.
- Bechtel Hanford, Inc. transmitted the transfer plan for SNF discovered during upcoming 105F and 105H reactor basins deactivation for SNF Project review and approval.



## **Section E**

### ***Advanced Reactors Transition***

#### **PROJECT MANAGERS**

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## **SUMMARY**

The Advanced Reactors Transition (ART) Program, WBS 1.12.1.1, PBS RL-TP11, consists of the 309 Building and the Nuclear Energy (NE) Legacies activities.

NOTE: All information is of September 30, 2000.

### **Top 4 Accomplishments for FY 2000**

Residual sodium was reacted in three small tanks, using the water vapor-nitrogen process and the small cleaning station.

A decision to react the residual NaK in the Cooling Loop was made in January 2000, following the accident involving NaK at Oak Ridge. It involved reaction of about one pound of residual NaK from a cold trap cooling loop. This was the first use of the cleaning station to clean a piping system; all previous residue reaction work had been with residue remaining in tanks.

The 309 Bldg./Plutonium Recycle Test Reactor (PRTR) Tank Farm ion exchange column was stabilized, removed and shipped for burial along with associated above ground piping.

The 309 Bldg. -32 ft level of the containment building was cleaned up and stabilized.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, and RL) shows that there are no milestones due.

### **ACCOMPLISHMENTS THIS REPORTING PERIOD**

- For the month of September surveillance and maintenance activities continued on the 309 Building and NE legacies.
- Final rinsing and drying of the cold trap annulus side of the 337B Cold Trap cooling system has been completed. The temporary connecting piping between the cleaning station and the system has been dismantled. The reaction process for all the residual NaK in the system is now complete. The cleaning station has been laid up for extended downtime, since all of the small alkali metal test systems have now been cleaned.
- Completed the 309 Building -32 ft level of the containment building clean up and stabilization.
- Work instructions have been prepared for stabilizing the Fuel Transfer Port in the 309 Building.

- In preparation for transition of the 309 Building to the ERC, the -32 ft level of the containment building was cleaned up. Cleanup consisted of removing steel I-beams, scaffolding, materials and unattached equipment. In the process four 4x4x8 ft boxes (500 cu.ft.) were filled, and removed to the containment main floor. Following material removal the floors, sumps and 8 ft. up the walls were wiped down and painted. In total about 9,000 sq.ft. was wiped down and stabilized. The C-Cell (with a floor area of 800 sq.ft) was down graded from a contamination area (CA) to a fixed contamination area (FCA).

## **SAFETY**

Safety data for ART is included in a separate FFTF report.

## **CONDUCT OF OPERATIONS / ISMS STATUS**

### **CONDUCT OF OPERATIONS**

Conduct of operations data for ART is included in a separate Fast Flux Test Facility (FFTF) report.

## **ISMS STATUS**

The DOE ISMS Phase 2 report, previously issued, was favorable.

## **BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT**

No breakthroughs or opportunities for improvement have been identified at this time.

## **UPCOMING ACTIVITIES**

- Ship Thermal Transient Loop cold trap offsite.
- Continue Fuel Transfer Pit cleanout in the 309 Building/PRTR facility.

## COST PERFORMANCE (\$M):

	BCWP	ACWP	VARIANCE
Advanced Reactors Transition	\$ 1.7	\$ 2.2	-\$ 0.5

The unfavorable \$0.5M (30 percent) cost variance is not a true reflection of the ART performance for FY 2000. This is the result of the system not being able to split B&R cost for EX-04-J1-02-0 between ART and FFTF. FFTF is partially supported by EX-04 funding which was utilized in September when \$917K of FFTF cost was booked. The true ART cost was \$1.3M resulting in a \$0.4M favorable variance.

## SCHEDULE PERFORMANCE (\$M):

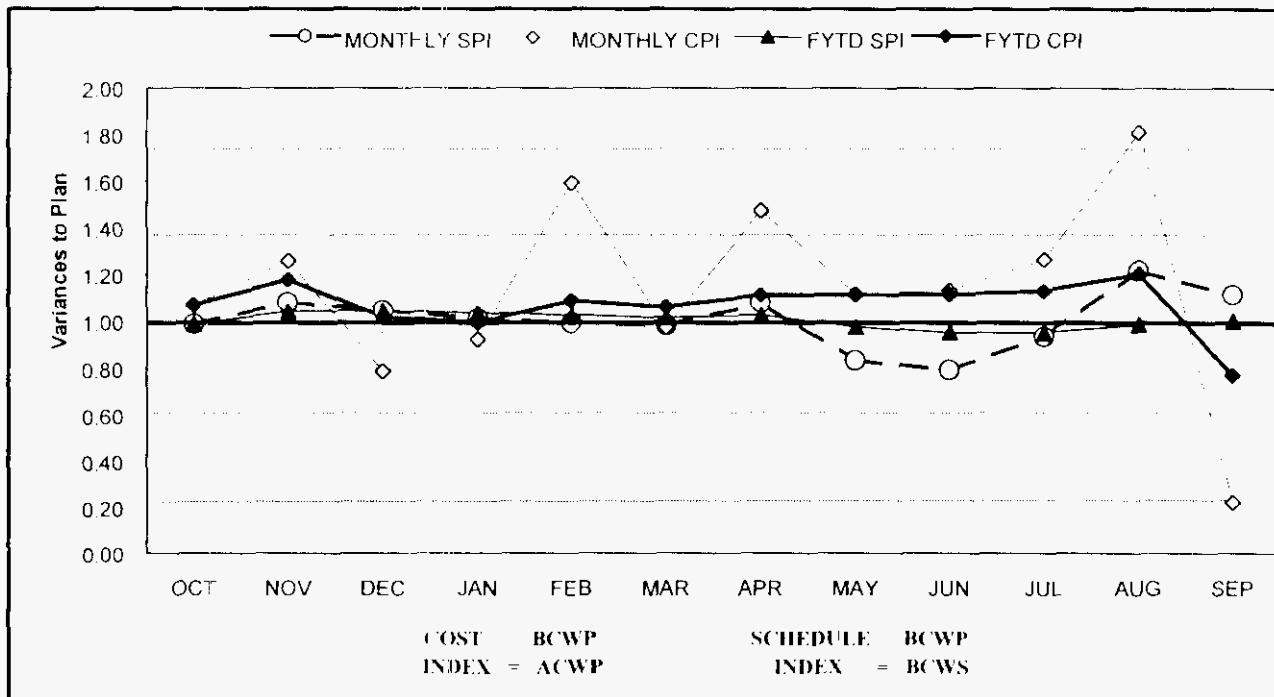
	BCWP	BCWS	VARIANCE
Advanced Reactors Transition	\$ 1.7	\$ 1.7	\$ 0.0

The schedule variance is within acceptable thresholds.

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

By PBS	FYTD							
	BCWS	BCWP	ACWP	SV	%	CV	%	
PBS TP11 WBS 1.12	Advanced Reactors Transition	\$ 1,673	\$ 1,673	\$ 2,172	\$ (0)	0%	\$ (499)	-30%
<b>Total</b>		<b>\$ 1,673</b>	<b>\$ 1,673</b>	<b>\$ 2,172</b>	<b>\$ (0)</b>	<b>0%</b>	<b>\$ (499)</b>	<b>-30%</b>

## COST/SCHEDULE PERFORMANCE INDICES (MONTHLY AND FYTD)



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.99	1.08	1.05	1.01	0.99	0.98	1.08	0.83	0.79	0.93	1.22	1.11
MONTHLY CPI	1.07	1.26	0.79	0.92	1.59	0.97	1.47	1.12	1.13	1.26	1.81	0.22
FYTD SPI	0.99	1.04	1.04	1.03	1.02	1.01	1.02	0.98	0.95	0.95	0.99	1.00
FYTD CPI	1.07	1.18	1.02	0.99	1.09	1.06	1.11	1.11	1.11	1.13	1.20	0.77
MONTHLY BCWS	\$79	\$113	\$88	\$93	\$116	\$139	\$116	\$254	\$146	\$144	\$196	\$191
MONTHLY BCWP	\$78	\$122	\$92	\$94	\$115	\$136	\$125	\$211	\$115	\$134	\$219	\$212
MONTHLY ACWP	\$73	\$97	\$117	\$102	\$72	\$140	\$85	\$189	\$102	\$106	\$132	\$957
FYTD BCWS	\$79	\$192	\$280	\$373	\$489	\$627	\$743	\$997	\$1,143	\$1,286	\$1,483	\$1,673
FYTD BCWP	\$78	\$200	\$292	\$386	\$501	\$637	\$761	\$972	\$1,088	\$1,222	\$1,461	\$1,673
FYTD ACWP	\$73	\$170	\$287	\$389	\$461	\$601	\$686	\$875	\$977	\$1,083	\$1,215	\$2,172

### COST VARIANCE ANALYSIS: (-\$0.5M)

#### WBS/PBS      Title

#### 1.12/TP11      Advanced Reactors Transition

**Description and Cause:** The unfavorable \$0.5M (30 percent) cost variance is not a true reflection of the ART performance for FY 2000. This is the result of the system not being able to split B&R cost for EX-04-J1-02-0 between ART and FFTF. FFTF is partially supported by EX-04 funding which was utilized in September when \$917K of FFTF cost was booked. The true ART cost was \$1.3M resulting in a \$0.4M favorable variance.

**Impact:** None.

**Corrective Action:** None.

## SCHEDULE VARIANCE ANALYSIS: (\$0.0M)

### WBS/PBS      Title

#### 1.12/TP11      Advanced Reactors Transition

Description and Cause: None.

Impact: None.

Corrective Action: None.

## FUNDS MANAGEMENT FUNDS VS SPENDING FORECAST (\$000) FY TO DATE THROUGH SEPTEMBER 2000 (FLUOR HANFORD, INC. ONLY)

	Project Completion *			Post 2006 *			Line Items *		
	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance
The River				\$ 4,199	\$ 2,073	\$ 2,126			
1.12 Advanced Reactors (EM)				\$ 4,199	\$ 2,073	\$ 2,126			
Total Advanced Reactors Operating									
Total Advanced Reactors Line Item									

\* Control Point

## ISSUES

There is nothing to report at this time.

## BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

PROJECT CHANGE NUMBER	DATE ORIGIN	BCR TITLE	FY00 COST IMPACT \$000	S E C H	DATE TO CCB	CCB APRV'D	RL APRV'D	CURRENT STATUS
ART-2000-004	7/18/00	FY '00 to '01 "Bridge Change Request"	2,160	X X	8/23/00	8/31/00	9/22/00	Approved
ART-2000-005	9/21/00	Resource Adj.	0		N/A			Approved
FTI-2001-002	9/25/00	FY2001 Fee Reduction to 90%	-\$2					Draft Prepared
ADVANCE WORK AUTHORIZATIONS								
		Nothing to report at this time.						

## **MILESTONE ACHIEVEMENT**

Fiscal-year-to-date milestone performance (EA, DOE-HQ, and RL) shows that there are no milestones due.

<b>Tri-Party Agreement / EA Milestones</b>	
Nothing to report at this time.	
<b>DNFSB Commitments</b>	
Nothing to report at this time.	

## **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**

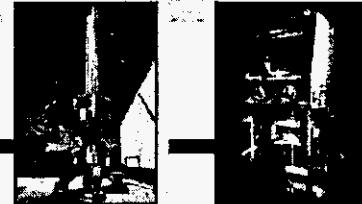
## **PERFORMANCE OBJECTIVES**

Nothing to report at this time.

## **KEY INTEGRATION ACTIVITIES**

Nothing to report at this time.

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*Section F – EM-50 Science & Technology Activities*



# **Section F**

## ***EM-50***

# ***Science & Technology***

## ***Activities***

## COST PERFORMANCE (\$M):

	BCWP	ACWP	VARIANCE
Technology Development (EM-50)	\$21.5	\$20.0	\$1.4*

\*Rounding

The unfavorable cost variance is within established thresholds.

## SCHEDULE PERFORMANCE (\$M):

	BCWP	BCWS	VARIANCE
Technology Development (EM-50)	\$21.5	\$23.9	-\$2.5*

\*Rounding

The \$2.5 million (10 percent) unfavorable schedule variance is primarily the result of PNNL. EM-50 projects work scope deferred to FY 2001 and FY 2002 for better utilization of funding allocations. Funding for PNNL three-year project allows for work scope adjustments without issue. FHI's portion of TD (\$1.0M) is within thresholds.

## 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	0	0	0
DOE-HQ	0	0	0	0	0	0	0	0
RL	0	0	1	0	0	0	0	1
<b>Total Project</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

## MILESTONE EXCEPTION REPORT

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

**OVERDUE – 0**

## **TECHNOLOGY DEPLOYMENTS**

The following table is a listing of EM funded Technology Deployments for FY 2000. These deployments are discussed in the applicable Project Sections.

### **FY 2000 TECHNOLOGY DEPLOYMENTS**

<b>Technology Name</b>	<b>Actual Date</b>	<b>Project</b>
Small Diameter Geophysical Logging System	01-Apr-00	ERC
Overview Video System	01-Apr-00	ERC
Liquid-Level Detection Technology (Ultrasonics)	01-Apr-00	ERC
Passive Soil Vapor Extraction (Barometric Pumping)	01-Apr-00	ERC
Stabilizing Low-Level Category 3 Waste Using Special Concrete	01-Apr-00	WM
Advanced Characterization System	30-Jun-00	ERC
Wireline Cone Penetrometer System for Multiple Tool Usage	31-Jul-00	ERC
Supervisory Control and Data Acquisition (SCADA)	31-Jul-00	LL
Drain Line Characterization Robot	31-Aug-00	ERC
Mini-Robot for Removal of Dispersibles in B-Cell	31-Aug-00	FT
HANSF Analysis Tool	31-Aug-00	SNF
Cold Vacuum Drying	31-Aug-00	SNF
In Situ Object Counting System	30-Sep-00	ERC
Remote Concrete Coring System	30-Sep-00	ERC
Packaging (bagless transfer) Process	30-Sep-00	NMS
Pipe-N-Go Repackaging Technique	30-Sep-00	NMS
Magnesium Hydroxide Precipitation	30-Sep-00	NMS



## **The Future**

Hanford cleanup activities develop assets – people, experience, land, buildings, research and training facilities – that can have a positive affect on our future. They can help solve national and global problems in food production, global warming, pollution and nuclear non-proliferation. The prime contractors and subcontractors at Hanford are implementing economic development initiatives aimed at weaning the Tri-Cities from dependence on federal cleanup dollars. These initiatives are being supported with grants and by freeing up valuable site resources for use by the private sector. Examples of these initiatives are a new industrial building to attract new businesses to the area, job-creation efforts, and providing technical assistance to entrepreneurs. The Volpentest HAMMER Training and Education Center is included in this outcome. HAMMER provides training for the Hanford Site cleanup mission and the DOE complex. The Center also augments economic diversification by creating a state-of-the-art regional training industry for students from across the nation and around the world.

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## **Section G**

### ***HAMMER***

**PROJECT MANAGERS**  
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## **SUMMARY**

The Hazardous Materials Management and Emergency Response (HAMMER) mission area consists of the HAMMER project, WBS 1.9.1.1, Project Baseline Summary (PBS) HM01.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of the end of September 2000. All other information is as of October 21, 2000.

The FY 2000 Volpentest HAMMER overall performance was excellent. The project remained clearly focused on achieving the FY 2000 objective – “operate the Volpentest HAMMER Training and Education Center (HAMMER) in a safe and effective manner”. The Center's continued commitment to operational and training safety resulted in an excellent safety record with no lost workday cases. In fact, there have been no lost workday cases since opening the new facility in September 1997.

### **Top 5 Accomplishments for FY 2000**

Volpentest HAMMER's first priority is to deliver hands-on training to the Hanford workforce. One thousand eight hundred twenty classes were conducted at the Volpentest HAMMER facility, for a total of 28,077 Hanford site student days (milestone #HMR-00-002). This represents a 14 percent increase over the FY 1999 actual student day total of 24,569 and exceeds the FY 2000 10 percent target. Highest attended health and safety classes included Hazardous Waste Operations, Respiratory Protection, Radiation Worker II Requalification, Basic Medic First Aid training, and Basic Crane and Rigging. Effectiveness was evidenced by high student satisfaction ratings. The ratings remained high throughout FY 2000 due to a strong customer service commitment by staff members (Progress).

Milestone #HMR-00-004 was successfully completed and exceeded expectations for increasing the HAMMER facility utilization. The goal for FY 2000 was 32,137 student days including Hanford and non-Hanford students, which is a 10 percent increase over 29,215 actual student days in FY 1999. The FY 2000 actual student days total was 33,054, which is a 13 percent increase over FY 1999. Additionally, a second deliverable of this milestone was to increase prop usage by 10 percent over FY 1999. The goal for FY 2000 was 21.7 percent, which is a 10 percent increase over the 19.8 percent actual usage in FY 1999. The actual FY 2000 prop usage was 23.2 percent, which is an exceptional 17 percent increase over FY 1999, and is proof that more classes are using hands-on learning (Progress).

Construction was completed on HAMMER's new 60' x 60' Training Support Building (TSB) Annex Building in January 2000 providing much-needed additional classroom space and a practical area for Respiratory training (Progress).

HAMMER's new partnership with the U. S. Department of Energy and the U. S. Department of Labor, OSHA was formally recognized in March 2000. The new alliance brings rigorous, high-quality, performance-based courses (formerly offered only in Des Plaines, Illinois) to HAMMER and Hanford Site workers (Progress).

Milestone #HMR-00-003 was successfully completed and exceeded expectations for increasing the number of return user facility customers. The goal for FY 2000 was 17 return user facility customers, which is a 10 percent increase over 15 return user facility customers in FY 1999. HAMMER achieved 30 return user facility customers, which is an outstanding 100 percent increase over FY 1999. In association with this, HAMMER successfully completed milestone #HMR-00-005 for increasing reimbursable Work For Others (WFO) and cost offset. The goal for FY 2000 was \$416,000, which is a 25 percent increase over \$332,400 in FY 1999. The actual FY 2000 reimbursable WFO and cost offset total is \$485,900, which is a 46 percent increase over FY 1999 (Progress).

## **Additional FY 2000 Accomplishments**

### **Progress**

Completed milestone #HMR-00-001 – to establish a methodology for measuring employer satisfaction. A methodology was developed for internal customers to establish a baseline of statistical data and comments. Non-Hanford customers are currently surveyed via the existing customer satisfaction system, which was developed in FY 1999. DOE-RL indicated that they wanted additional customer feedback from non-Hanford customers, so an additional methodology was formulated to address this request.

A total of 52 Hanford Site Emergency Preparedness (EP) Initial training courses were presented during FY 00 for a total of 656 students. In addition, this year 445 students were able to receive Refresher training via the Web. Courses included Building Warden Initial and Refresher, Building Emergency Director Initial and Refresher, Hanford Incident Command System Initial and Refresher, and EP Drill Coordinator Initial.

Construction was completed on HAMMER's new TSB Computer-Based Training Room in January 2000 providing much-needed space for RadWorker training.

HAMMER's new partnership with the U. S. Department of Energy, Northwest Public Power Association (NWPPA) and the Eastern Washington Electric Utility Group became official in June 2000. The new alliance will bring a 40-acre "electrical city" to the facility for NWPPA personnel, Hanford Site High Risk Electrical Workers, and others.

September accomplishments include: initiated preparations for the construction of a laser containment facility in the TSB at HAMMER. Bechtel-Nevada, LANL and the Hanford Site have jointly developed the laser, as a much faster and cleaner method of cutting up unwanted material. The laser is expected to arrive in January 2001, with a DOE complex wide demonstration to be presented in March 2001. Additionally, the quarterly Eastern Washington State Agencies Trainer Round Table meeting was held. Representatives from Labor and

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Industries, Corrections, Licensing, Department of Transportation, Department of Safety and Health Services, Department of Personnel and Employment Security Office attended this meeting. HAMMER's teleconferencing center was demonstrated and several of the meeting attendees toured HAMMER facility to view and discuss possible use of HAMMER in their areas of responsibility. In addition, the Northwest Regional Administrator of the Federal Rail Administration, Region VIII, visited the HAMMER facility. Discussions on partnership opportunities were conducted and future meetings are planned to discuss the potential for HAMMER to become this region's training facility.

Fiscal-year-to-date milestone performance (EA, DOE-HQ and RL) shows that four of five milestones (80 percent) were completed ahead of schedule, and one milestone (20 percent) was completed late. The Milestone Achievement details, found following the Baseline Change Request status, provide further information on all milestone types.

## **ACCOMPLISHMENTS**

- Initiated preparations for the construction of a laser containment facility in the TSB.
- Conducted the quarterly Eastern Washington State Agencies trainer Round Table meeting.
- Conducted the Northwest Regional Administrator of the Federal Rail Administration, Region VIII meeting to discuss partnership opportunities and future training opportunities.

HAMMER currently has no status to report in the areas of ISMS Status, Breakthroughs and Opportunities for Improvement.

## **UPCOMING ACTIVITIES**

- An Archeological Resources Protection Act Incident Investigation class has been scheduled for October 2000.
- WSU will present a Certified HAZMAT Manager National Test Preparation Class in October 2000.
- Washington State Department of Ecology will present an interagency Spill Workshop in October 2000.
- HAMMER will hold the first Firefighter Physical Ability test in October 2000.
- WSU will present an emergency Preparedness for Terrorism class in December 2000.

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

	BCWP	ACWP	VARIANCE
<b>HAMMER</b>	\$5.8	\$5.4	\$0.4

The favorable cost variance of \$0.4M (8 percent) is within established thresholds.

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

	BCWP	BCWS	VARIANCE
<b>HAMMER</b>	\$5.8	\$5.9	- \$0.1

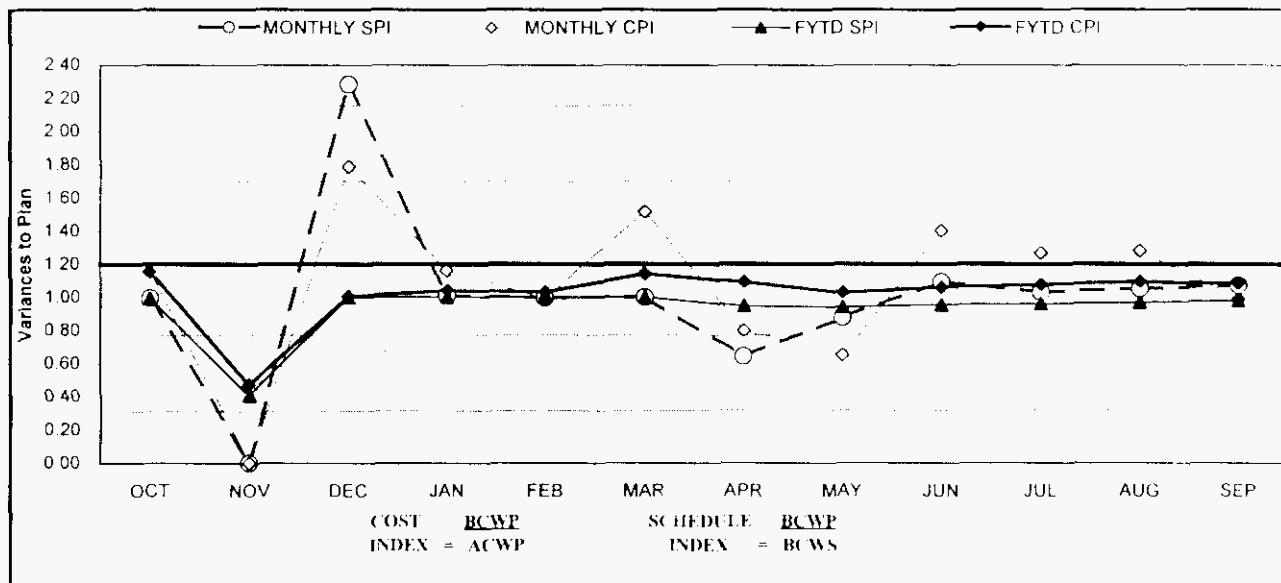
The unfavorable schedule variance of \$0.1M (2 percent) is within established thresholds.

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

By PBS	PBS HM01 WBS 1.9.1	Hammer	FYTD						Green
			BCWS	BCWP	ACWP	SV	%	CV	
			\$ 5,936	\$ 5,813	\$ 5,371	\$ (123)	-2%	\$ 442	8%
<b>Total</b>			<b>\$ 5,936</b>	<b>\$ 5,813</b>	<b>\$ 5,371</b>	<b>\$ (123)</b>	<b>-2%</b>	<b>\$ 442</b>	<b>8%</b>

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**COST/SCHEDULE PERFORMANCE INDICES  
(MONTHLY 2000 AND FYTD)**



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.99	0.00	1.28	1.01	1.00	1.00	0.64	0.88	1.09	1.03	1.05	1.02
MONTHLY CPI	1.16	0.00	1.79	1.16	0.99	1.51	0.80	0.65	1.40	1.27	1.28	0.99
FYTD SPI	0.99	0.41	1.00	1.00	1.00	1.00	0.95	0.94	0.95	0.96	0.97	0.98
FYTD CPI	1.16	0.47	1.01	1.04	1.03	1.14	1.09	1.03	1.06	1.07	1.09	1.08
MONTHLY BCWS	\$ 352	\$ 507	\$ 396	\$ 418	\$ 440	\$ 914	\$ 541	\$ 393	\$ 425	\$ 425	\$ 580	\$ 567
MONTHLY BCWP	\$ 350	\$ -	\$ 904	\$ 422	\$ 438	\$ 913	\$ 347	\$ 345	\$ 464	\$ 437	\$ 587	\$ 607
MONTHLY ACWP	\$ 303	\$ 439	\$ 505	\$ 363	\$ 443	\$ 603	\$ 435	\$ 531	\$ 331	\$ 345	\$ 458	\$ 615
FYTD BCWS	\$ 352	\$ 859	\$ 1,255	\$ 1,673	\$ 2,113	\$ 3,027	\$ 3,568	\$ 3,961	\$ 4,386	\$ 4,810	\$ 5,369	\$ 5,936
FYTD BCWP	\$ 350	\$ 350	\$ 1,254	\$ 1,676	\$ 2,114	\$ 3,027	\$ 3,375	\$ 3,719	\$ 4,183	\$ 4,620	\$ 5,207	\$ 5,817
FYTD ACWP	\$ 303	\$ 742	\$ 1,247	\$ 1,610	\$ 2,053	\$ 2,656	\$ 3,091	\$ 3,622	\$ 3,753	\$ 4,298	\$ 4,256	\$ 5,171

**COST VARIANCE ANALYSIS: (\$0.4)**

**WBS/PBS    TITLE**

**1.9.1.1/HM01 HAMMER**

**Description and Cause:** The variance is within thresholds.

**Impact:** None.

**Corrective Action:** None.

**SCHEDULE VARIANCE ANALYSIS: (-\$0.1)**

**WBS    TITLE**

**1.9.1.1/HM01 HAMMER**

**Description and Cause:** The variance is within thresholds.

**Impact:** None.

**Corrective Action:** None.

**FUNDS MANAGEMENT**  
**FUNDS VS SPENDING FORECAST (\$000)**  
**FY TO DATE THROUGH SEPTEMBER 2000**  
**(FLUOR HANFORD, INC. ONLY)**

	Project Completion *			Post 2006 *			Line Items/Other *		
	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance
<b>The Future</b> 19 HAMMER HM01				6,318	5,373	945			
<b>Total Hammer Operating</b>	\$ -	\$ -	\$ -	\$ 6,318	\$ 5,373	\$ 945	\$ -	\$ -	\$ -
<b>Total Hammer Line Item</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

\* Control Point

**ISSUES**

Nothing to report at this time.

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

PROJECT CHANGE NUMBER	DATE ORIGIN	BCR TITLE	FY00 COST IMPACT \$000	S	E	C	H	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
HMR-2000-003	7/26/00	FY-2001 MYWP Bridge Change Request	0	X	X			8/25/00			At RL
HMR-2000-004	8/30/00	Install Air Conditioning in the HAMMER Training Support Building	30	X	X			NA	NA	NA	Project Approved
Project											
		Nothing to report at this time.									

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**MILESTONE ACHIEVEMENT**

<b>MILESTONE TYPE</b>	<b>FISCAL YEAR-TO-DATE</b>				<b>REMAINING SCHEDULED</b>			<b>TOTAL FY 2000</b>
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	0	0	0	0	0	0	0	0
DOE-HQ	0	0	0	0	0	0	0	0
RL	4	0	1	0	0	0	0	5
<b>Total Project</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>

**Green**

**Tri-Party Agreement / EA Milestones**

Nothing to report at this time.

**DNFSB Commitments**

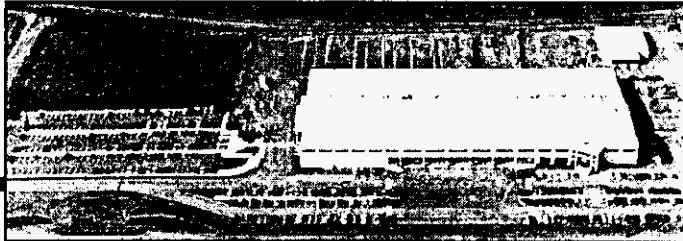
Nothing to report at this time.

**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**

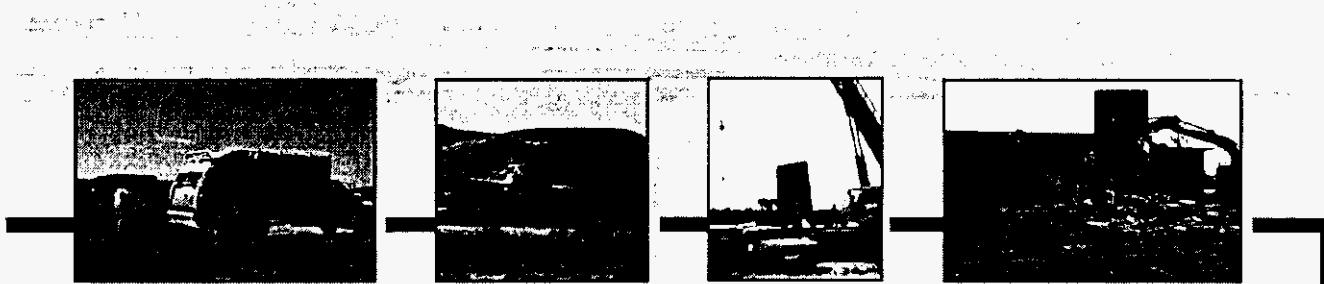
**FORECAST LATE - 0**



# **Multiple Outcomes**

Projects that bridge more than one outcome are included here. These projects include Landlord, Support, and National Programs. Further descriptions are included in each section.

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## **Section H**

*Landlord*

**PROJECT MANAGERS**  
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## **SUMMARY**

The Landlord mission area consists of the Landlord Project, WBS 1.5.1, Project Baseline Summary (PBS) RL-TP13.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of September 30, 2000. All other information is as of October 19, 2000.

The Landlord Project FY 2000 overall performance exceeded expectations. The project's focus on meeting the Multi-Year Work Plan commitments remained a high priority and as a result, 100 percent of the planned milestones were successfully completed ahead of schedule. Outlined below are the most significant FY 2000 accomplishments.

### **Top 5 Accomplishments for FY 2000**

Legacy rail cars destined for burial as low-level waste were successfully diverted by decontaminating and excessing for sale or re-use. A contaminated 100-ton well car was prepared for offsite transport, loaded on a truck at the 212R Rail Siding on July 12 and shipped to a vendor in Tennessee for the DOE Shield Block Program. The well car disposition was completed in August when the wheels were buried onsite in the low-level burial grounds (RL Milestone LLP-00-450). One flat car was transferred from DOE-RL ownership to the Tri-City Asset Reuse Corporation (TARC) and two more were prepared for transfer (Completion and Removal).

Capital equipment upgrade costs were avoided by free releasing and selling four regulated and two non-regulated cranes at auction generating over \$700K in total revenue. The money was used to purchase a new 70-ton hydraulic mobile crane for use in the Tank Farms (Momentum).

The Landlord Master Plan was developed, which will integrate mission requirements with physical infrastructure capabilities and develop tactical planning aligned with the desired end state. The plan establishes detailed plans for nine functional areas within the Landlord Project, consistent with the Site's Strategic Objectives. Opportunities exist to shore-up the Landlord Project's Lifecycle Baseline, in concert with the projects identified in the Master Plan. The plan also applies a commercial municipal approach to site planning and management. This process will be renewed annually (Progress).

The demolition phase of Project L-270, "Emergency Services Renovation, 200 Area," was completed on February 24, 2000. This demolition removed the 609C wing of the 200 Area Fire Station, which was required to make way for the construction of the new living quarters/administration addition (approximately 11,000 square feet) (Momentum).

RL Milestone LLP-00-435, "Project L-312, 2101M, MO-235, and Associated Buildings Storm Drainage Resolution" construction was completed one week ahead of the scheduled completion date of August 4, 2000. This milestone helps resolve storm drainage problems around facilities in 200 East and West Areas. The water accumulation from the storm water runoff created unsafe walking conditions for pedestrians and unsafe driving conditions for vehicles (Progress).

## **Additional FY 2000 Accomplishments**

### **Momentum**

RL Milestone LLP-00-425, "Complete Definitive Design for Project L-310, Replace Distribution Water Line to 200 West" was completed two days ahead of the scheduled due date of May 26, 2000. Construction for this project is scheduled in FY 2001 and it replaces the existing 24-inch Export Water Line (EWL) between the 2901Y Valve House and the 200W Water Reservoir (approximately 2.5 miles long). The existing line is over 50 years old, has experienced several leaks in the past five years, and is the sole EWL to the 200 Area Water Treatment Plant.

RL Milestone LLP-00-440, "Project L-298, FY 2000 Road Refurbishments," was completed eight days ahead of the scheduled completion date of September 29. The FY 2000 roadwork included: widening and overlay of the Rattlesnake Barricade Access Road (to make permanent safety improvements to this Site access road).

RL Milestone LLP-00-415, "Project L-309, Replace Section of Main Water Lines (200 East)," was completed ahead of schedule on September 28, 2000. This project replaced approximately 1,200 feet of undersized, temporary two-inch sanitary water line in 200 East Area near the 272AW Building with a new six-inch line.

### **Progress**

Additional lighting in the south parking lot for 2750E Building was required to resolve employee concerns associated with inadequate lighting levels. This project was added to the Landlord Project baseline in January 2000 by BCR LPM-2000-001 to resolve the employee concern on an accelerated basis. Overall construction was completed on April 4, approximately two months ahead of schedule and under budget.

RL Milestone LLP-00-405, "Bunker Tank Removal Preparation" was completed fourteen weeks ahead of the scheduled due date of September 29, 2000. This milestone completed activities to prepare the 384 Powerhouse Bunker Tanks for removal in FY 2001. This included removal of the 366-A Building, relocation of a fire hydrant, cleaning out a french drain, and taking other preliminary steps to prepare for tank removal and management of fuel contaminated soil.

RL Milestone LLP-00-400, "Surveillance/Maintenance, Shutdown, & Isolation Of Vacant Facilities," was completed eight days ahead of schedule on September 21, 2000. This activity provided Surveillance and Maintenance (S&M) of vacant facilities, shutdown of 20 facilities, and deactivation (utilities isolated) of 25 vacant facilities.

RL Milestone LLP-00-401, "Complete Bridge Baseline Change Request in Support of MYWP Update by August 25, 2000" was completed three weeks ahead of schedule. This year the MYWP was divided into two phases. Phase I was intended to baseline FY 2001 and incorporated a funding constraint of \$19M which deferred \$11M of work scope to the outer years. Phase I also addressed additional requirements for the aging infrastructure in FY 2002 per the Infrastructure Restoration Plan. Phase II of the MYWP is in process and includes indirect-to-

direct conversion and the Preferred Schedule Options Study for a lifecycle baseline

A new Electrical Utilities Supervisory Control and Data Acquisition (SCADA) system was deployed that is a PC-based computer control system that provides remote control, data acquisition and event reporting over the major substations of the Hanford High Voltage Electrical Power Distribution System. The telemetered data is stored for historical and trending purposes and is available to engineering and maintenance personnel for post-mortem analysis, system performance studies and validation of metered energy consumption data. The system is current state of the art software/hardware and can easily evolve as necessary. Other benefits include effective control of electrical power substations, risk reduction of system failures, and a reduced life cycle maintenance cost of \$1.7M.

### **Completion and Removal**

There are several areas on the Hanford Site that have been abandoned due to cancellation of projects, change in contractors, or a move of operations. The responsibility for management of these sites is not always clear and as a result, property and materials deteriorate. Three such sites were cleaned up which included: removing excess materials (scrap metal, wood, debris, tumbleweeds, drum liners, etc.), disposing wastes (or appropriately packaged awaiting disposal) and posting signs as necessary. All actions included radiological release surveys, environmental compliance reviews, and safety reviews.

RL Milestone LLP-00-460, "Complete Closure of Four Abandoned Septic Systems by August 25, 2000" was completed three weeks ahead of schedule. This milestone closed four abandoned septic systems to WSDOE requirements on July 28, 2000. This activity included removal of seepage inside the tanks and filling the tanks either with native soil or sand slurry to ensure the elimination of void space within the tanks. This activity supports the DOE's commitment to Ecology to bring abandoned, non-compliant septic systems into compliance with state regulation.

The Landlord Project managed the Integrated Soil, Vegetation, and Animal Control (ISVAC) Program to maximize performance of the program goals against the priorities, within budget, and to ensure the following objectives are met: 1) safety of employees, public, and environment; 2) to remove/cleanup uncontrolled contamination discovered during environmental surveillances; 3) control biological vectors affecting contamination spread; and 4) restore disturbed soil areas to self-sustaining vegetation. Below is a summary of the activities scheduled and completed throughout the year:

#### **Site Cleanup**

- 10 Down-postings (391.211 square feet)
- 3 Brush Hog (170.57 square feet)
- 3 Surveys and Postings (12 miles of transfer lines)

#### **Site Spraying**

- CH2M Hill Hanford Group, Inc.: 38 Completed; 19 in Process; 3 Continuous
- DynCorp: 10 Completed; 48 in Process
- Waste Management Hanford: 20 Completed; 10 in Process

- Fast Flux Test Facility: 3 Completed; 2 Continuous
- Spent Nuclear Fuels: 1 Completed
- Other: 41 Completed; 2 in Process, 7 Continuous

Construction of Project L-292, "Emergency Preparedness Control Station (EPCS)" is complete. The installation of 100K/D Emergency Notification Sirens was completed on schedule in July 2000 and is operational. Redundancies in the electronics will be installed to connect the Emergency Operations Center (EOC) to the sirens. These installations allow the sirens to automatically remain active in the event of a power failure.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, Field Office, and RL) shows that nine of nine milestones (100 percent) were completed ahead of schedule. The Milestone Achievement details, found following cost and schedule variance analysis, provide further information on all milestone types.

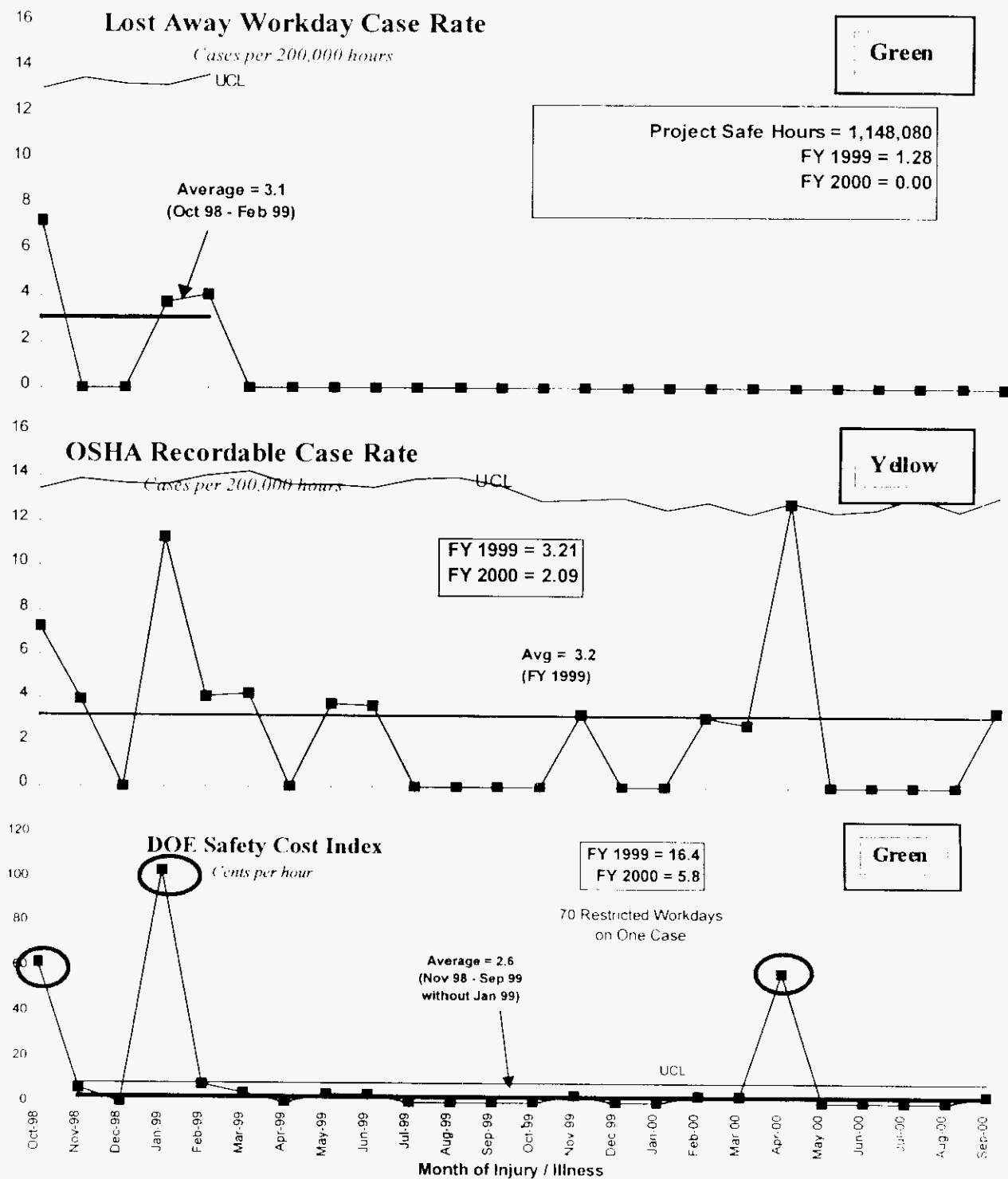
## **ACCOMPLISHMENTS THIS REPORTING PERIOD**

- Completed RL Milestone LLP-00-415, "Project L-309, Replace Section of Main Water Lines (200 East)," ahead of schedule on September 28, 2000.
- Completed RL Milestone LLP-00-405, "Bunker Tank Removal Preparation" fourteen weeks ahead of the scheduled due date of September 29, 2000.
- Completed RL Milestone LLP-00-400, "Surveillance/Maintenance, Shutdown, & Isolation Of Vacant Facilities," eight days ahead of schedule on September 21, 2000.
- Completed RL Milestone LLP-00-440, "Project L-298, FY 2000 Road Refurbishments," eight days ahead of the scheduled completion date of September 29, 2000.

## **SAFETY**

FY 1999 performance was stable for case rates, but was very unstable in terms of severity (days away and restricted). FY 2000 was stable.

**PHMC Environmental Management Performance Report – November 2000**  
**Section H—Landlord**



## **ISMS STATUS**

NOTE: The Infrastructure program includes the Landlord Project and the indirect Infrastructure. Both of these areas are covered under one ISMS program, therefore the ISMS activities described below are for the entire Infrastructure program, which includes Landlord.

- Voluntary Protection Program (VPP) application for status has been submitted to DOE and the evaluation is expected in November 2000.
- Infrastructure employees achieved another 1 million hours without a lost workday accident, the third time this organization has achieved this significant milestone.

## **BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT**

### **Breakthroughs**

- Continued activities to complete the conversion of Indirect to Direct. This conversion will support the movement of most infrastructure services into RL PBS, TP-13, the Landlord Program. With this conversion we will be able to further optimize infrastructure services by integrating normal maintenance and operations with capital improvement projects.

### **Opportunities for Improvement**

- The Landlord Master Plan developed basis of estimates, which will validate the baseline in the MYWP.

## **UPCOMING ACTIVITIES**

- Complete Project L-309, "Replace Main Water Lines" by December 22, 2000.
- Complete installation of a chlorine containment system for Project L-303, "200 West Area Chlorine Mitigation" by January 31, 2001.

Initiate work on the following projects:

- Project L-340, "Install PFP Backflow Preventors" - FY 2001 Capital Small Project to install backflow Preventors on the two main potable water lines to PFP to resolve cross contamination issues.
- Project L-339, "PFP Water System Isolation- Install Sanitary Water to WRAP" - FY 2001 GPP to install a water bypass line around PFP to resolve cross contamination issues with the 200 West Area potable water system.

- Project L-276, “Emergency Services Equipment Bay Renovations,” - FY 2001 GPP to expand and renovate the existing 200 Area Fire Station Equipment Bay.

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

	BCWP	ACWP	VARIANCE
<b>Landlord</b>	\$ 15.3	\$ 13.7	\$ 1.7

The \$ 1.7M (11 percent) favorable cost variance is due to a credit to FH's fee base and credit pass backs for Site Services. L-297, “Equipment Disposition Project,” has a new strategy. In lieu of burial, the railcars were sent off site to be recycled. Recycling of the lead in the well cars could not be accomplished in FY 2000 due to moratorium on release of contaminated metals. Further information at the PBS level can be found in the following Cost Variance Analysis details.

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

	BCWP	BCWS	VARIANCE
<b>Landlord</b>	\$ 15.3	\$ 16.3	- \$ 1.0

The \$1.0 M (6 percent) unfavorable schedule variance is attributed to the Chlorine Containment System for Project L-303, 200 West Area Chlorine Containment System not being shipped until late October. Further information at the PBS level can be found in the following Schedule Variance Analysis details.

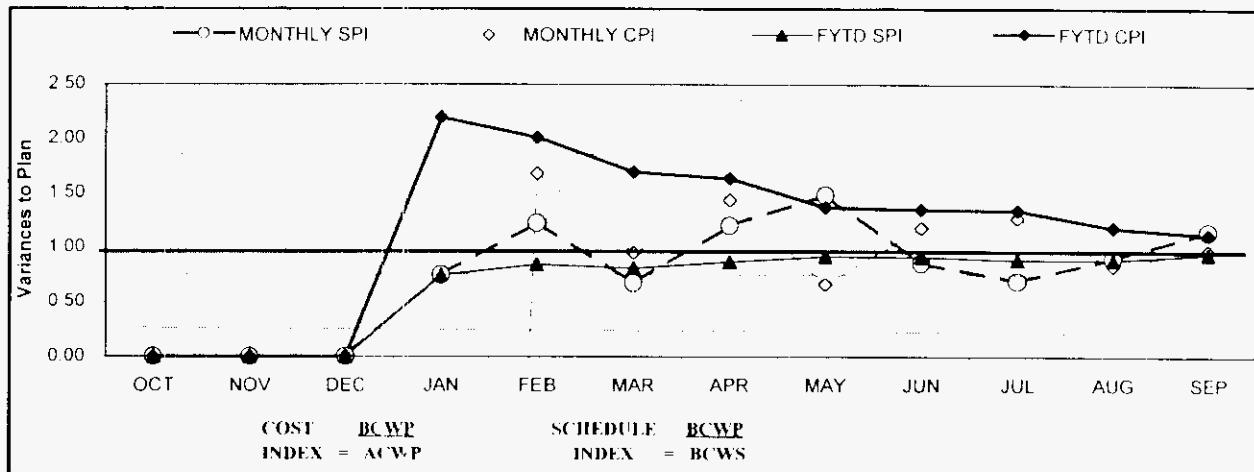
**FY 2000 COST/SCHEDULE PERFORMANCE – ALL FUND TYPES CUMULATIVE TO DATE STATUS – (\$000)**

FYTD								
By PBS		BCWS	BCWP	ACWP	SV	%	CV	%
PBS TPI3 WBS 1.5.1	Landlord	\$ 16,284	\$ 15,330	\$ 13,675	\$ (955)	-6%	\$ 1,655	11%
<b>Total</b>		<b>\$ 16,284</b>	<b>\$ 15,330</b>	<b>\$ 13,675</b>	<b>\$ (955)</b>	<b>-6%</b>	<b>\$ 1,655</b>	<b>11%</b>

Note: Landlord final FY 2000 cost was \$13.7M with \$7.0M in carryover for a total of \$20.7M.

Green

## COST/SCHEDULE PERFORMANCE INDICES (MONTHLY AND FYTD)



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.00	0.00	0.00	0.75	1.22	0.67	1.20	1.48	0.86	0.69	0.90	1.15
MONTHLY CPI	0.00	0.00	0.00	-19.23	1.68	0.95	1.43	0.66	1.18	1.27	0.83	0.97
FYTD SPI	0.00	0.00	0.00	0.75	0.84	0.81	0.87	0.92	0.91	0.88	0.89	0.94
FYTD CPI	0.00	0.00	0.00	2.20	2.01	1.69	1.63	1.37	1.35	1.34	1.18	1.12
MONTHLY BCWS	\$0	\$0	\$0	\$3,994	\$1,016	\$1,269	\$1,115	\$653	\$773	\$1,284	\$2,812	\$3,369
MONTHLY BCWP	\$0	\$0	\$0	\$2,981	\$1,243	\$854	\$1,339	\$968	\$661	\$887	\$2,528	\$3,868
MONTHLY ACWP	(\$197)	\$943	\$767	(\$155)	\$741	\$899	\$934	\$1,464	\$561	\$698	\$3,048	\$3,972
FYTD BCWS	\$0	\$0	\$0	\$3,994	\$5,010	\$6,279	\$7,394	\$8,047	\$8,820	\$10,104	\$12,916	\$16,284
FYTD BCWP	\$0	\$0	\$0	\$2,981	\$4,224	\$5,078	\$6,417	\$7,385	\$8,046	\$8,933	\$11,462	\$15,330
FYTD ACWP	(\$197)	\$746	\$1,513	\$1,358	\$2,099	\$2,998	\$3,932	\$5,395	\$5,957	\$6,658	\$9,703	\$13,675

### COST VARIANCE ANALYSIS: (+\$ 1.7M)

#### WBS/PBS

#### Title

##### 1.5.1/TP-13

##### Landlord

**Description/Cause:** The favorable cost variance is due to a credit to FHI's fee base and credit pass backs for Site Services. L-297, "Equipment Disposition Project," has a new strategy. In lieu of burial, the railcars were sent off site to be recycled. Recycling of the lead in the well cars could not be accomplished in FY 2000 due to moratorium on release of contaminated metals. The contract for L-298, Phase II road refurbishments was awarded later than planned. The work will be completed by the end of November. Real Estate and Site Planning's efforts on the Master Plan were not completed until late September 2000 and invoice costs were not accrued. The cost for demolition of Building 609C for Project L-270, "Emergency Services Renovation," was not as high as planned. The Construction portion scheduled in FY 2001 will be higher than planned, making up the difference.

**Impact:** The Landlord Project is showing an artificial cost under run. No overall impact.

**Corrective Action:** The remaining funds from FY 2000 will be carried over into FY 2001 to complete the planned work.

## SCHEDULE VARIANCE ANALYSIS: (-\$ 1.0M)

**WBS/PBS**  
1.5.1/TP13

**Title**  
Landlord

**Description/Cause:** The unfavorable schedule variance is attributed to the Chlorine Containment System for Project L-303, 200 West Area Chlorine Containment System not being shipped until late October. The loading assembly supplier has not completed fabrication. In addition, the work was deemed plant forces instead of fixed price and the maintenance crew must be scheduled around other priority work like cold weather protection. The lead in two well cars has not been melted down for re-use due to the moratorium on recycled materials. Project L-270, "Emergency Services Renovation," is behind schedule due to demolition for the 609C facility being scheduled at a higher amount than the fixed price contractor had on his schedule and construction of the new building was scheduled lower than the Fixed Price contractor's schedule.

**Impact:** No significant impacts.

**Corrective Action:** None.

## FUNDS MANAGEMENT FUNDS VS SPENDING FORECAST (\$000) FY TO DATE THROUGH SEPTEMBER 2000 (FLUOR HANFORD, INC. ONLY)

	Project Completion *			Post 2006 *			Line Items *		
	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance
Multiple Outcomes									
15 Landlord				\$ 17,700	\$ 11,733	\$ 5,967			
TP13 Operating Line Item									
Total Landlord Operating				\$ 17,700	\$ 11,733	\$ 5,967			
Total Landlord Line Item									

\* Control Point

## ISSUES

Nothing to report at this time.

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

PROJECT CHANGE NUMBER	DATE ORIGIN	BCR TITLE	FN00 COST IMPACT \$000	SCH	FFCH	DATE TO CCB APRVD	CCB APRVD	RL APRVD	CURRENT STATUS
I.PM-00-008	8/24/00	Bridge BCR for FY 2001 MYWP Submittal	\$33,000	X	X	8/1/00	8/1/00		Approved by RL
I.PM-00-009	9/12/00	Defefer Road Overlays and Plans	\$105	X	X	9/13/00	9/13/00		Approved by RL
I.PM-00-010	9/12/00	Stanford Fire Suppression and Recovery Costs	\$2,500	X	X	9/13/00	9/13/00		Approved by RL
I.H-2001-002	9/25/00	FY2001 Fee Reduction to 90%	-\$107						Draft Prepared
		ADVANCE WORK AUTHORIZATIONS							
		Nothing to report at this time.							

## MILESTONE ACHIEVEMENT

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MILESTONE TYPE	FISCAL YEAR-TO-DATE			REMAINING SCHEDULED			TOTAL FY 2000
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	
Enforceable Agreement	0	0	0	0	0	0	0
DOE-HQ	0	0	0	0	0	0	0
RL	9	0	0	0	0	0	9
<b>Total Project</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>

## Tri-Party Agreement / EA Milestones

Nothing to report.

## DNFSB Commitments

Nothing to report.

## MILESTONE EXCEPTION REPORT

Number/VWBS Level	Milestone Title	Baseline Date	Forecast Date
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**OVERDUE – 0**

**FORECAST LATE – 0**

## **PERFORMANCE OBJECTIVES**

The items listed below are not Performance Incentives. They are performance goals (i.e., milestones and goals between FH and the subcontractor).

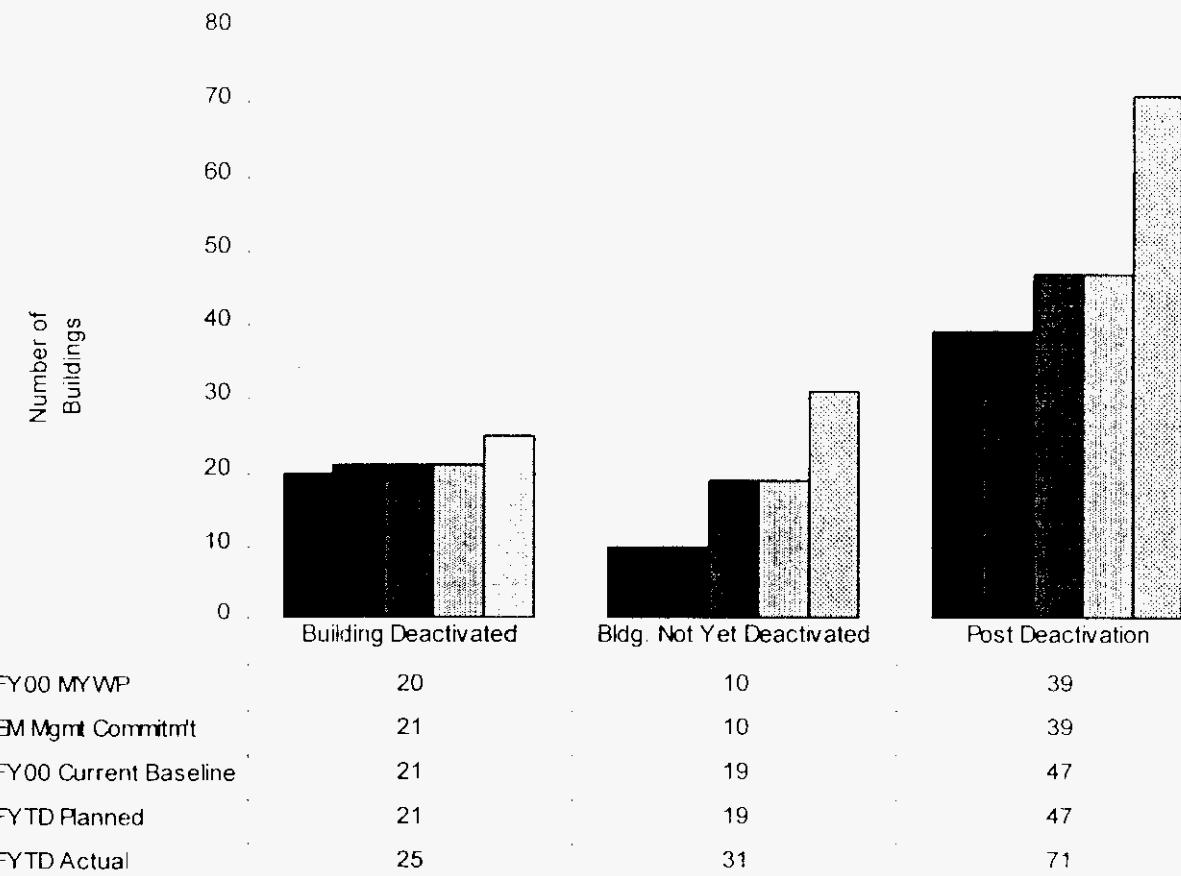
<b>Outcome</b>	<b>Performance Goals</b>	<b>Status</b>
<b>Restore the River Corridor for Multiple Uses &amp; Transition the Central Plateau</b>	Replace 1,200 Feet of 2-inch Sanitary Water Line from 272AW Building Along Canton Ave. in 200 East	Completed construction on September 28, 2000.
	Provide Vegetation and Animal Control to Reduce/Minimize the Spread of Contamination	Met performance expectations. See Accomplishments Section.
	Legacy Site Cleanup	Met performance expectations. See Accomplishments Section.
	Complete Installation of 100K/D Emergency Notification Sirens which will Complete the Total Integration of All Outside Sirens	Completed on schedule in July 2000.
	Complete Emergency Services Renovation of the 200 Area Fire Station	Completed all FY 2000 activities associated with this project to support construction completion by April 6, 2001.
	Shutdown Approx. 20 Vacant Office Facilities – Deactivate 25 Vacant Facilities	Met performance expectations. See Accomplishments Section.
<b>Put Assets to Work for the Future</b>	Disposition One Well Car and One Flat Car – Surveillance and Maintenance of Legacy Rail Cars at 212R Awaiting Disposition	Met performance expectations. See Accomplishments Section.

## **KEY INTEGRATION ACTIVITIES**

- Developed a Long Range Infrastructure Plan, which identifies critical infrastructure projects needed to support the Site's mission needs. Planning and integration meetings were held with Site programs to fully understand and integrate their requirements. The information contained in the Long Range Infrastructure Plan was later requested by DOE-RL in the form of a Schedule Options Study for Site Infrastructure, and DOE-HQ in the form of an Infrastructure Restoration Plan.
- Supported the Office of Environmental Management (EM) in reviewing infrastructure budget and policy issues as part of the Infrastructure Life Extension Campaign. The effort might result in an addendum to EM's FY 2002 budget request to the Office of Management and Budget.

## BUILDING DEACTIVATION

Building Deactivation as of September 30, 2000



**Buildings Deactivated:** **MORE** buildings were vacated in FY2000 than planned. Some of these additional buildings were deactivated because the action was simple and relatively inexpensive. See buildings not yet deactivated for more information.

**Buildings Not Yet Deactivated:** **THESE** totals represent buildings in queue for deactivation. The baseline and planned totals represent the number expected remaining at the end of the year. This is dependent on actions of other projects and is not within Landlord control. Comparisons from period to period are not meaningful. Building flow from this category and impact the totals in buildings deactivated and those in post deactivation.

**Post Deactivation Monitoring:** **MORE** buildings were vacated in FY2000 than planned and were deactivated and are now in post deactivation. This includes six buildings that were vacated which did not require deactivation.

## FACILITY DECOMMISSIONING – CLEANUPS

Facility Decommissiong - Cleanups as of September 30, 2000

25

Number of Buildings

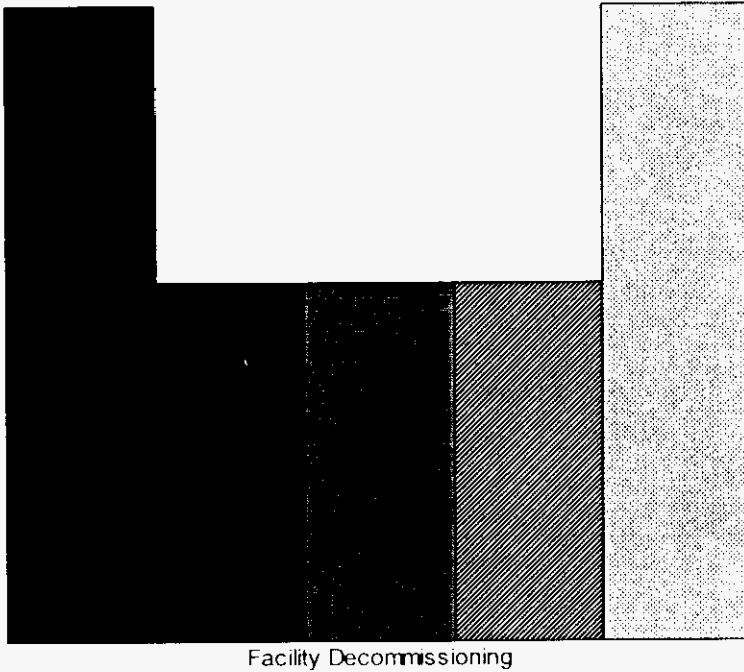
20

15

10

5

0



<input checked="" type="checkbox"/> FY00 MYWP	23
<input checked="" type="checkbox"/> EM Mgmt Commitm't	13
<input checked="" type="checkbox"/> FY00 Current Baseline	13
<input checked="" type="checkbox"/> FYTD Planned	13
<input type="checkbox"/> FYTD Actual	23

**Facility Decommissioning:** The Landlord Project was able to decommission or remove more facilities than planned because the time and money required to dispose of several facilities was small.



## **Section I** *Support*

### **PROJECT MANAGERS**

<b>SP&amp;I</b>	W.W. Ballard, RL	(509) 376-6657
	G.J. McCleary, FH	(509) 372-8385
<b>SSE</b>	W.W. Ballard, RL	(509) 376-6657
	M.L. Grygiel, FH	(509) 372-2983
<b>ECP</b>	S.H. Wisness, RL	(509) 373-9337
	J.W. Hales, FH	(509) 376-4069
<b>PSRP</b>	S.H. Wisness, RL	(509) 373-9337
	R.L. Dirkes, PNNL	(509) 376-8177

## **SUMMARY**

Mission Support, Project Baseline Summary (PBS) OT01, consists of four sub-projects:

- Planning and Integration [Work Breakdown]
- Structure (WBS 1.8.2.1)]
- Systems Engineering (WBS 1.8.2.2)
- Environmental Compliance (WBS 1.8.2.3)

The Environmental Compliance Program is composed of two elements. These two elements were stand-alone programs known as the Hanford Environmental Management Program (HEMP) and the Effluent and Environmental Monitoring Program (EEM) prior to FY99. Although there is a single program, these elements retain their identity on the Integrated Priority List as two separate Units of Analysis.

- Public Safety and Resource Protection (WBS 1.8.2.4)

In addition, Richland Directed Activities, PBS OT04, is included in this section. It consists of general site requirements such as:

- Resource Conservation and Recovery Act [RCRA] Mixed Waste Fee (management fee)
- Department of Health (DOH) Oversight (air monitoring)
- Downwinder Litigation
- Permits/site support [State of Washington (air emissions program)]
- Emergency Preparedness Grants
- State of Oregon Hanford Oversight
- Payment in Lieu of Taxes
- Hanford Advisory Board/Miscellaneous Grants (Hanford Openness Panel)
- Uranium Mass Balance Project (Paducah)
- National Security Analysis (formerly declassification of documents)
- Other minor financial assistance grants and contracts.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of September 30, 2000. All other information is as of October 25, 2000 unless otherwise noted.

## **Project Controls**

### **Top 5 Accomplishments for FY 2000**

- Coordinated and submitted Fluor Hanford Project data for Budget Formulation (IPLs, PPLs and PBSs), Schedule Options Study support, and Summary Schedule (includes FH, BHL, and PNNL Projects) (Progress).
- Supported significant integration activities such as Budget Formulation (IPLs, PPLs and PBSs), Schedule Options Study, and Summary Schedule (includes FH, BHL, and PNNL Projects) (Progress).

- Developed, implemented and managed a process to analyze project performance and cost trends via Fiscal Year Spend Forecast to allocate funds to key clean-up activities and maintain funds within Budget & Reporting control points (Progress).
- Delivered FY 2001 MYWP Updates electronically (Progress).
- Coordinated Performance Management Meetings (Progress).

## **Additional FY 2000 Accomplishments**

### **Progress**

- Transitioned from Hanford Site Performance Report to Environmental Management Performance Report (EMPR).
- Completed ISMS verification.
- Implemented Project Execution Module to incorporate a significant change in DOE-HQ reporting requirements.
- Completed Business Management Oversight Process (BMOP) plan and approach.
- Aligned monthly reports to Site Critical Outcomes.
- Active and driving participant in 10% base operations reduction.
- Actively involved in range fire recovery cost analysis.
- Maintained Business Management Systems for Hanford Site such as HANDI, IPARS, IPABS, P3, and PERF.
- Maintained configuration management for Baseline Change Requests for Fluor Hanford.
- Submitted execution year performance data via IPARS to DOE-HQ on a monthly basis.

## **Systems Engineering and Integration (SE&I)**

### **Top 5 Accomplishments for FY 2000**

- Supported the initiative (Schedule Options Study) to develop a viable technical, schedule, and cost baseline for achieving the Hanford Site Outcomes. SE&I provided technical baseline information and analyses to support the selection of a preferred option. SE&I also supported several "sub-teams" in developing additional details on specific project level initiatives (Progress).
- Supported the FH initiative (Requirements Initiatives Integration Team [RIIT]) to find at least \$30M in efficiencies in base operations costs to allow RL to fund critical work in FY 2001 and FY 2002. This initiative has currently found over \$17M in efficiencies (Progress).
- Supported the FH Accelerating Cleanup Team in developing studies for the 300 Area, the Spent Nuclear Fuels Project, and the Nuclear Material Stabilization Project (Progress).
- Worked with the FH projects to improve and maintain the Hanford Site Technical Baseline Database (HSTD). The HSTD is used to provide integrated technical information for several DOE products including IPABS-IS, Multi-Year-Work-Plans, Hanford Site Environmental Management Specification, HANDI, and etc (Progress).
- Lead a workshop on a functional analysis of Long Term Resource Management at Hanford (Progress).

## **Additional FY 2000 Accomplishments**

### **Progress**

- Site Level Analyses and Models were used to provide a forecast on the Hanford Site population (by geographic region and by type of work) that tied to the Site Baseline Plans.
- Worked with FH Projects, DynCorp, and BHI to integrate the Waste Site and Facility responsibility assignments. Several corrections were made to various systems that were used to feed the IPABS-IS.
- Supported Chemical Management Program in evaluating various systems for managing chemical inventory on the Hanford Site.
- Developed a WEB page that demonstrates requirements traceability and flowdown. The WEB page has links to several other WEB sites as well.

## **Environmental Compliance Program (ECP)**

### **Top 5 Accomplishments for FY 2000**

- FH proactively maintained compliance with all applicable federal, state, and local environmental statutes and regulations. FH developed permitting and regulatory documents including 4 Resource Conservation and Recovery Act of 1976 (RCRA) Permit Class I Modifications, issued monthly NPDES Reports, lead development of the Hanford Air Operating Permit Supplement Package Application, and issued the 222-S, Part B Application.

Fifty-nine written enforcement actions were input into the Environmental Action Tracking **System (EATS) Database**. Forty-two have been completed and nine have been closed. More than 30 potential regulatory compliance issues were identified and analyzed. Nine regulatory analysis memorandums were developed to ensure the consistent compliance with regulations across the multiple FH Projects. FH coordinated and supported 50 regulatory inspections and responded to regulator requests. FH acted as the single point of contact for spill and release reporting for all site contractors.

Hanford Site environmental monitoring and reporting was performed for such activities as radioactive discharges, emergency and hazardous chemical inventory, radionuclide air emissions and toxic chemical releases; and six mandated regulatory reports were completed to keep the regulators informed of the status of FH's compliance with the regulations.

Annual site-wide environmental reports were prepared with data compiled from all prime contractors and delivered for issuance to the regulators well before the date required by the regulations.

The National Emissions Standards for Hazardous Air Pollutants reports were provided quarterly as required by the Federal Facility compliance Agreement identifying compliance activities completed during the previous quarter.

To assure that employees are informed of environmental regulations and their maintenance requirements, the NEPA Source Guide was updated and provided to the Site. FH also maintained the TPA database and public repository information for site use in assuring

compliance.

The Environmental Action Tracking System was improved with changes such as a warning system, reformatted report, and revised desk instructions. This system provides the site with a tool that ensures that regulator requests are responded to on time (Progress).

- Forty enforceable TPA milestones were planned in FY 2000 and all forty were completed with 13 being completed ahead of schedule. A TPA change was also successfully negotiated to meet Ecology's regulatory compliance expectations for the Plutonium Finishing Plant repackaging of Rocky Flats ash efforts. The resolution of this compliance issue ensured support for project acceleration (Progress).
- FH established the infrastructure for the Chemical Management Program that includes all facilities, Industrial Hygiene, Hanford Fire Department, Material Safety Data Sheets (MSDS), Emergency Response, Pollution Prevention, Procurement, and Quality Assurance. This allows for a more structured management of the site's chemicals (Progress).
- Timely Support was provided during and after the Hanford fire by collecting air sample filter data and analysis information. Support was also provided for regulator inspection of impacted waste sites. In addition, the RCRA contingency plan 15-day report was submitted to Ecology as required (Progress).
- At the January 5, 1999 Routine Technical Assistance Meeting (RTAM) with the DOH, ES obtained approval of a revision to the Central Waste Complex (CWC) radiation air Notice of Construction (NOC). The revision allows for a reduction of the number of required smears of NucFil filters, saving the project \$25K to \$30K per year (Progress).

## **Additional FY 2000 Accomplishments**

### **Progress**

- Completed on or ahead of schedule six (6) mandated Regulatory Reports on Hazardous Chemicals and Dangerous Waste management activities as required under EPCRA Subtitle B, WAC 173-303, and TSCA.
- Completed and submitted per revised schedule the Annual LDR Report required under TPA Milestone M-26-01.
- Prepared and issued Reports for Anticipated Costs of TSD Units Closure and Post-Closure Activities.
- Prepared and issued Annual Reports for Hanford Site Environmental Releases, Radionuclide Air Emissions, and PTRAEU & HVU Activities, and Quarterly Status Reports for NESHAP Activities.
- Provided Mid-Year Status Reports for NEPA activities on or ahead of schedule.
- Compiled and issued all monthly NPDES Reports on schedule.
- Completed all Quarterly RCRA Permit Class I Modifications on or ahead of schedule.
- Led Hanford Site activities for development and administration of the Hanford Air Operating Permit Application.
- Prepared and delivered the Hanford Site Air Operating Permit Application Supplement to RL.
- Revised and submitted five (5) RCRA Part A, Form 3 Permit Applications.
- Issued a Part B Application for 222-S that is tailored to become the model for future Hanford Site Part B Permit Applications.

- Supported preparation and issuance of the “working draft” RCRA Part B Permit Application for LLBG and T Plant.
- Coordinated strategy development, supporting data, and sitewide comments to prepare for a potential appeal of Modification E Revision to the Hanford Site RCRA Permit.
- Prepared and delivered the Hanford Air/Water Permitting Schedule.
- Provided Support for 111 Facility Inspections and 22 Facility Assessments throughout the year.
- Provided Interpretative Authority for Regulatory Analysis and Review of Proposed Rulemaking and for Environmental Compliance Issues Resolution.
- Prepared several NEPA Supplemental Analyses, which have allowed PFP stabilization activities to continue on schedule.
- Prepared the Surplus Uranium NEPA Environmental Assessment, which resulted in a Finding of No Significant Impact in June 2000.
- Prepared and submitted the DOE Order 435.1 Implementation Plan on schedule.
- Prepared for submittal ORP eight (8) Air Notices of Construction.
- Established an Environment & Regulation Web Page to disseminate numerous Environmental Laws, Regulations, Policies, Procedures, and Contractual Provisions.
- Completed Staff Training on ISMS Core Functions and Guiding Principles
- Supplied a technical expert on radiological air emissions for the DOE Germantown, MD office in the ES&H investigation of their DOE facilities in Oak Ridge, TN and Paducah, KY.
- Sitewide input for the Class 1 modifications of the HF RCRA Permit and for the Hanford Facility Dangerous Waste Permit Application, General Information Portion DOE/RL-91-28 was coordinated.
- Responses to the LDR Final Determination, TPA M-32 Administrative Order, EPA Multi-Media Inspection Compliant, and other regulatory and compliance analysis to support formal compliance actions were provided to legal councils and projects.
- Recovery actions for the WSCF Test Method deviation issue and associated sitewide impacts, including.
  - issued two status updates for the RCRA Focus Action Plan
  - completed sitewide sample-by-sample impact review
  - attended response team meetings/briefings
- Twenty Regulatory Environmental Issues Management List (REIML) issues including: tank integrity assessments; the TPA Milestone M-32-00 dispute; groundwater; RCRA Corrective Action; Land Disposal Restrictions, and Hanford Facility RCRA Permit conditions were prepared and reviewed. The REIML is a tool to identify and communicate environmental compliance issues for negotiation with the regulators.
- Provided clarifications to benefit facilities regarding Toxic Substances Control Act, including lack of a requirement from EPA on the management of low concentrations (<50ppm) of PCBs.
- A Hanford sitewide comment package was coordinated, developed and submitted on the State Dangerous Waste Amendments.
- Coordination for non-reportable and reportable releases of a hazardous substance and/or a petroleum product released to the environment continued throughout the year.
- All Environmental Protection procedures were updated to reflect new and revised requirements as well as FH organizational changes.

- The Nuclear Materials Stabilization project requested review and comment on an exemption request for a waste stream under the Dangerous Waste Regulations, WAC 173-303 for a state-only corrosivity waste code (WSC2). Commented on the exemption and cautioned that an additional waste code, state-only toxicity (WT02) should also be considered for the exemption request.
- Regulatory analysis and document preparation associated with Plutonium Finishing Plant efforts in interfacing with Ecology concerning the effort to start "pipe and go" activities of Rocky Flats Ash by September 5, 2000 were supported.
- Communications between WDOH, DOE-RL, and facilities/projects including PFP, WSCF Laboratory, and T Plant regarding compliance questions, strategies, and permitting associated with radioactive air emission compliance were facilitated.
- Coordination for Ecology Air technical assistance proposal/workshops and for first technical assistance visits was provided.
- RCRA contingency plan issues were coordinated with Emergency Preparedness in order to resolve Ecology concerns. This effort resulted reaching an agreement to close out many issues remaining from the Plutonium Reclamation Facility (PRF) explosion compliance inspection.
- Revisions to all the PHMC Environmental Protection Performance Objectives and Criteria were completed. These HNF-IPs will be used for the Facility Evaluation Board and other environmental assessments. The revisions include regulatory updates as well as incorporate ISMS requirements.

## **Public Safety and Resource Protection (PSRP)**

### **Top 5 Accomplishments for FY 2000**

- Significant progress was made towards the management and protection of the Hanford Site natural and cultural resources through the revision of the Biological Resources Management Plan (BRMaP) and completion of the draft Hanford Cultural Resources Management Plan. Implementation of BRMaP was initiated during the year. Both these resource management plans are critical to the protection of Site resources and will be instrumental in assuring the requirements associated with the Hanford Reach National Monument designation will be met. (Momentum).
- PS&RP staff played a major role during the fire that consumed approximately 150,000 acres of the Hanford Site in late June. Staff provided key meteorological support to emergency response and fire-fighting teams during the event. In addition, staff provided critical air sampling support and geological, ecological, and cultural resource information during immediate follow-up and damage assessment activities. Recovery activities include the collection of additional air, soil, and agricultural product samples, ecological surveys, and the replacement of damaged air sampling and meteorology equipment. In addition, plans for reclamation of burned mitigation sites and further resource (cultural and natural) protection were developed. Since the fire, remote sensing and GIS (Geographic Information System) analyses of the burn have been ongoing. Planning for roadside firebreaks was initiated late in FY 2000 and work will continue into FY 2001 to support DOE on technical aspects of firebreak construction and management. In August, the PS&RPP received a directive from DOE-RL to take prioritized, immediate steps to protect public and employee safety, and

rehabilitate critical biological resources and protect cultural resources damaged in the 2000 Hanford wild land fire. Cost estimates were prepared for the response to and recovery from the Hanford fire and provided to DOE-RL. An initial \$75,000 to cover the cost of these activities was distributed to PNNL from PBS RL-TP13 in the August financial plan. Staff members initiated steps to respond to this directive. Appropriate actions, as agreed upon with DOE-RL, to fulfill the directive, will be completed in FY 2000 (Progress).

- PS&RPP staff was recognized in May for their efforts during the elk relocation that was conducted in March 2000 with Outstanding Performance Awards. The PS&RPP provided radiological and sample collection support, resources to support the helicopter round-up activity, and Site institutional knowledge relative to elk behavior during the cooperative relocation effort that included the U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, and U.S. Department of Energy (Progress).
- In fulfillment of a DOE policy to conduct periodic (every three years) validation reviews of multi-year work plan (MYWP) baseline cost estimates, a review of the PS&RPP FY 2000 MYWP was initiated by the U.S. Army Corps of Engineers, November 15 and 16, 1999. The Corps review also includes the Environmental Management Program operated by Fluor Daniel Hanford. Several PS&RPP staff provided varying levels of support during the November 15th and 16th effort, which essentially completes the PS&RPP component of the review. Preliminary discussions with the Corps indicate that there seem to be few issues to resolve on the PS&RPP MYWP, and that "PNNL was very helpful, knowledgeable and informative." The validation review concluded that the funding for PS&RPP was consistent with the scope of work defined.
- The Hanford Meteorology Station switched to a personal computer (pc)-based computer network for gathering and processing all of the data from the Hanford Meteorological Monitoring Network and other data acquisition activities during December. This system consists of five networked personal computers each with a specific data collection and processing function. Identical data files exist on several of the computers for redundancy. The transition from the IBM RISC/6000 to the pc-based system was seamless, with no interruption in the data gathering process. There is a significant annual cost savings in the pc-based versus the IBM RISC system. MetView (meteorological data viewing) and APGEMS (Air Pollutant Graphical Environmental Modeling System) software was installed on the HMS computer systems during May. These two software packages were developed for use in the Emergency Operations Center. Some HMS-specific modifications to the MetView software were made to make the program more usable to operational meteorologists (Progress).

## **Additional FY 2000 Accomplishments**

### **Progress**

- Cultural Resources Project staff completed the Gable Mountain survey during April. This joint tribal survey was conducted in conjunction with the Hanford Cultural Resources Laboratory and represented the first survey conducted of a sacred site. The approach used, which was developed by the tribal partners, will serve as a model for future surveys of sacred sites.
- The final FY 2001 Multi-Year Work Plan (MYWP), PNNL-931-8B and associated Baseline Change Request bridging the FY 2000 MYWP to the FY 2001 MYWP were submitted to RL for approval on August 30, meeting a Key program milestone (RL.OT014001). The program funding to be authorized for FY 2001 totals \$6,605K.

All inputs used to feed the new electronic version of the program's FY 2001 Multi-Year Work

Plan (MYWP) were provided to the Fluor Hanford, Inc. (FH) database source systems as required by the baseline updating guidance. The inputs included updated MYWP technical narratives; the program's lifecycle cost profiles, milestones, and schedule; and updated Performance Objectives, Measures, and Expectations (POMES).

- All projects within the PS&RPP successfully weathered the transition into the year 2000 without any significant Y2K bugs. Several precautionary activities were conducted in anticipation of potential problems and program activities continued into CY 2000 seamlessly.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, and RL) shows that 48 of the 52 milestones (92 percent) were completed on or ahead of schedule and four milestones (8 percent) were completed late. The Milestone Achievement details, found following cost and schedule variance analysis, provide further information on all milestone types.

## **ACCOMPLISHMENTS THIS REPORTING PERIOD**

### **Project Controls**

- Coordinated and submitted Fluor Hanford Project data and provide significant support to integration activities such as Budget Formulation (IPL, PPLs and PBSs), Schedule Options Study, and Summary Schedule (includes FH, BHI, and PNNL Projects).
- Developed, implemented and managed a process to analyze project performance and cost trends via Fiscal Year Spend Forecast to allocate funds to key clean-up activities and maintain funds within Budget & Reporting control points.
- Conducted monthly Performance Management Meetings aligned to the Site Critical Outcomes with joint RL/contractor participation utilizing the workshop environment to enhance site communication and round table discussions including topics such as recognition of significant achievements, risk management (early warnings), issues, barrier mitigation and opportunities/breakthroughs.
- Completed milestone, SPI-00-002, Assure delivery of FY 2001 MYWP Updates to RL, on September 22, 2000.
- The deliverable, Monthly EMPR was delivered on September 29, 2000
- The deliverable, Submit Updated 1.8.2.1 MYWP of Final Review/Approval was submitted on September 22, 2000.

### **Systems Engineering and Integration**

- Worked on an initiative to align the Project Baseline Summaries (PBS) and Work Breakdown Structure (WBS) to the Hanford Outcomes. This work is providing the framework for the Hanford Site Requirements Document that is being developed by RL with support from SE&I.
- Supported a DOE-HQ workshop on the Stream Disposition Data. The workshop initiated efforts to improve the process and the Integrated Planning, Accounting, and Budgeting System - Information System (IPABS-IS). The results will be incorporated into the HQ budget guidance that will be issued Spring FY 2001.
- Met the BMOP expectations by maintaining the HSTD accuracy at > 99% and preparing 5 Systems Engineering procedures for approval.

## **Environmental Compliance**

### **Chemical Management**

- The annual briefing to DOE on the status of the Chemical Management Program (CMP) was presented on September 21, 2000. This briefing satisfies section 5.8 of the Chemical Management Requirements document. DOE had several requests for information, which are currently being gathered.

### **National Environmental Policy Act of 1969 (NEPA)**

- The Environmental Compliance Program NEPA activities report for FY 2000 and the update to the NEPA Source Guide were issued on September 27, 2000. The issue of these documents completed milestones ECP-00-202 and ECP-00-203 three days ahead of schedule.

### **Air Compliance**

- Plans for obtaining the Categorical Air Permit were implemented on September 28, 2000. This completed milestone ECP-00-407 two days ahead of schedule.
- A meeting was held with Washington Department of Health (WDOH) personnel in Olympia on September 19th and 20th, which addressed Hanford Site comments on emission source listings contained in the preliminary draft of the Air Operating Permit.
- A meeting was conducted with the Hanford Site Central Environmental Committee and the FH Environmental Center of Expertise (ECOE) to discuss the WDOH order received in September 2000. The order requires that differential pressure gauges used in conjunction with Hanford radiation air abatement systems be annually calibrated or functionally tested, and that lists of these gauges be provided to WDOH by the end of October 2000. The ECOE has proposed that the Hanford Site respond to the WDOH order by providing a list of DP gauges. The list should be broken down into three categories: gauges currently on an annual calibration/functional testing schedule, gauges that will convert over to this schedule, and gauges whose schedules will be negotiated with WDOH. A draft response letter reflecting the ECOE has been prepared and distributed for review by affect parties. A “white paper” has also been prepared that evaluates the issue and the possible regulatory bases for WDOH’s position.
- ES prepared, for internal review, a draft categorical Notice of Construction (NOC) to allow for pre-approved entry and surveillance activities in facilities throughout the Hanford Site. In support of this draft, a unit curie offsite dose information was obtained from PNNL, for worst-case releases from each of Hanford’s operating areas. One FH facility has already expressed interest in possible use of the NOC for coverage of some planned entry and surveillance activities.

### **RCRA Permit**

- A response was prepared to an Ecology letter requesting additional information for permitting documentation supporting Modification F of the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit. Ecology requested the additional information by October 11,

2000, to perform a completeness review of documentation supporting Modification E of the Hanford Facility RCRA Permit. The additional information pertained to the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex, Part A, Form 3, Revision 8 and Part B, Revision 1 (WA7890008967); and Hanford Facility Dangerous Waste Permit Application, General Information Portion, DOE/RL-91-28. The requested information was transmitted to Ecology on October 10, 2000.

- Ecology stated in the September 2000 Permit Steering Committee meeting that Ecology plans to issue Revision 7 of the RCRA Permit incorporating Modification E by the end of the calendar year. Modification E includes the Central Waste Complex (CWC) and the Waste Receiving and Processing (WRAP) Facility. It was informally proposed to Ecology that the agency incorporate lessons learned from the 222-S Part B permit negotiations into the CWC and WRAP portions of the RCRA Permit. This would further delay issuance of Modification E, but would benefit both facilities. Ecology is considering the proposal and a response is anticipated by the end of October 2000.
- Hanford Facility RCRA Permit requirement, Part II.U.3., requires that piping schematics for dangerous waste underground pipelines shall be maintained in the Facility Operating Record and updated annually, after the initial submittal, with new or revised information. The annual RCRA Permit mapping and marking update information for the Hanford Site was completed on September 14, 2000. This completed milestone ECP-00-703 one week ahead of schedule.

### **RCRA Permit Revision and Implementation**

- Environmental Services (ES) supported a meeting on revising Building Emergency Plans (BEP) for final status units. ES facilitated the resolution of issues with BEPs and completed baseline BEPs for LERF/ETF and 242-A Evaporator. The new approach will require a review of BEPs when DOE/RL-92-04 is modified. The *Hanford Emergency Management Plan*, DOE/RL-92-04, is included as Attachment 4 to the Hanford Facility Dangerous Waste (RCRA) Permit. If Permit modification forms are required for a DOE/RL-94-02 revision and the revision effects BEPs, permit modification forms will also be completed/submitted for the BEP for each final status TSD unit. Previously when DOE/RL-94-02 was revised, the tiers down documents were not reviewed for impacts.
- ES supported meetings/preparation of the new Chapter 8's (training) for final status units for inclusion into the Class 1 modification package.

### **Inspections/Assessments**

- Regulatory inspections/assessment support was provided at the following facilities:
- On June 14, 2000 the State of Washington Department of Ecology started an assessment of the Plutonium Finishing Plant (PFP). The Department of Ecology completed their assessment on September 7, 2000. The purpose of their assessment was to determine a baseline of information from which to determine if waste management at PFP was adequate, if all waste streams had been identified, and to support transition of PFP to a deactivated status.
- On September 27, 2000, inspectors from the EPA and the State of Washington Department of Ecology (Ecology) performed an inspection of pre-selected non-regulated waste streams at Hanford. The waste streams were located in three different locations and were being

collected in 55-gallon drums with "non-regulated" waste labels affixed to them. The inspectors provided each facility representative with a "checklist" detailing any concerns or corrective actions necessary. They inspected 4 drums at the new HEHF Annex (2917-WB) building in the 200 West Area, 3 drums at U-Plant, 1 drum and a locked fenced area that contained other recycled waste at T-Plant. The inspectors also visited and toured the Consolidated Centralized Recycle Center in the 400 Area.

- On September 27, 2000, inspectors from the EPA and Ecology performed a follow-up inspection of the 2714-U waste drums stored at the T Plant Complex. The inspectors met with the ECO and performed a walkthrough of the Mixed (Radioactive) Waste Storage Pad and the 217-T hazardous waste storage building.
- On Tuesday, October 3, 2000 the Washington State Department of Health (WDOH) visited the 222-S Laboratory to gain a status of the cracking that is occurring on the main stack.
- ES performed environmental compliance assessments at the following facilities:
  - 310/340 Complex
  - 324/327 Facility
  - 200 Accelerated Decommissioning Project facilities
  - 300 Accelerated Decommissioning Project facilities
  - CWC Complex (sodium)

### **Crosscutting Compliance/Issue Resolution**

- Land Disposal Restriction (LDR) compliance activities continued during the month. Comments were received from Ecology on the Interim LDR Report for 2000, and a response from Ecology was received on alleged violation #4. A strategy for Interim 2000 LDR Report comments is being prepared and verbal agreement was obtained from Ecology on the response to alleged violation #4 in order to close the compliance action.
- ES coordinated the compilation and verification of the status concerning the 'Silver List' close-out forms in response to an Ecology request. Initiated in about 1995, the (Dan) Silver List closeout forms identify environmental compliance items and provide documentation of their resolution that might not otherwise exist to support agreement with the regulators.
- Environment and Regulation (E&R) prepared the regulatory basis for and was involved in a discussion with the EPA (September 28, 2000) on the continuation of interim status at Hanford.

### **Project Support (ECP funded)**

- The River Corridor Project requested help in preparing the quarterly Class 1 Permit Modifications for the PUREX Storage Tunnels Part A Permit Application. Changes were proposed and processed in the package transmitted. The training modifications for all final status units were also prepared and included in this quarters Class 1 Quarterly Permit Modification package.
- Environmental function support continued at Plutonium Finishing Plant (PFP) in interfacing Ecology on regulatory matters concerning the transition of PFP to slab on grade, and in developing a response to the Washington State Department of Ecology letter dated September 7, 2000 concerning Ecology's Plutonium Finishing Plant Assessment Report.

### **Environmental Notifications and Reporting**

- Regulatory reporting was coordinated for fourteen (14) non-reportable releases of a hazardous substance and /or a petroleum product released to the environment. All of these releases were cleaned up and disposed of per state and federal requirements. There were no reportable events, with a release to the environment, three (3) reportable code non-compliance events reported directly to the regulators, and one (1) event, which required a notification to the regulators per a regulatory agreement letter.

## **PUBLIC SAFETY AND RESOURCE PROTECTION (PSRP)**

- PS&RPP staff made two presentations to DOE-RL mid- and top-level management during September. The presentations provided program and project overviews and FY 2000 accomplishments.
- Ecosystem Monitoring Project staff completed the following report: Tiller, B.L., L.L. Cadwell, R.K. Zufelt, L. Bender, F. Turner, and G.K. Turner. 2000. "Population Characteristics and Seasonal Movement Patterns of the Rattlesnake Hills Elk Herd - Status Report 2000." PNNL 13331, Pacific Northwest National Laboratory, Richland Washington.
- *Hanford Site Environmental Report 1999* was printed and distributed to RL and the public the last week of September, thus fulfilling FO Milestone RLOT013003 "Annual Environmental Report to RI, and the Public."
- "Collect FY 2000 Environmental Samples in Accordance with Environmental Surveillance Master Sampling Schedule for CY 1999 and CY 2000 and the Surface Environmental Surveillance Procedures Manual" was completed by 09/30/00, thus fulfilling PNNL Key Milestone RLOT013001 on schedule.
- Project staff (along with the other PS&RPP projects) provided a SESP overview to DOE-RL Office of Site Services staff September 8, and DOE Hanford Site managers, September 22, on site surveillance.
- The final copy of Rev 12 of the *NEPA Characterization Document* was completed and distributed by 09/29/00. Hard copies were produced as well as electronic copies (placed on a Compact Disc). Rev 12 is being placed on the Ecology and NEPA websites at PNNL. This completes PNNL Key Milestone RLOT014002, "NEPA Characterization Document (Rev. 12) Issued by PNNL."
- The Draft Hanford Cultural Resources Management Plan was delivered to DOE-RL on September 29, fulfilling RI Milestone RLOT015004.
- The *History of the Plutonium Production Facilities at the Hanford Site Historic District, 1943-1990* was delivered to DOE-RL on September 29, fulfilling RL Milestone RLOT015003, "Complete Hanford Site Historic District Book".

## **ISMS STATUS**

Nothing to report at this time.

## **BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT**

Nothing to report at this time.

## **UPCOMING ACTIVITIES**

- Revision 3 of the Hanford Site Environmental Monitoring Plan (DOE/RL-91-50), which is revised every 3 years, is scheduled for completion and distribution in November 2000.
- The Annual Benton County Air Authority (BCAA) Asbestos Notification is due December 31, 2000.
- The Quarterly RCRA Permit Class I Modification Notification is due January 2, 2001.
- The Quarterly NESIHAPs Status report is due January 29, 2001.
- The Annual Dangerous Wastes Reports and Tier II Emergency and Hazardous Chemical Inventories are due February 21, 2001.
- Ecology has again delayed issuance of Modification E of the Hanford Facility RCRA Permit (will incorporate WRAP and CWC units), and is now projecting this will occur after January 1, 2001. It has been proposed to Ecology that some of the positive permitting agreements that came out of the recent 222-S Part B Permit application workshops be considered in permit conditions prepared for Modification E. To date, Ecology has stated it will consider only the 222-S agreements in finalizing Modification E.
- Environmental Services will compile hazardous chemical information from the Hanford facilities to prepare the Tier Two Emergency and Hazardous Chemical Inventory Report, which is due February 21, 2001 (Milestone ECP-01-501).
- Environmental Services will compile the dangerous waste generation and waste management activities on site for the Hanford Annual Dangerous Waste Reports, which are due February 21, 2001 (Milestone ECP-01-503).
- The annual Surface Environmental Surveillance Project design review process has been initiated and will culminate with the revision and distribution of the "CY 2000 Hanford Site Environmental Surveillance Master Sampling Schedule" by the end of February 2001.
- Summaries of CY 2000 Biodiversity Plot Monitoring Data and the Sage Brush Die-Off observed during the previous fiscal year will be completed during March 2001.
- The annual "Climatological Data Summary Report for CY 2000" is scheduled for completion and distribution by the end of May 2001.

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

	BCWP	ACWP	VARIANCE
<b>Mission Support 1.8</b>	\$24.7	\$25.2	-\$0.5

The \$0.5 million (2 percent) unfavorable cost variance is due to several factors. Further information at the PBS level can be found in the following Cost Variance Analysis details.

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

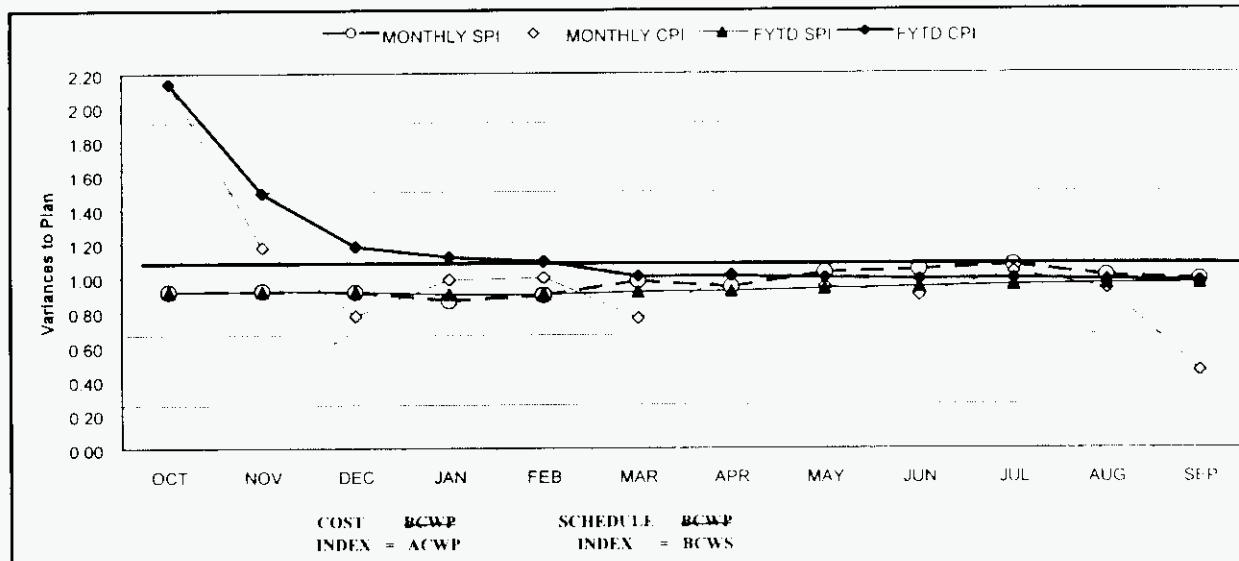
	BCWP	BCWS	VARIANCE
<b>Mission Support 1.8</b>	\$24.7	\$25.5	-\$0.9

The \$0.9 million (3 percent) unfavorable schedule variance is due to several factors. 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							
	BCWS	BCWP	ACWP	SV	%	CV	%	
PBS OT01	Mission							
WBS 1.8.2	Support Other	\$ 25,536	\$ 24,663	\$ 25,207	\$ (873)	-3.4%	\$ (545)	-2.21%
	MYPs							
<b>Total</b>		\$ 25,536	\$ 24,663	\$ 25,207	\$ (873)	-3.4%	\$ (545)	-2.21%

## COST/SCHEDULE PERFORMANCE INDICES (MONTHLY AND FYTD)



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	SPI
MONTHLY SPI	0.92	0.92	0.91	0.86	0.90	0.98	0.94	1.03	1.05	1.07	1.01	0.99	
MONTHLY CPI	2.14	1.18	0.78	0.99	1.00	0.76	1.02	0.95	0.90	1.03	0.93	0.46	
FYTD SPI	0.92	0.92	0.92	0.90	0.90	0.92	0.92	0.93	0.94	0.96	0.96	0.96	0.97
FYTD CPI	2.14	1.49	1.18	1.12	1.09	1.01	1.01	1.00	0.99	0.99	0.99	0.98	
MONTHLY BCWS	\$1,848	\$2,071	\$1,576	\$2,309	\$1,858	\$2,209	\$1,996	\$2,070	\$1,599	\$1,771	\$2,083	\$2,069	
MONTHLY BCWP	\$1,694	\$1,907	\$1,442	\$1,997	\$1,666	\$2,166	\$1,880	\$2,127	\$1,578	\$1,899	\$2,101	\$2,040	
MONTHLY ACWP	\$792	\$1,620	\$1,853	\$2,022	\$1,668	\$2,837	\$1,852	\$2,241	\$1,762	\$1,835	\$2,257	\$4,173	
FYTD BCWS	\$1,848	\$3,919	\$5,495	\$7,804	\$9,662	\$11,871	\$13,867	\$15,938	\$17,417	\$19,218	\$21,301	\$25,536	
FYTD BCWP	\$1,694	\$3,601	\$5,043	\$7,040	\$8,706	\$10,872	\$12,782	\$14,879	\$16,457	\$18,356	\$20,456	\$24,663	
FYTD ACWP	\$792	\$2,412	\$1,265	\$6,287	\$7,955	\$10,292	\$12,644	\$14,884	\$16,640	\$18,481	\$20,731	\$25,207	

## COST VARIANCE ANALYSIS: (\$-0.5M)

### WBS/PBS

### Title

#### 1.8.2/OT01

#### Mission Support

**Description/Cause:** The \$0.5 million (2.2 percent) unfavorable cost variance is within acceptable reporting thresholds.

**Impact:** No impact.

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

## SCHEDULE VARIANCE ANALYSIS: (\$-0.9M)

### WBS/PBS

### Title

#### 1.8.2/OT01

#### Mission Support

**Description/Cause:** The \$0.9 million (3.4 percent) unfavorable schedule variance is within acceptable reporting thresholds.

**Impact:** No impact.

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

**FUNDS MANAGEMENT**  
**FUNDS VS SPENDING FORECAST (\$000)**  
**FY TO DATE THROUGH SEPTEMBER 2000**  
**(FLUOR HANFORD, INC. ONLY)**

	Project Completion *			Post 2006 *			Line Items *		
	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance	Funds	Actual Cost	Variance
<b>Multiple Outcomes</b>									
18    Mission Support				\$ 17,652	\$ 17,060	\$ 592			
OT01, OT04				\$ 7,267	\$ (172)	\$ 7,439			
Inventory				\$ 24,919	\$ 16,888	\$ 8,031			
<b>Total Mission Support Operating</b>									
<b>Total Mission Support Line Item</b>									

\* Control Point

## ISSUES

**Baseline Updating Guidance (BUG)** – Until RL provided formal response to several issues FH outlined in its July 18, 2000 letter to RL (Ref: FH-000359A R1, "Fluor Hanford Significant Issues with Baseline Updating Guidance"), FH was proceeding at risk with the recommendations proposed in the letter.

**Corrective Action/Status** – Issues were resolved via guidance letters and meetings with RL.

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

PROJECT CHANGE NUMBER	DATE ORIGIN	BCR TITLE	FY00 COST IMPACT \$000	SCI	TECH	DATE TO CCB	CCB APPROV	RL APPROV	CURRENT STATUS
SPI-2000-001	10/7/99	Addition of Paths to Closure Range	\$67						Approved
SPI-2000-002	10/22/99	FY 1999 Carryover Scope	\$248	X	X	2/3/00	2/3/00		Approved
SPI-2000-003	11/5/99	Baseline Modifications to Support Fiscal Year 2000 Multi-Year Work Plan Update	(\$923)			3/23/00	3/23/00	5/14/00	Approved
SPI-2000-006	2/17/00	Modeling Tool & IPL Module Scope	\$117	X	X	2/17/00	2/17/00	5/4/00	Approved
SPI-2000-007	4/28/00	10% Reduction to FY 2000 1.8.2.1	\$675		X				Approved
PSR-2000-001		Alignment of Budget/Scope to Funding Allocation and Incorporation of FY 1999 Carry Over	\$193	X				5/4/00	Approved
PSR-2000-002	6/13/00	Incorporation of FY 1999 Carryover Funds to FY 2000 Scope	\$175			6/22/00	6/22/00	8/10/00	Approved
SSE-2000-001	10/6/99	FY 2000 Bridge Change Request	(\$88)			11/10/99	11/10/99	1/26/00	Approved
SSE-2000-002	10/18/99	FY 99 Carryover							RWOA-F
SSE-2000-003	1/31/00	Repricing Impacts to Baseline							Draft
SSE-2000-004	7/26/00	FY 2000 to FY 2001 BCR							draft
ECP-2000-001	11/15/00	Correctional/Alignment of ECP Milestones				11/30/99	11/30/99	1/26/00	Approved
ECP-2000-002	12/7/99	Remove Project W-420 from Environmental Compliance Program	(\$1,380)			1/5/00	1/6/00	2/11/00	Approved
ECP-2000-003	12/15/00	Utilization of ECP FY - 99 Uncosted Carryover	\$449						Draft
ECP-2000-004	2/15/00	Adjust Baseline to Final FY 2000 Funding Allocations and Change ECP-00-410 Milestone Date	\$161			4/7/00	4/7/00	5/10/00	Approved
ECP-2000-005	4/18/00	Change Due Date for ECP Milestone				5/4/00	5/4/00	5/25/00	Approved
ECP-2000-006	5/2/00	Rebuild Automated Bar Coding of Air Samples at Hanford (ABCASH) System	\$193	X					Draft
ECP-2000-007	5/15/00	Change Level and Type of Environmental Compliance Program(ECP) Milestones				5/31/00			Approved
FFE2001-001	9/12/00	Base Ops Reduction for PHMC Projects	-\$535		X				Draft Prepared
FFE2001-002	9/25/00	FY2001 Fee Reduction to 90%	-\$129						Draft

## **MILESTONE ACHIEVEMENT**

<b>MILESTONE TYPE</b>	<b>FISCAL YEAR-TO-DATE</b>				<b>REMAINING SCHEDULED</b>			<b>TOTAL FY 2000</b>
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	22	3	0	0	0	0	0	25
DOE-HQ	0	1	0	0	0	0	0	1
RL	13	7	4	0	0	0	0	26
<b>Total Project</b>	<b>37</b>	<b>11</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52</b>

Only TPA/EA milestones and all FY 2000 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY 2000 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the FY 2001 TPA/EA milestones.

<b>FY 2000 Tri-Party Agreement / EA Milestones</b>			
<b>Number</b>	<b>Milestone Title</b>	<b>Baseline Date</b>	<b>Actual Completion Date/Status</b>
ECP-00-302	<b>RCRA Permit Class 1 Mod Notification Quarter 1 (For Year 2000-2046)</b>	10/01/1999	09/30/1999
ECP-00-702	<b>RCRA RPTS/DOCS Closure/Post Closure Cost Est. to RL</b>	10/22/1999	10/06/1999
ECP-00-901	<b>Issue 1<sup>st</sup> Quarterly NESHAP Status RPT to RL for EPA</b>	10/22/1999	10/20/1999
ECP-00-705	<b>RCRA Reports/Docs-Annual Permit Status Report – INEL</b>	12/01/1999	11/29/1999
ECP-00-508	<b>RCRA Section 3016 Report (Hazardous Waste Facility)</b>	12/06/1999	11/29/1999
EPC-00-306	<b>Annual Asbestos Notification of Intent (For Year 2000-2046)</b>	12/31/1999	12/14/1999
ECP-00-303	<b>RCRA Permit Class 1 Mod Notification Quarter 2 (For FY 2000-2046)</b>	01/01/2000	12/16/1999
ECP-00-902	<b>Issue 2<sup>nd</sup> Quarterly NESHAP Status RPT to RL for EPA</b>	01/28/2000	01/17/2000
ECP-00-701	<b>Annual Noncompliance Report to RL</b>	02/17/2000	02/09/2000
ECP-00-503	<b>1999 Hanford Site Annual Dangerous Waste Report (FY 2000-2046)</b>	02/22/2000	02/22/2000
ECP-00-501	<b>Tier II Emergency &amp; Hazardous Chemical Inventory</b>	02/23/2000	02/23/2000
ECP-00-003	<b>Biennial Assess. Of Info. &amp; Data Access Needs EPA/ECO (2000-2046)</b>	03/31/2000	03/06/2000
ECP-00-801	<b>Transmit EIS/ODIS Data to INEEL (FY 2000-2046)</b>	04/01/2000	03/31/2000
ECP-00-802	<b>Issue Annual Non-Radioactive Airborne Emissions Report (FY 2000-2046)</b>	04/01/2000	03/31/2000
ECP-00-304	<b>RCRA Permit Class 1 Mod Notification Quarter 3 (For FY 2000-2046)</b>	04/02/2000	3/29/2000

**PHMC Environmental Management Performance Report –November 2000**  
**Section I – Mission Support**

<b>FY 2000 Tri-Party Agreement / EA Milestones</b>			
<b>Number</b>	<b>Milestone Title</b>	<b>Baseline Date</b>	<b>Actual Completion Date/Status</b>
ECP-00-904	<b>Issue 3<sup>rd</sup> Quarterly NESHAP Status Report To RL for EPA</b>	04/21/2000	04/04/2000
ECP-00-307	<b>Submit Implementation Plan</b>	05/15/2000	05/15/2000
ECP-00-803	<b>Issue Annual Radionuclide Air Emissions Report (For FY 2000-2046)</b>	06/15/2000	06/15/2000
ECP-00-410	<b>Annual PTRAEU Report to DOE-RL (For FY 2000-2046)</b>	6/15/2000	06/14/2000
ECP-00-502	<b>EPCRA Section 313 Toxic Chemical Release Inventory</b>	06/23/2000	06/21/2000
ECP-00-504	<b>Annual PCB Document Log – June</b>	06/23/2000	06/22/2000
ECP-00-305	<b>RCRA Permit Class I Mod Notification Quarter 4 (For FY 2000-2046)</b>	07/02/2000	06/26/2000
ECP-00-507	<b>Annual LDR Report (M-26-01)</b>	07/21/2000	07/21/2000
ECP-00-906	<b>Issue 4<sup>th</sup> Quarterly NESHAP Status Report to RL for EPA</b>	07/28/2000	07/05/2000
ECP-00-804	<b>Annual Report on Environmental Releases</b>	08/31/2000	08/30/2000
ECP-00-703	<b>Coordinate RCRA Pipe Mapping and Marking (For FY 2000-2046)</b>	09/21/2000	09/14/2000
ECP-00-704	<b>Submit Revision of 91-28</b>	09/30/2000	08/29/2000
ECP-00-301	<b>RCRA General Facility Inspections (For FY 2000-2046)</b>	09/30/2000	09/28/2000
<b>DNFSB Commitments</b>			
	Nothing to report at this time.		

## **MILESTONE EXCEPTION REPORT**

**OVERDUE – 0**

**FORECAST LATE – 0**

<b>FY 2001 Tri-Party Agreement / EA Milestones</b>			
<b>Number</b>	<b>Milestone Title</b>	<b>Baseline Date</b>	<b>Actual Completion Date/Status</b>
ECP-01-901	<b>Issue Quarterly NESHAP Status Report to RL for EPA</b>	10/20/2000	
ECP-01-902	<b>Issue Quarterly NESHAP Status Report to RL for EPA</b>	1/29/2001	
ECP-01-904	<b>Issue Quarterly NESHAP Status Report to RL for EPA</b>	4/2/2001	
ECP-01-906	<b>Issue Quarterly NESHAP Status Report to RL for EPA</b>	8/31/2001	
<b>DNFSB Commitments</b>			
	Nothing to report at this time.		

## **PERFORMANCE OBJECTIVES**

Nothing to report at this time.

## **KEY INTEGRATION ACTIVITIES**

Specific components of the PS&RP Program are identified as a critical core project within the Groundwater/Vadose Zone Integration Project. As such, key activities relevant to both programs were integrated into FY 2001 detailed work plans as appropriate.

*PHMC Environmental Management Performance Report – November 2000*  
*Section J – National Programs*



## **Section J**

### *National Programs*

## **SUMMARY**

DOE EM is responsible for a variety of National Programs. DOE-HQ typically provides operations policy and programmatic guidance to one or more field office that serve as lead for individual programs. FH currently supports the following National Programs: Transportation and Packaging (PBS OT02) and Pollution Prevention and Waste Minimization (PBS WM07).

Transportation and Packaging provides full-service transportation and packaging capabilities. Packaging services for radioactive and hazardous cargo is provided, including regulatory safety-basis documentation, certification, and licensing. Packaging plans and logistical studies for major shipping campaigns are also provided, as well as approved training courses in transportation safety and waste management. Transportation and traffic logistics management, engineering and operational support to offsite customers, carrier selection and evaluation, automated transportation management systems used by the U.S. Department of Energy (DOE) complex and commercial vendors, and international transport of hazardous and radioactive packages are other services provided.

Pollution Prevention and Waste Minimization (P2/WMin) coordinates the development and implementation of a Hanford Site P2/WMin Program to comply with Federal, state, and DOE directives. The program's purpose is to achieve Site objectives through effective and efficient methodologies tailored to generator activities and operations.

### **Top 5 Accomplishments for FY 2000**

The Sitewide Cost Savings/Avoidance for the Hanford Site this fiscal year was over forty-seven million dollars (\$47M) (Progress).

The site accomplished a waste avoidance (routine and non-routine) of over 180,000 cubic meters of low level waste/mixed low level waste, over 26,000 metric tons of Hazardous waste, and over 1,500 metric tons of Sanitary waste. The purchase of EPA designated products containing recycled content was 98.3 percent (Progress).

The Hanford Site received three DOE Pollution Prevention Awards: 1) Donna Merry for Model Facility, 2) Public Outreach, and 3) Sowing the Seeds for Change. Hanford Site also won the Washington State Department of Ecology Recycling Award (Progress).

This fiscal year Pollution Prevention/Waste Minimization implemented nine Pollution Prevention high Return on Investment (ROI) projects with a savings/avoidance of \$23M and waste reduction of over 150,000 cubic meters at a cost of \$1.309 million (Progress).

Thirteen projects on the site were implemented with a project cost of \$1.9M and savings/avoidance of \$8.1M, with a potential waste reduction of 11,950 cubic meters (Progress).

## **Additional FY 2000 Accomplishments**

### **Progress**

The Cleanup/Stabilized Waste Avoided goal to reduce all waste by 10 percent (1,920 m<sup>3</sup>) was exceeded. The documented waste was reported at 7,280 m<sup>3</sup> through various processes and uses.

The updated Safety Analysis Report Packaging (SARP) HNF-SD-TP- SARP-017, Rev.2, for (Onsite) Multi-Canister Overpack Cask was completed and issued to RL April 12, 2000.

Six Transportation and Packaging Project Hanford Management System Procedures have been updated and issued.

FH T&P Program Office received a thank you from RL for the excellent work completing the Engineering Change Notice to the Lead Lined Drum Safety Analysis Report for Packaging (SARP) in a timely and efficient manner. The revisions to the safety analysis for the tie-down and Gas Generation sections of the SARP were well done and of high quality. The DOE Authorization Basis Division (ABD) review of the ECN was easier.

Efforts continued in the development of the Hanford Site Minimum Packaging Requirements (MPR) with RL. The intent of the MPR is to establish an equivalent baseline of requirements for on-site shipments (similar to 10 CFR 71) for future development of SARP/SEP's. Once these criteria have been established and approved by RL, the MPR will reduce the review and approval process for SARP/SEP's.

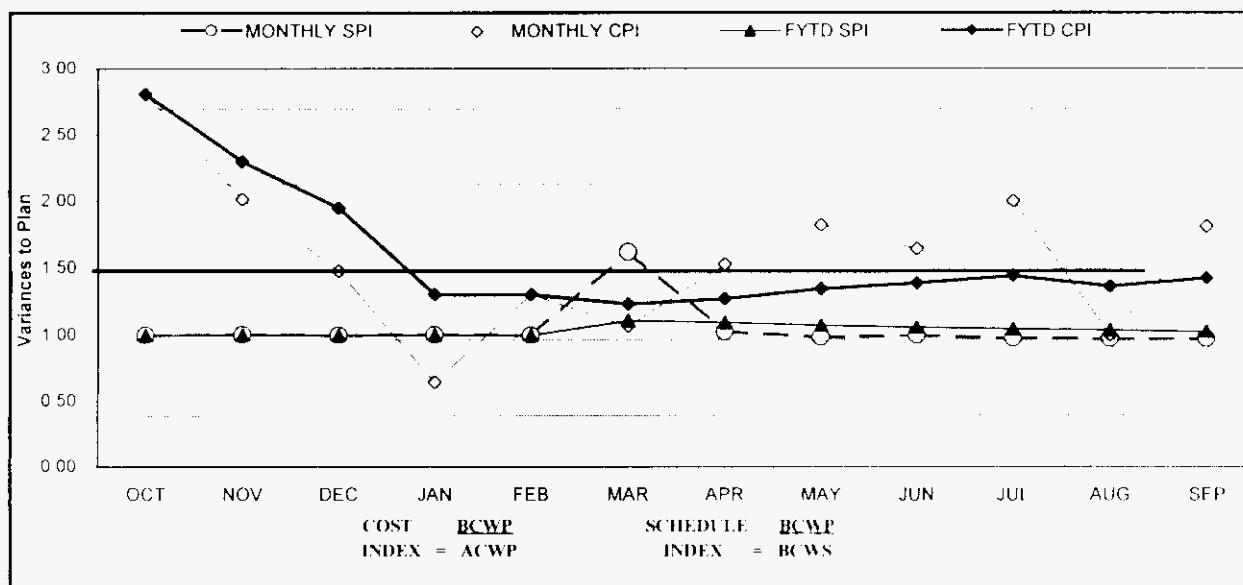
## **ACCOMPLISHMENTS THIS REPORTING PERIOD**

- A preliminary review of the PHMC LLW, MLLW, and hazardous waste generation numbers for September and FY 2000 was completed. The data reviewed to date indicates that the PHMC met the FY 2000 waste reduction goals. PNNI generated approximately 27 MT less of Hazardous Waste (HAZ) than in FY99 as a result of various actions taken in the past few years to minimize HAZ waste generated (i.e., Pollution Prevention Opportunity Assessments, Return on Investment (ROI) implementation, material substitution, and inventory reduction). SAN, LLW and MLLW waste reductions resulted from recycling, ROI implementation, and source reduction.
- The fourth quarter FY 2000 meeting was conducted September 25, 2000. Presentations made included a brief discussion of the technical services and training available; an overview of the PFP Safety and P2/WMin program; a BII presentation on the procurement and field use of the ROI funded Geo Physical Probe; the FY 2001 site goals; and draft revision #5 to the Hanford Site Waste Minimization and P2 Awareness Program Plan.
- In response to a DOE-HQ request, forecast numbers for shipping containers (i.e., drums, boxes, etc.) required by the site for the next 35 years was given to the DOE-RL P2/WMin Program Manager.

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

By PBS		FYTD						
		BCWS	BCWP	ACWP	SV	%	CV	%
PBS OT02	Transportation &	\$ 2,319	\$ 2,485	\$ 1,930	\$ 166	7%	\$ 555	22%
WBS 1.11.1	Packaging (RL 7601)							
PBS WM07	Waste Minimization	\$ 3,681	\$ 3,681	\$ 2,402	\$ (0)	0%	\$ 1,279	35%
WBS 1.11.2	(RLHQ 7770)							
<b>Total</b>		<b>\$ 6,000</b>	<b>\$ 6,166</b>	<b>\$ 4,332</b>	<b>\$ 166</b>	<b>3%</b>	<b>\$ 1,833</b>	<b>30%</b>

**COST/SCHEDULE PERFORMANCE INDICES**  
**(MONTHLY AND FYTD)**



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	1.00	1.00	1.00	1.00	1.00	1.62	1.03	0.98	1.00	0.98	1.00	0.9
MONTHLY CPI	2.81	2.01	1.48	0.65	1.30	1.07	1.53	1.82	1.64	2.00	1.00	1.81
FYTD SPI	1.00	1.00	1.00	1.00	1.00	1.11	1.10	1.07	1.06	1.05	1.04	1.03
FYTD CPI	2.81	2.30	1.95	1.30	1.30	1.23	1.27	1.35	1.39	1.44	1.36	1.42
MONTHLY BCWS	\$ 304	\$ 383	\$ 328	\$ 329	\$ 324	\$ 361	\$ 398	\$ 611	\$ 674	\$ 561	\$ 675	\$ 1,051
MONTHLY BCWP	\$ 303	\$ 384	\$ 328	\$ 330	\$ 324	\$ 585	\$ 409	\$ 601	\$ 672	\$ 548	\$ 657	\$ 1,024
MONTHLY ACWP	\$ 108	\$ 191	\$ 222	\$ 512	\$ 249	\$ 547	\$ 268	\$ 330	\$ 409	\$ 274	\$ 657	\$ 565
FYTD BCWS	\$ 304	\$ 687	\$ 1,015	\$ 1,345	\$ 1,669	\$ 2,030	\$ 2,428	\$ 3,039	\$ 3,713	\$ 4,274	\$ 4,949	\$ 6,000
FYTD BCWP	\$ 303	\$ 687	\$ 1,015	\$ 1,345	\$ 1,669	\$ 2,254	\$ 2,663	\$ 3,264	\$ 3,937	\$ 4,485	\$ 5,142	\$ 6,166
FYTD ACWP	\$ 108	\$ 299	\$ 521	\$ 1,033	\$ 1,282	\$ 1,829	\$ 2,096	\$ 2,427	\$ 2,836	\$ 3,110	\$ 3,767	\$ 4,332

## COST VARIANCE ANALYSIS: (+\$1.8M)

### WBS/PBS      Title

#### 1.11.1/OT02      Transportation and Packaging

**Description and Cause:** The \$555K (22 percent) favorable cost variance is due to a major change in the Motor Carrier Evaluation Program (MCEP) that resulted in no activities being done. When the revision is complete, MCEP field audits will resume, increasing both travel and labor costs. At the request of the customer, the Automated Transportation Management System/Enterprise Transportation Analysis System (ATMS/ETAS) integration project will not be started until FY 2001.

**Impact:** None.

**Corrective Action:** None.

#### 1.11.2/WM07      Pollution Prevention/Waste Minimization

**Description and Cause:** The \$1,279K (35 percent) favorable cost variance is due to staffing shortfalls in first half of year.

**Impact:** None

**Corrective Action:** Under-runs will be utilized to offset funding shortfall in Fiscal Year 2001.

## SCHEDULE VARIANCE ANALYSIS: (+\$0.2M)

### WBS/PBS      Title

#### 1.11.1/OT02      Transportation and Packaging

**Description and Cause:** The \$166K (7 percent) favorable schedule variance is due to program efficiencies and is within established thresholds.

**Impact:** None.

**Corrective Action:** None.

## FUNDS MANAGEMENT FUNDS VS SPENDING FORECAST (\$000) FY TO DATE THROUGH SEPTEMBER 2000 (FLUOR HANFORD, INC. ONLY)

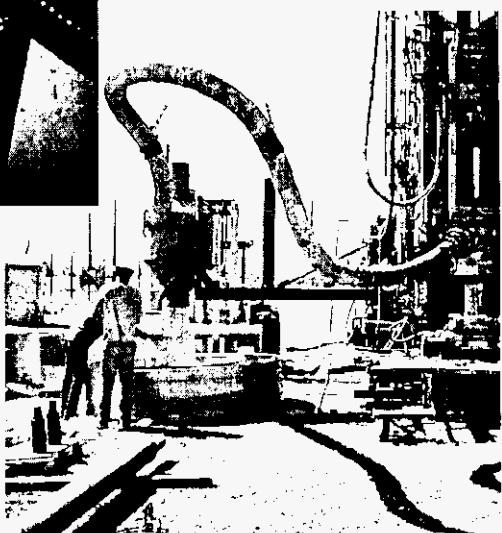
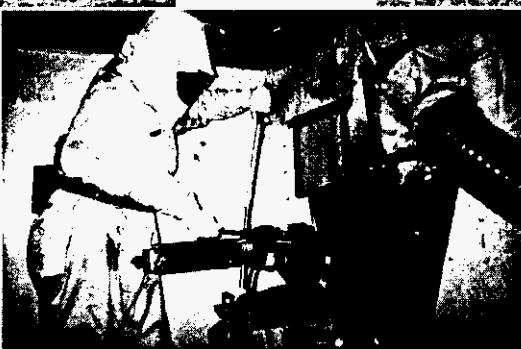
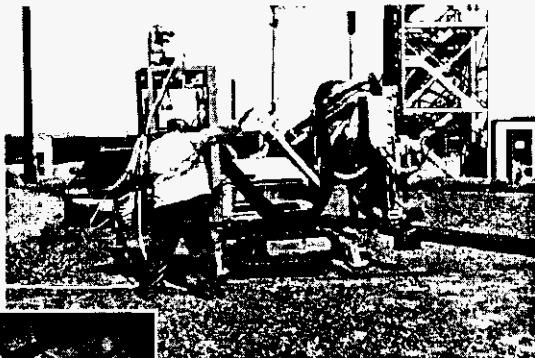
	Project Completion *			Post 2006 *			Line Items *		
	Funds	FYSF	Variance	Funds	FYSF	Variance	Funds	FYSF	Variance
Multiple Outcomes									
National Programs									
1.11.1 & WM07 OT02 WM07							\$ 6,638	\$ 4,328	\$ 2,310
Line Item									
Total National Programs Operating									
Total National Programs Line Item							\$ 6,638	\$ 4,328	\$ 2,310

\* Control Point

Richland Operations Office  
Environmental Restoration

# Environmental Management Performance Report

November 2000



*Focused on Progress...  
Focused on Outcomes!*



Department of Energy  
Richland Operations Office



Bechtel Hanford, Inc.  
Environmental Restoration Contractor

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**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION  
NOVEMBER 2000**

**INTRODUCTION**

The monthly Environmental Restoration (ER) Environmental Management Performance Report consists of three sections: Section A - Executive Summary, Section B - Restoring the River Corridor Project Summaries, and Section C - Transitioning the Central Plateau Project Summaries. All cost, schedule, milestone commitments, performance measures, and safety data is current as of September 30. Accomplishments, Issues and Integration items are current as of October 26, unless otherwise noted. For this month's report, emphasis is focused on providing a fiscal year 2000 (FY00) summary overview of accomplishments, cost/schedule performance, and key integration activities.

**Section A – Executive Summary.** This section provides an executive level summary of Bechtel Hanford, Inc.'s (BHI) performance information from a FY00 perspective and is intended to bring to Management's attention that information considered to be most noteworthy. The Executive Summary begins with a description of notable accomplishments that are considered to have made the greatest contribution toward safe, timely, and cost-effective cleanup during FY00. Major commitments are summarized that encompass Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones and FY00 Management Commitment milestones. Safety statistics are also included. Issues that require management and/or regulator attention and resolution status are addressed. Fiscal year-end ERC Project cost and schedule variance analysis is summarized. The Key Integration Activities section highlights site activities that cross contractor boundaries and demonstrates the shared value of working as a team to accomplish the work. The Executive Summary ends with a listing of major upcoming planned key events within a 90-day period.

**Section B – Restoring the River Corridor.** This section contains more detailed FY00 activity information and performance status for the three projects within the 'Restoring the River Corridor' outcome. These three projects consist of the Remedial Action and Waste Disposal (RAWD) Project, Decommissioning Projects, and the Program Management and Support (PM&S) Project.

**Section C – Transitioning the Central Plateau.** This section contains more detailed FY00 activity information and performance status for the two projects within the 'Transitioning the Central Plateau' outcome. These two projects consist of the Groundwater/Vadose Zone (GW/VZ) Integration Project and the Surveillance/Maintenance and Transition (SM&T) Projects.

Information in this report is identified with a green, yellow, or red text box used as an indicator of the overall status. Green indicates work or issue resolution is satisfactory and generally meets or exceeds requirements; yellow indicates that significant improvement is required; and red indicates unsatisfactory conditions requiring immediate corrective actions.

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION  
NOVEMBER 2000**

**Section A:  
Executive Summary**

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION  
NOVEMBER 2000**

**SECTION A – EXECUTIVE SUMMARY**

**Financial / Performance Measures data as of month-end September.  
All other data as of October 26, 2000 (unless otherwise noted).**

**NOTABLE ACCOMPLISHMENTS:**

*Significant progress was achieved in all areas of Environmental Restoration (ER) Project activities during fiscal year 2000 (FY00). All 16 FY00 planned Tri-Party Agreement milestones were completed, as well as all three FY00 HQ management commitment milestones. In addition, one FY01 Tri-Party Agreement milestone (M-24-46, RCRA 2-well installation) was completed 15 weeks ahead of schedule. Further, all Environmental Management (EM) corporate performance measures were exceeded in every category. On May 22, Environmental Restoration Contractor (ERC) personnel reached one million hours worked without a lost workday injury. This was the fourth time that ERC achieved this milestone since the Hanford Site contract was awarded in July 1994. Following are more notable FY00 ER Project accomplishments that have been grouped into three categories: momentum, progress, and completion/removal. ER Project's top five accomplishments for FY00 are underlined for easy recognition. Additional ER accomplishments are identified in the following individual project sections.*

**RIVER CORRIDOR:**

**Momentum:** (*how Hanford cleanup has been "sped up"*)

*Remediation activities were initiated at two new locations within the 100 Area. 100 F Area remediation activities commenced on July 10, twelve weeks ahead of schedule (satisfying Tri-Party Agreement Milestone M-16-13A). 100 N Area remediation activities were also initiated on July 21 (satisfying Hanford Site Resource Conservation and Recovery Act (RCRA) Permit requirements). The 100 Area Burial Ground Record of Decision (ROD) received regulator approval on September 25. All waste sites in the 100 Area are now covered under a ROD which signifies cleanup criteria and requirements have been established for the nine reactor areas along the Columbia River.*

Green

*Demolition of the remaining ancillary structures was completed for both F and DR Reactors, except for the F Reactor fuel storage basin (FSB) and DR Reactor FSB stairwells. Demolition of the F Reactor FSB began on September 25, and demolition of the DR Reactor stairwells began on October 20. F Reactor interim safe storage (ISS) is scheduled for completion in 2002 (one year ahead of schedule). DR Reactor ISS is scheduled for completion in 2001 (four years ahead of schedule).*

*D and H Reactor presurveys, walkdowns, estimates, and biological cleanup activities were completed, and all required D and H Reactors' engineering documents were issued for review prior to initiating ISS demolition activities in FY01 (accelerated from 2004 [D Reactor] and 2006 [H Reactor]).*

*Nine technology deployments were completed (FY00 HQ performance measure identified four technology deployments). These deployments were instrumental in providing efficiencies in the efforts of waste site remediation, reactor ISS, and Canyon Disposition Initiative (CDI) characterization activities.*

**Progress:** (*"things" achieved in terms of amounts or percentages*)

*Over 529,000 metric tons (639,000 tons) of contaminated waste were removed in FY00 and disposed in the Environmental Restoration Disposal Facility (ERDF). To date, over 2.2 million metric tons (2.5 million tons) of contaminated waste have been removed and disposed at ERDF.*

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

### NOVEMBER 2000

#### NOTABLE ACCOMPLISHMENTS continued:

since disposal operations began in July 1996. An average of 125 waste containers is transported to ERDF daily from Hanford remediation sites.

Excavation was completed for 42 contaminated waste sites (FY00 U.S. Department of Energy (DOE) Headquarters (HQ) performance measure identified 41 waste sites). This brings the total waste sites cleaned up to 219 of the 1,547 identified to date (14%).

An average of 250 monthly entries was achieved (since February) into the 233-S Plutonium Concentration Facility with no lost workdays occurring. Confined workspace environments and contamination hazards are encountered during each entry where decommissioning activities are being performed.

Loadout hood dismantlement and decontamination activities were completed in the 233-S facility.

Dry cleanup and gross decontamination of the 233-S process hood floor were completed. A total of 51 polyjars (0.5 liter in size) containing loose material was collected.

Removal and disposal (to ERDF) of 59 meters (193 feet) of 233-S exhaust and supply roof duct were completed. A new work approach that allowed removal of larger duct sections improved efficiency and lowered worker safety risks.

A total of 19 lines was removed from the 233-S viewing room south end pipe trench.

HQ approval was received for the completed FY00 Baseline Update and Reconciliation change proposal. The Integrated Priority List for the FY02 budget submittal was also completed.

FY01-FY03 Detailed Work Plan (DWP) management review meetings were conducted with BHI, DOE Richland Operations Office (RL), HQ, regulators, and stakeholders to reach agreement on future workscope. The FY01-FY03 DWP was approved on September 26. The seven-volume document establishes the basis for FY01 ER work execution.

The FY00 Small Business socioeconomic contractual goals were exceeded in all categories. All small, small disadvantaged, and women-owned small business prime contract goals have been met or exceeded for the entire six years of BHI's prime contract. In addition, this past year BHI was recognized as having the best small business statistics in Bechtel Systems and Infrastructure (parent company of BHI).

#### **Completion/Removal:** (what's done and what's gone)

Construction of ERDF Cells #3 and #4 was completed in December 1999 (satisfying Tri-Party Agreement Milestone M-16-92B). The two new cells doubled the capacity of waste storage at ERDF.

Remediation and backfill were completed for the contaminated liquid waste sites in the 100 B/C Area on February 25, five weeks ahead of schedule. 100 B/C Area remediation, which began in 1996, was the first remediation work activity initiated by the ERC towards meeting a Tri-Party Agreement milestone (Tri-Party Agreement Milestone M-16-08B due March 31). Only pipeline and burial ground remediation remains in the 100 B/C Area.

The B Reactor Museum Feasibility Assessment (Phase II) Project document was completed (satisfying Tri-Party Agreement Milestone M-93-05). Supplemental cost estimates for hazard mitigation were also completed, and work was initiated.

Green

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

### NOVEMBER 2000

#### NOTABLE ACCOMPLISHMENTS continued:

*Project closeout reports were completed for four facilities including the 108-F Biological Laboratory, 119-DR Exhaust Air Filter Sampling Building, 116-D and 116-DR exhaust stack demolitions. Demolition of these structures was accelerated from outyears and was completed in FY99. Submittal of the closeout reports formally constitutes completion of facility demolition.*

*A major sustained effort across all ERC projects and functional departments was focused on implementing, maintaining, and improving our Integrated Environment, Safety, and Health Management System (ISMS). Initial efforts focused on preparing for and supporting DOE verification of our ISMS and addressing opportunities for improvement. The Phase II verification audit, which was conducted by a DOE-led team, was successfully completed and resulted in no major findings.*

*Recognition was received from the Secretary of Energy with a Certificate of Appreciation for contributions to DOE's mission to prevent pollution in operations, processes, and programs.*

#### **CENTRAL PLATEAU:**

**Momentum:** (how Hanford cleanup has been "sped up")

*Utilizing a robotic crawler, the CDI drain header characterization was completed at U Plant (221-U Building) canyon facility in August. The robot traveled the equivalent of nearly three football fields to visually inspect the 61-centimeter (24-inch) diameter drain line for structural integrity, to obtain radiation readings, and to collect samples of contaminated materials within the line. Obtaining access to the planned 38 process cells was also completed.*

**Progress:** ("things" achieved in terms of amounts or percentages)

*Technical and management reviews of the System Assessment Capability (SAC) were completed resulting in validation of the approach being taken to develop the SAC and in the Groundwater/Vadose Zone Integration Project Expert Panel support for the SAC activity. The SAC Rev. 0 software development and testing were also completed. The SAC is being designed to provide a cumulative assessment of the impacts and risks associated with Hanford Site contaminants.*

*Field activities were completed at the Vadose Zone Transport Field Study site in the 200 Area, and data interpretation also commenced. The main objectives of this field study are to evaluate the underground tank leak issues, improve vadose monitoring capabilities, identify key transport processes, and provide data for model verification.*

*FY00 ISRM Project activities were completed that included awarding the contract, constructing an evaporation pond, installing 16 wells, and initiating chemical barrier injections and withdrawals in 10 wells (satisfying a FY00 HQ Management Commitment Milestone). The subterranean chemical barrier is 31 meters (100 feet) deep and extends 198 meters (650 feet) between the DR Reactor and the Columbia River. By 2002, the barrier is expected to reach its final length of 702 meters (2,300 feet).*

*Phase I was completed for the 618-11 Burial Ground elevated tritium investigation. The 618-11 Burial Ground is located adjacent to a commercial nuclear reactor complex and is about 6 kilometers (3.5 miles) from the Columbia River. Phase I involved sampling and analysis of 22 wells for tritium and other constituents. Results indicated two areas of high concentrations of helium, which is a natural byproduct of the radioactive decay process of tritium. Phase II of the tritium investigation will include obtaining additional soil gas samples and two groundwater samples. The results of the additional tests will help determine if the helium is coming from a tritium source buried in the waste site or from tritium contamination in the groundwater.*

Green

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
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**NOTABLE ACCOMPLISHMENTS continued:**

*All five groundwater pump and treat systems operated above the planned 90% availability during FY00 (97% actual; 90% planned). The pump and treat systems remove contaminants (carbon tetrachloride, strontium, and chromium<sup>1</sup>) from the groundwater and mitigate further migration to the Columbia River. Approximately 1.1 billion liters of groundwater were processed during FY00; over 4.3 billion liters of groundwater have been processed to date.*

*Plutonium loadout hood stabilization activities were completed in the REDOX facility which is located in the 200 Area.*

*Surveillance and maintenance (S&M) activities were initiated in the B Plant interior after Fluor Hanford (FH) completed required corrective actions to the building ventilation system. There was no evidence of any degradation due to the ventilation system being inoperable for more than ten months. No entry was allowed into the facility while the ventilation system was being repaired.*

**Green**

***Completion/Removal:* (what's done and what's gone)**

*FY00 field characterization activities were completed for the 200-CW-1 Gable Mountain/B Pond Cooling Water Operable Unit. This included 12 test pits and one borehole. Significant cost savings resulted from utilizing prior-year lessons learned on this project.*

*Deactivation of the old 100 N Area water plant was completed, and construction and startup of the new replacement water plant was also achieved.*

*Legacy waste removal was completed at KE, KW, and H Reactors.*

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
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**MAJOR COMMITMENTS:**

***Tri-Party Agreement Milestones:***

A total of 17 Tri-Party Agreement milestones were completed in FY00. All 16 planned FY00 Tri-Party Agreement milestones were achieved as of August; 15 ahead of schedule, and one behind schedule. In addition, one FY01 Tri-Party Agreement Milestone M-24-46 (due December 31, 2000), was completed on September 14, 15 weeks ahead of schedule.

Green

***Total Tri-Party Agreement Milestones Completed in FY00***

**17**

*Total FY00 Planned/Completed Through September*

16

*Total FY01 Completed (ahead of schedule) Through September*

1

***FY00 Management Commitment Milestones:***

Green

*Transmit Update of the Vadose Zone Science and Technology Roadmap (PBS V201) due April 30.*

***Status:*** Complete. Draft was transmitted to RL on April 28.

*Install Wells and Initiate Injection of the Barrier for Phase 1 of the In Situ Redox Groundwater Remediation (PBS ER08) due September 30.*

***Status:*** Complete (two months ahead of schedule). The 16-well installation was completed on April 24. Barrier injection was initiated on August 1.

*Complete the Semi-Annual Groundwater/Vadose Zone Report (December 1999 – March 2000) (PBS V201) due May 31.*

***Status:*** Complete. Final document was transmitted to RL on May 31.

***EM Corporate Performance Measures:***

	<b>DWP FY00</b>	<b>FY00 Mgmt Commitments</b>	<b>Current Baseline</b>	<b>Forecast for FY00</b>	<b>Completed YTD</b>
<b>Waste Site Assessments</b>	121	167	168	168	168
<b>Waste Site Excavations</b>	24	41	43	42	42
<b>Technology Deployments</b>	0	4	4	4	4
<b>Facility Decommissioning</b>	0	0	4	4	4

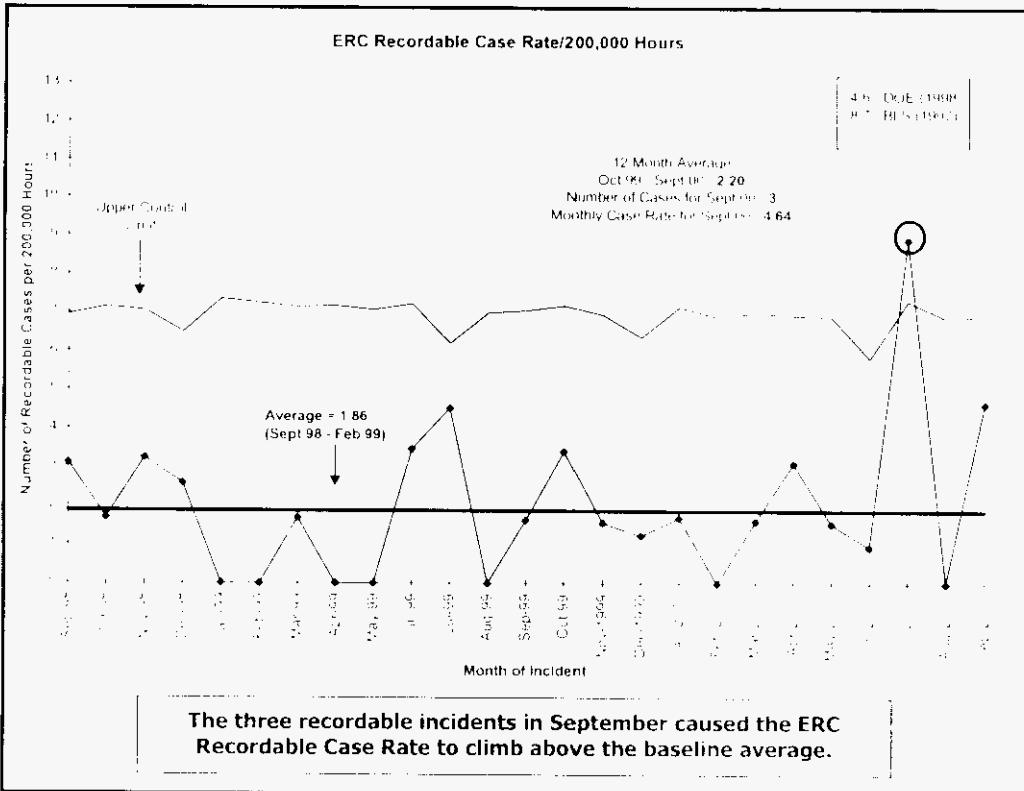
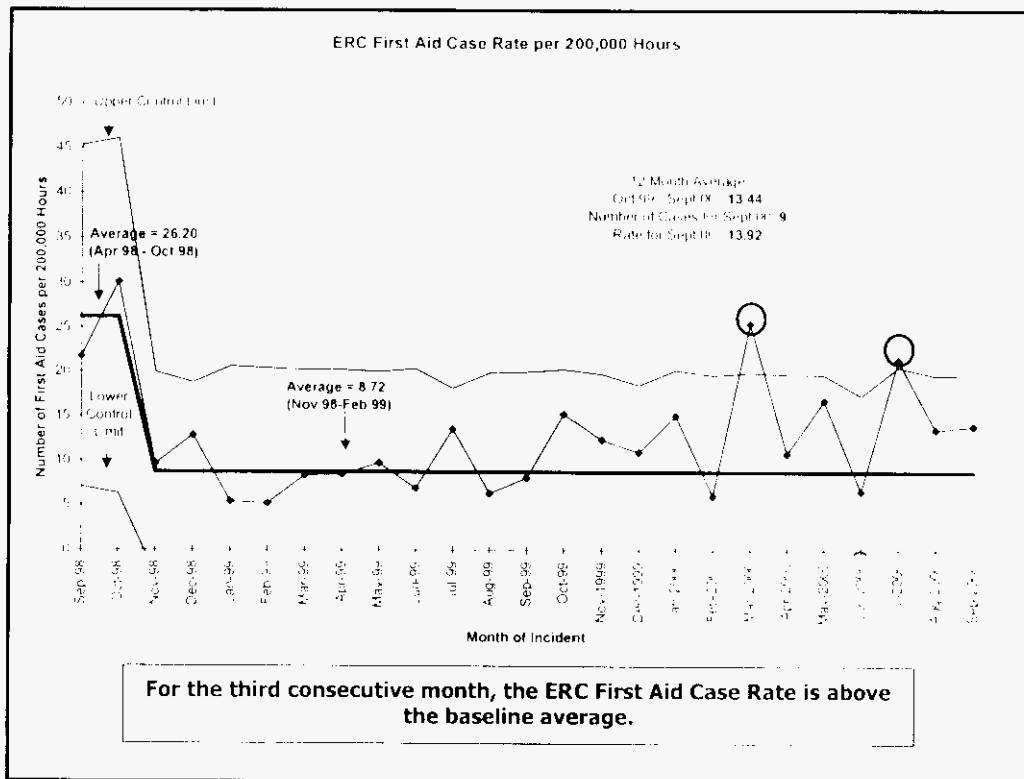
Green

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

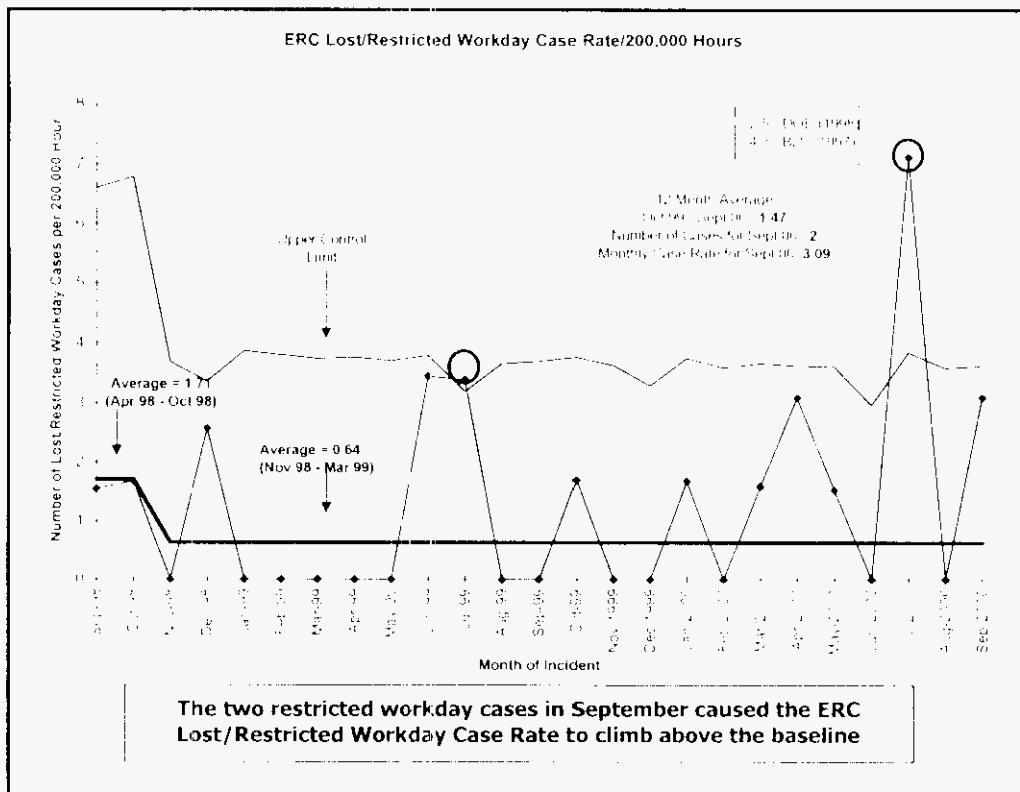
### NOVEMBER 2000

#### SAFETY/ISMS/CONDUCT OF OPERATIONS (Total ER Contract):



**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT**  
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**SAFETY/ISMS/CONDUCT OF OPERATIONS (Total ER Contract) continued:**



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**NOVEMBER 2000**

**SAFETY/ISMS/CONDUCT OF OPERATIONS (Total ER Contract) continued:**

*Safety:*

	<b>YTD</b>	<b>Current Month (Sept)</b>	<b>Current Month Comments</b>
<b>First Aid</b>	108	9	(2) sprains, (2) contusions, (1) laceration, (1) sting, (3) pain
<b>OSHA Recordable</b>	20	3 (includes the two below)	(1) Teamster working the swing shift was pulling on a bungee cord at the front of a full container. The bungee slipped off the hook, and the back of his upper arm hit a stack of pallets that was next to the container. He was examined at Kadlec and returned to work with prescription medication.
<b>Restricted Workday Case</b>	10	2	(1) RCT was pulling up on the metal bar to open the gate at 100 DR and pinched the left thumb between the metal stop and the metal bar. She was treated for a crushed/fracture to the thumb and restrictions were applied. (1) D&D worker was descending stairs with items in his arms. The wind kept blowing his hood over his face, making viewing difficult. He slipped on the stairs causing his left foot to turn inward. He was treated at a medical aid station. The first set of x-rays showed negative for a fracture and he returned to work with no restrictions. The incident became recordable/restricted after a visit to his personal physician who has prescribed physical therapy and light duty restrictions. The second x-ray performed several days later showed a fracture at the base of the little toe, normally called "Dancer's Fracture", and very common when side stepping of the foot.
<b>Lost Workday Case</b>	2	0	N/A

The ERC, as of October 21, 2000, reports 106,950 hours since the last lost workday incident. The incident occurred on April 20, 2000 and became a lost time on September 28, 2000.

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION  
NOVEMBER 2000**

**SAFETY/ISMS/CONDUCT OF OPERATIONS (Total ER Contract) continued:**

**ISMS:**

**DOE EM Performance Agreement:** Develop and implement Integrated Safety Management (ISM) - September 30, 2000

Green

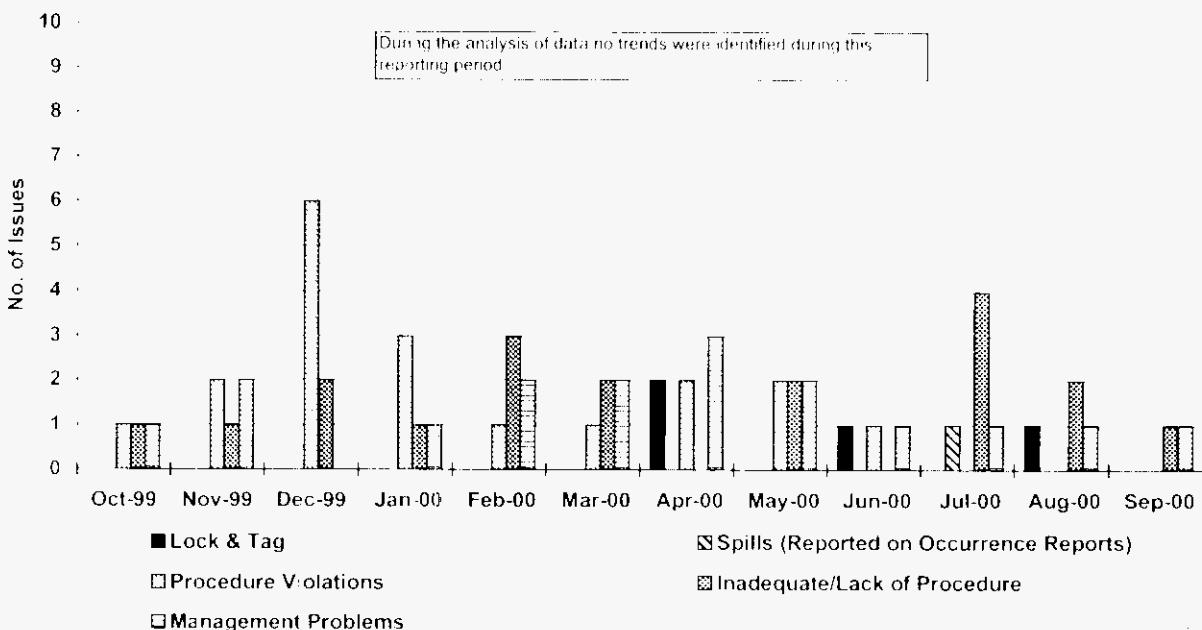
**Status:**

- Completed all actions on the multi-discipline action plan for hazards evaluations.
- Continuous improvement and employee awareness of ISMS is ongoing through the ISMS Question of the Day Program.
- The Detailed Work Plan (DWP) for FY01 is approved. ISMS Program responsibility has been transitioned to the QS&H Department Manager.
- Work is ongoing to establish safety performance objectives, measures, and commitments for FY01.

**Conduct of Ops:**

**ERC-Corrective Action Tracking System (CATS) Trend Data 10/1/99 through 9/30/00**

	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00
Lock & Tag	0	0	0	0	0	0	0	0	0	0	0	0
Spills (Reported on Occurrence Reports)	0	0	0	0	0	0	0	0	0	0	0	0
Procedure Violations	1	2	6	3	1	1	2	2	1	0	0	0
Inadequate/Lack of Procedure	1	1	2	1	3	2	0	2	0	4	2	1
Management Problems	1	2	0	1	2	2	3	2	1	1	1	1



Each potential trend is reviewed and evaluated for impact on the project, and then given the appropriate level of attention based on a graded approach

*September Conduct of Ops Issues Continued on Next Page...*

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

NOVEMBER 2000

### SAFETY/ISMS/CONDUCT OF OPERATIONS (Total ER Contract) continued:

#### September Conduct of Ops Issues:

##### **Procedure Problems:**

**Condition Description:** Some documents are not identified as "Air Quality Documents as required by the BHI-EE-02 Environmental Requirements Manual". The types of records are the Effluent Record Sample Log (form BHI-TM-R127) and Effluent System Checklist (BHI-TM-R021). The RadCon supervisor stated that he was unaware of these requirements. The procedures (BHI-RC-04, Instruction 4.6 and BHI-RC-03, Procedure 7.1) were reviewed to ensure compliance with the documentation requirements contained within BHI-EE-02 and found to not contain the documentation requirements for identifying on the records "Air Quality Document" nor do they reference the EE-02 manual to obtain those requirements to prevent reoccurrence of this critical documentation requirements.

Green

**Corrective Action Plan:** BHI-RC-04 Radiological Control Instructions Instruction 4.6 "Effluent Monitors Inspection and..." will be corrected to replace the "Air Quality Document" requirement and reference to BHI-EE-02. The procedure will also include steps for the RCT supervisor to ensure that the air quality documentation is in order. This revision will be accomplished by 11/30/00. RadCon will mark all appropriate forms "Air Quality Document" beginning immediately. The "alarm bell" notation will be added to these requirements. This notation was added to RadCon procedures following the last revision of the subject procedure. The notation has prevented other problems similar to this deficiency from occurring to other procedures.

##### **Management Problems:**

**Condition Description:** On August 9, at approximately 10:45 a.m., 130 gallons of sodium dithionite (an injection chemical used for reduction/oxidation processes) was discharged to the ground. During routine operations, an operator was actuating valves called out by another operator. The operator actuating the valves misinterpreted a call to open the "GV" valve and instead opened the "BV" valve, which resulted in the discharge of the sodium dithionite. The quantity of chemical released to the ground was below reportable occurrence criteria. However, the operator error resulting in a valve misalignment led to a deviation from written procedures. Following a re-enactment of the event, the DOE Facility Representative suggested that the event be reported as a deviation from written procedures that resulted in adverse effects on performance of the ISRM process.

Green

**Corrective Action Plan:** (1) Establish an Operations Engineering Group (reference field #30, Lessons Learned) to provide onsite technical support and oversight. Target Completion Date: 09/05/2000, Completion Date: 09/05/2000. (2) Install a check valve between the system and the chemical truck to prevent overflow. Target Completion Date: 10/01/2000, Completion Date: 10/01/2000. (3) Engineering staff discuss the valve positions with operators, providing directions to the operators in how to check valves to see if they are open or closed. Target Completion Date: 09/03/2000, Completion Date: 09/05/2000.

### REGULATORY/EXTERNAL/DOE-RL & HQ ISSUES AND REQUESTS:

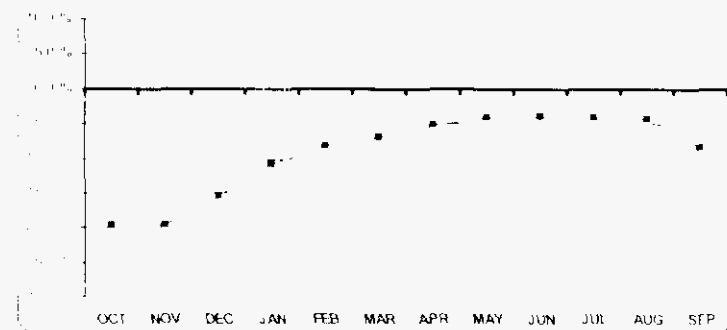
Refer to individual Project issues in the following Section B and Section C.

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT**  
**ENVIRONMENTAL RESTORATION**  
**NOVEMBER 2000**

**TOTAL COST/SCHEDULE OVERVIEW (Total ER Contract):**

FYTD Schedule Variance Percentage (SV%)  
 $((BCWP-BCWS)/BCWS)$

Green



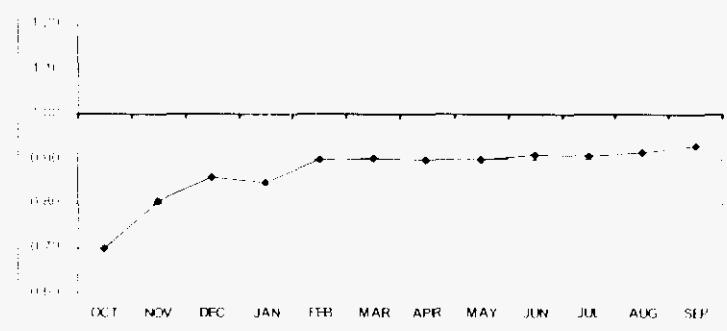
*Desired performance is better than -10%.*

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
DWP	11,612	10,506	10,211	12,760	10,155	10,293	12,259	10,599	10,197	12,389	10,820	12,798
DWP (Accum)	11,612	22,118	32,330	45,090	55,245	66,037	78,296	88,894	99,092	111,481	122,301	135,100
<b>CURRENT PERIOD</b>												
BCWS	19,558	8,508	12,788	15,102	13,068	13,445	15,190	12,158	12,771	12,681	10,838	23,687
BCWP	11,711	6,838	11,396	15,035	13,338	13,352	15,797	12,559	12,497	12,040	9,946	15,991
<b>FISCAL YEAR TO DATE</b>												
BCWS	14,558	23,066	39,354	50,456	63,524	76,969	92,159	104,317	117,089	129,769	149,607	164,289
BCWP	11,711	18,550	29,846	44,981	58,370	71,672	82,469	99,019	112,516	124,556	134,502	150,493
SV	(2,847)	(4,516)	(5,408)	(5,475)	(5,104)	(5,297)	(4,690)	(4,398)	(4,572)	(5,113)	(6,105)	(13,797)
SV%	-19.6%	-19.6%	-15.3%	-10.9%	-8.2%	-6.9%	-5.1%	-4.1%	-3.9%	-4.0%	-4.3%	-8.4%

*For variance explanation by PBS, see Project Status Section of each project.*

FYTD Cost Performance Index (CPI)  
 $(ACWP/BCWP)$

Green



*Desired performance is 1.0 or less.*

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	EAC w/ Carry Over
<b>CURRENT PERIOD</b>													
ACWP	11,711	10,506	10,211	12,760	10,155	10,293	12,259	10,599	10,197	12,389	10,820	12,798	
BCWP	11,711	6,838	11,396	15,035	13,338	13,352	15,797	12,559	12,497	12,040	9,946	15,991	
<b>FISCAL YEAR TO DATE</b>													
ACWP	11,711	23,066	39,354	50,456	63,524	76,969	92,159	104,317	117,089	129,769	149,607	164,289	
BCWP	11,711	18,550	29,846	44,981	58,370	71,672	82,469	99,019	112,516	124,556	134,502	150,493	
CV	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	
CPI	0.80	0.85	0.90	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
EAC (Cumulative)	11,711	24,319	41,030	52,441	65,472	79,133	93,834	107,535	121,236	134,937	147,638	160,339	
Yr-End Budget Variance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

*For variance explanation by PBS, see Project Status Section of each project.*

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT**  
**ENVIRONMENTAL RESTORATION**  
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**TOTAL COST/SCHEDULE OVERVIEW (Total ER Contract) continued:**

**FY 2000 PERFORMANCE**  
**FYTD SEPTEMBER 2000**  
**( $\$K$ )**

DWP BCWS	CURRENT BCWS	FYTD			YTD SCHEDULE VARIANCE		YTD COST VARIANCE			FY00 EAC	
		BCWS	BCWP	ACWP	\$	%	\$	%	*CPI		
ER01 100 Area RA	27,364	30,368	30,368	28,682	23,751	1,676	5.9%	4,931	17.2%	0.83	25,468
ER03 300 Area RA	3,157	6,673	6,673	6,291	4,794	383	5.8%	1,407	23.8%	0.76	5,187
ER04 ER Waste Disposal	16,146	20,953	20,953	20,197	18,324	368	1.7%	1,873	9.3%	0.91	18,032
<b>RAS Subtotal</b>	<b>46,667</b>	<b>57,589</b>	<b>57,589</b>	<b>55,170</b>	<b>46,869</b>	<b>-2,419</b>	<b>-4.2%</b>	<b>8,301</b>	<b>15.0%</b>	<b>0.85</b>	<b>49,347</b>
ER02 200 Area RA	3,534	3,502	3,502	3,497	2,456	-46	-1%	1,041	19.8%	0.73	2,563
ER08 GW Management	19,344	25,770	25,770	21,309	21,058	-412	-1.7%	2,712	13%	0.99	25,888
V201 GW/VZ	11,325	11,276	11,276	10,369	10,179	-917	-8.1%	180	1.7%	0.98	11,044
<b>GWZ Subtotal</b>	<b>34,253</b>	<b>40,638</b>	<b>40,638</b>	<b>35,191</b>	<b>33,693</b>	<b>-5,447</b>	<b>-13.4%</b>	<b>1,498</b>	<b>4.3%</b>	<b>0.96</b>	<b>39,185</b>
ER06 D&D	8,446	17,129	17,129	15,420	15,376	-173	-1.0%	44	0.3%	1.00	17,141
<b>Cost Subtotal</b>	<b>8,446</b>	<b>17,129</b>	<b>17,129</b>	<b>15,420</b>	<b>15,376</b>	<b>-1,709</b>	<b>-10.0%</b>	<b>44</b>	<b>0.3%</b>	<b>1.00</b>	<b>17,141</b>
ER05 S&M	12,291	14,510	14,510	13,308	13,093	-119	8.2%	216	18%	0.98	14,372
ER07 Long-Term S&M	47	46	46	46	36	0	0%	7	16.2%	0.86	38
<b>SMS Subtotal</b>	<b>12,338</b>	<b>14,576</b>	<b>14,576</b>	<b>13,384</b>	<b>13,132</b>	<b>-1,192</b>	<b>-8.2%</b>	<b>252</b>	<b>1.9%</b>	<b>0.98</b>	<b>14,410</b>
ER10 ERCPM&S	27,987	28,522	28,522	26,775	26,248	-1,747	-6.1%	527	20%	0.98	29,007
ER10 RL PM&S	5,800	5,836	5,836	4,563	4,553	-12	22.0%	0	0.0%	1.00	5,836
<b>PM&amp;S Subtotal</b>	<b>33,387</b>	<b>34,357</b>	<b>34,357</b>	<b>31,328</b>	<b>30,801</b>	<b>-3,029</b>	<b>-8.8%</b>	<b>527</b>	<b>1.7%</b>	<b>0.98</b>	<b>33,842</b>
<b>GRAND TOTAL</b>	<b>135,101</b>	<b>164,289</b>	<b>164,289</b>	<b>150,493</b>	<b>139,871</b>	<b>-13,796</b>	<b>-8.4%</b>	<b>10,622</b>	<b>7.1%</b>	<b>0.93</b>	<b>153,925</b>

\*CPI = ACWP/BCWP

Green

**Cost/Schedule Status:**

**Cost Variance Summary**

At FY00 end, the ER Project had performed \$150.5M worth of work, at a cost of \$139.9M. This results in a favorable cost variance of \$10.6M (+7.1%). The positive cost variance is attributed to ERDF cover design and construction/transportation underruns, utilization of more efficient asbestos abatement methods (asbestos and piping removed/disposed concurrently), savings in soil sampling and analyses by using local laboratory and onsite resources, F Area remediation savings in site preparation and reallocating resources between the F and H Areas, savings in Landfill 1A/1B remediation (such as working two sites concurrently), efficiencies learned in prior work applied to Gable Mountain and B Pond test pit trenching, fewer resources utilized than planned for GW/VZ Science and Technology (S&T) and Characterization of Systems, significantly lower F and DR Reactor ISS sample analysis costs than planned due to utilizing larger data groups (economies of scale), underruns on B Plant S&M and Radiation Area Remedial Action (RARA) stabilization. Underruns were utilized to perform other ER work.

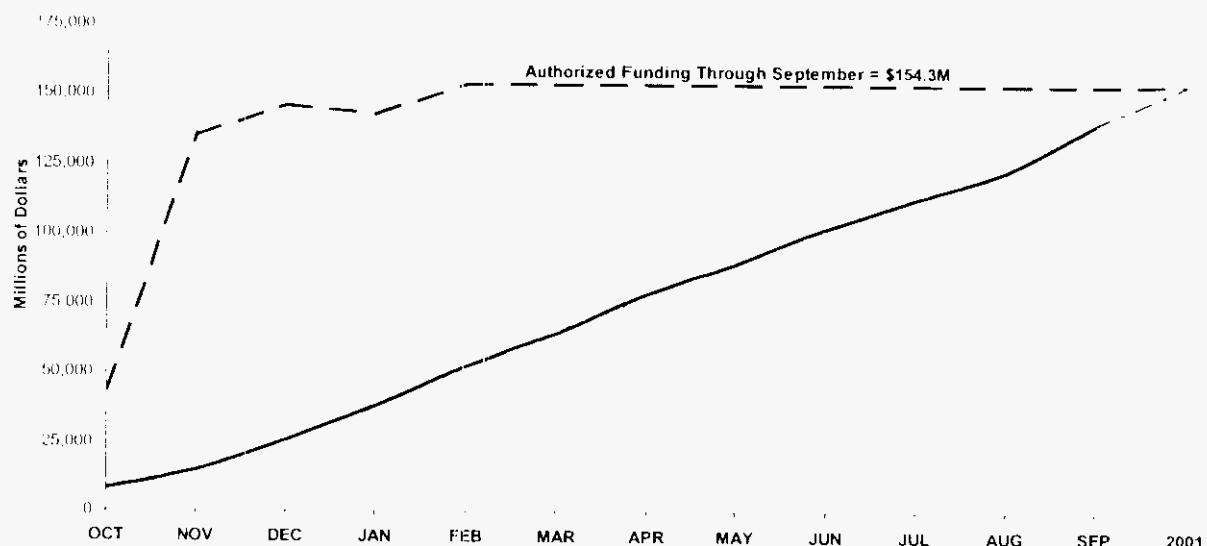
**Schedule Variance Summary**

The ER Project ended FY00 \$13.8M (-8.4%) behind schedule. [Efficiencies allowed for approval/initiation of approximately \$5.0M multi-year superstretch and other remediation in FY00 with most of the work planned for FY01 (planned schedule variance/carryover). After adjustment for this work, the net negative schedule variance would be \$8.8M (5.5%)]. The negative schedule variance is attributed to remediation backfill delays pending resolution of differing chromium sample laboratory results, 100 DR south pipeline confirmation sampling behind schedule due to design preparation delays, 300 Area contract award for drum removal deferred due to bidder request, GW/VZ Characterization of Systems delayed due to resource availability, 200-ZP-2 well deepening and B Reactor hazards mitigation work were approved late in FY00 with completion scheduled for FY01 (planned carryover), initiation of approved Superstretch work which will continue into FY01 (planned carryover workscope), and late billings for RL site wide assessments.

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT**  
**ENVIRONMENTAL RESTORATION**  
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**TOTAL COST/SCHEDULE OVERVIEW (Total ER Contract) continued:**

**FY2000 Funds Management**



<b>PBS</b>	<b>PBS Title</b>	<b>Authorized Funds</b>	<b>ACWP</b>	<b>Funding Carryover</b>
RL-ER01	100 Area Remediation	\$25,969,999	\$23,751,023	\$2,218,976
RL-EL02	200 Area Remediation	\$3,130,000	\$2,456,402	\$673,598
RL-ER03	300 Area Remediation	\$5,827,400	\$4,800,187	\$1,027,214
RL-ER04	Waste Disposal Facility	\$19,339,999	\$18,324,084	\$1,015,915
RL-ER05	S&M - Facility Transitioning	\$14,335,000	\$13,092,640	\$1,242,360
RL-ER06	Decommissioning Project	\$17,150,000	\$15,375,877	\$1,774,123
RL-ER07	Post Closure - S&M	\$60,900	\$38,588	\$22,312
RL-ER08	Groundwater Management	\$13,795,730	\$11,140,120	\$2,655,610
RL-ER08	Groundwater Management LT	\$778,868	\$654,377	\$124,491
RL-ER09	N. Basin Cleanup	\$3,173	\$349	\$2,824
RL-ER10	Program Management & Support	\$26,989,858	\$26,247,800	\$742,058
RL-VZ01	GW/Vadose Zone Integration Project	\$6,370,000	\$5,407,853	\$962,147
<b>S/Total BHI</b>		<b>\$133,750,927</b>	<b>\$121,289,299</b>	<b>\$12,461,628</b>
RL-VZ01	GW/Vadose Zone (PNNL)	\$4,585,334	\$4,574,200	\$11,134
RL-ER03	300 Area Remediation (PNNL)	\$0	\$0	\$0
RL-ER08	Groundwater Monitoring (PNNL)	\$9,693,363	\$9,270,485	\$422,878
<b>S/Total PNNL</b>		<b>\$14,278,697</b>	<b>\$13,844,685</b>	<b>\$434,012</b>
RL-ER03	300 Area Remediation (USFWL)	\$6,546	\$6,546	\$0
RL-ER08	Groundwater Mgmt (RL)	\$6,595	\$6,595	\$0
RL-ER10	Program Management & Support (RL)	\$5,834,838	\$4,553,340	\$1,281,498
RL-VZ01	GW/Vadose Zone (RL)	\$407,586	\$196,713	\$210,873
<b>S/Total RL</b>		<b>\$6,229,283</b>	<b>\$4,736,912</b>	<b>\$1,492,371</b>
<b>Total ER</b>		<b>\$154,258,907</b>	<b>\$139,870,896</b>	<b>\$14,388,011</b>

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT**  
**ENVIRONMENTAL RESTORATION**  
**NOVEMBER 2000**

**TOTAL COST/SCHEDULE OVERVIEW (Total ER Contract) continued:**

**FY2000 Schedule Carryover**

Bechtel Hanford, Inc. (\$000's)	Schedule Carryover
100-DR south pipeline confirmation sampling and backfill	316.8
100-FR closeout verification packages	60.1
100-FR remedial actions (pipe cutting)	103.9
JA Jones and 600-23 sites remedial design, remedial action	1,243.0
<b>S/T 100 Area Remedial Action (ER01)</b>	<b>1,717.8</b>
618-4 burial ground procurement package	363.0
300-FF-2 ROD support	30.1
<b>S/T 300 Area Remedial Action (ER03)</b>	<b>393.1</b>
ERDF transportation & waste disposal for JA Jones and 600-23 sites ( <i>superstretch</i> )	345.1
ERDF vegetation for the interim cover	18.0
<b>S/T ERDF (ER04)</b>	<b>363.1</b>
Dismantle & remove the irrigation system from the Hanford prototype barrier	76.3
200 Area RI/TS on 200-CW-1 and 200-PW-2	20.1
<b>S/T 200 Area Characterization (ER02)</b>	<b>96.4</b>
200-ZP-1 platform / valve upgrade	57.8
200-ZP-2 PITT well deepening	368.7
RCRA well installation	1,531.9
Well decommissioning ( <i>superstretch</i> )	1,310.2
Well maintenance, tritium sample collection	433.9
<b>S/T Groundwater Management (ER08)</b>	<b>3,702.5</b>
Peer review (incl expert panel meeting #8)	258.1
Characterization of systems	287.8
System assessment capability (SAC revision 1)	17.0
<b>S/T Groundwater Vadose Integration (VZ01)</b>	<b>562.9</b>
B Reactor roof repair, H Reactor legacy waste disposal, asbestos sample collection & analysis	79.9
B Reactor hazards mitigation	467.8
200 Area S&M, REDOX maintenance, U Plant fan motor refurbishment, 221 U canyon roof repair	461.1
Canyon disposition initiative	116.7
Nuclear facility support, B Plant SAR implementation, IMUST SAP, PUREX BIC update	104.0
<b>S/T S/M&amp;T (ER05)</b>	<b>1,229.5</b>
233-S, loadout hood dismantlement, work package development, loading & shipping of roof duct waste, ventilation engineering / modification	179.4
F Reactor fuel storage basin ( <i>superstretch</i> ); Reactor ISS engineering, EE/CA, RAW	1,065.6
Procure BROKK excavator	363.1
D Reactor ISS, backfill valve pit & fuel storage basin, microwave tower installation	151.2
<b>S/T Decommissioning Projects (ER05)</b>	<b>1,759.3</b>
Subcontract to improve site closure process	64.9
Disposal of chemical wastes from building 3728, management of HE IS/WIDS databases	143.6
Regulatory support to air operating permit	75.3
Complete general design criteria document	40.8
Restructuring for staff reductions, baseline management	15.1
Performance fee on base scope (forecast less FY2000 accrual)	943.9
Performance fee on JA Jones / 600-23, F-Reactor, well decommissioning ( <i>superstretch</i> )	750.0
RAD counting faculty equipment	24.4
Scanning backlog of radiological records in document control	93.2
Revisions to Safety & Health programmatic documents (i.e. Industrial Hygiene Program)	22.3
<b>S/T BHI Program Management &amp; Support (ER10)</b>	<b>1,773.5</b>
<b>Total Bechtel Hanford, Inc.</b>	<b>11,598.1</b>
<b>PNNL (\$000's)</b>	
Groundwater vadose zone science & technology, soil waste inventory, field investigations, vadose transpot field study	278.7
Groundwater modeling, monitoring (technical planning, sample collection, offsite analyses interpretation & reporting, strategic planning hydrologic assessment), Support well installation	784.5
<b>Total PNNL</b>	<b>1,063.2</b>
<b>DOE-RL - ER10 (\$000's)</b>	
Program management & support, Compliance oversight, site wide services, laundry, support, etc	1,368.2
<b>Total DOE-RL</b>	<b>1,368.2</b>
<b>Total (BHI, PNNL, DOE-RL)</b>	<b>14,029.4</b>

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

### NOVEMBER 2000

#### PERFORMANCE OBJECTIVES:

See following individual Project sections.

#### KEY INTEGRATION ACTIVITIES:

Following is a summary of significant cross-cutting integration activities accomplished during FY00. Refer to additional individual Project key integration activities noted in the following Section B and Section C.

##### Cross-Cutting:

**RL WBS/PBS Restructuring:** BHI teamed with site contractors to support DOE-RL in development of a "Schedule Options Study" and provided support to DOE-RL in the restructuring of the Hanford Site Work Breakdown Structure. BHI supported both the River Corridor and Central Plateau baseline teams. BHI supported development of the Budget Update Guidance (BUG) Phase II, which includes details developing this baseline update based on the revised PBS/WBS, formatted to address the site outcomes.

**300 Area Acceleration:** BHI supported FH in the development of an accelerated closure plan. BHI provided the technical volumes for D&D and Remedial Action. These technical volumes included scope, schedule, cost, and the methodology of estimating. BHI assisted in the final write-up of the FH deliverable to RL. FH delivered the final product to DOE-RL and presented the final product to the Site Management Board on July 17. Positive comments about the product were made and verbal recognition was given to the FH, BHI and PNNL integrated team.

**DOE and Bechtel Staff Recognized for Pollution Prevention Efforts:** In late July, U.S. Secretary of Energy Bill Richardson recognized several Department of Energy and Bechtel Hanford, Inc. employees for their waste minimization and pollution prevention accomplishments at Hanford. The DOE recognition acknowledged BHI's waste minimization and pollution prevention activities over the last several years. Recent accomplishments at Hanford included reducing the amount of waste by more than 300,000 tons and avoiding costs of nearly \$50M in 1999. BHI successfully implemented the largest source reduction project in the DOE complex in 1999. It involved extensive characterization of 417 waste sites. As a result, 129 sites were reclassified, enabling BHI to reduce the amount of low-level radioactive waste requiring treatment by nearly 65,000 cubic yards and avoiding costs of more than \$36M. This single effort reduced more waste than all of the combined source reduction projects implemented throughout the DOE complex in 1998. Source reduction projects reduce pollution or waste generated at this source. The use of new technology and value engineering assessments was cited as a reason for effectiveness of site characterization efforts, which resulted in substantial cost savings to the U.S. government and taxpayers. The DOE recognition also acknowledged BHI's 100 percent compliance with efforts "affirmative procurement" requirements, which direct the purchase of supplies and products made from recovered or recycled materials.

Green

**Excavation at Wanapum Cache Site:** The Wanapum tribe requested ER support for trenching to uncover the remains of three Wanapum cellars used to store fishing gear, camp items, and preserved foods relating to a traditional fishing village last occupied in 1943. The area being excavated is on the terrace of the Columbia River southeast of the 100-H Area. Excavations were conducted in shallow lifts of approximately 10 cm to prevent damaging materials of interest to the fullest extent possible. Materials of interest are defined as "Objects of Cultural Patrimony" under the provisions of the Native American Graves Protection and Repatriation Act.

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**UPCOMING PLANNED KEY EVENTS:**

*Tri-Party Agreement Milestone M-13-25, Submit Uranium Rich Process Waste Group (200-PW-2) Work Plan, due 12/31/00.*

*Tri-Party Agreement Milestone M-13-00K, Submit 1 200 NPL RI/FS (RFI/CMS) Work Plan, due 12/31/00.*

*Tri-Party Agreement Milestone M-16-27A, Complete 100-HR-3 Phase I, ISRM Barrier Emplacement, due 12/31/00.*

*Tri-Party Agreement Milestone M-24-47, Install 4 Additional Wells at SST WMA T, due 12/31/00.*

*Tri-Party Agreement Milestone M-24-48, Install 4 Additional Wells at SST WMA TX-TY, due 12/31/00.*

*Tri-Party Agreement Milestone M-24-00L, Install RCRA Groundwater Monitoring Wells Up to 50 in CY 2000, due 12/31/00.*

**Green**

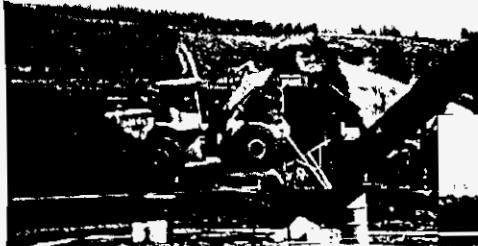
Richland Operations Office  
Environmental Restoration

# Environmental Management Performance Report

## Section B - River Corridor Information

November 2000

- Remedial Action and Waste Disposal Project
- Decommissioning Projects (Interim Safe Storage and 233-S)
- Program Management and Support



*Focused on Progress...*

*Focused on Outcomes!*



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Environmental Restoration Contractor

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
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**Remedial Action and  
Waste Disposal Project  
(RAWD)**

ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
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## SECTION B – RESTORING THE RIVER CORRIDOR

Financial / Performance Measures data as of month-end September.  
All other data as of October 26, 2000 (unless otherwise noted).

### Remedial Action & Waste Disposal Project (RAWD):

#### ACCOMPLISHMENTS: RAWD

##### FY00 SUMMARY

Following is a summary of significant Remedial Action and Waste Disposal Project accomplishments achieved during FY00. The FY00 accomplishments are grouped into three categories: momentum, progress, and completion/removal. The Project's top five accomplishments are underlined for easy recognition.

##### **Momentum:** (how Hanford cleanup has been "sped up")

Initiated 100 F Area remediation activities on July 10, twelve weeks ahead of schedule (satisfying Tri-Party Agreement Milestone M-16-13A). 100 N Area remediation activities were also initiated on July 21 (satisfying Hanford Site RCRA Permit requirements). The 100 Area Burial Ground ROD received regulator approval on September 25. All waste sites in the 100 Area are now covered under a ROD which signifies cleanup criteria and requirements have been established for the nine reactor areas along the Columbia River.

##### **Progress:** ("things" achieved in terms of amounts or percentages)

Removed over 579,000 metric tons (639,000 tons) of contaminated waste in FY00 and disposed in ERDF. To date, over 2.2 million metric tons (2.5 million tons) of contaminated waste have been removed and disposed at ERDF since disposal operations began in July 1996.

Completed excavation of 42 contaminated waste sites (FY00 HQ performance measure identified 41 waste sites). This brings the total waste sites cleaned up to 219 of the 1,547 identified to date (14%).

Completed 168 waste site assessments (FY00 HQ performance measure identified 167 assessments). This brings the total assessments completed to 797 of the 1,547 identified to date (52%).

Issued a request for proposal to potential bidders for 100 B/C Area pipeline remediation on August 23. Bid proposals were received on September 29, and technical reviews are underway.

Completed soil (including plumes) and pipeline excavation activities in the 100 D Area in July. Over 643,000 metric tons (709,000 tons) of contaminated waste were removed and disposed in ERDF since work began in the 100 D Area in November 1996.

Completed soil (including plumes) and pipeline excavation activities in the 100 H Area in July. Since 100 H Area remediation work began in March 1999, 408,000 metric tons (450,000 tons) of contaminated waste were removed and disposed in ERDF.

Completed contaminated soil excavation (including plumes) in the 300-FF-1 Operable Unit. Excavated areas included Landfills 1A, 1B, 1D and the South Process Pond. Over 481,000 metric tons (531,000 tons) of contaminated waste were removed and disposed in ERDF since 300 Area remediation activities began in July 1997. Only the b18-4 Burial Ground remains to be remediated.

Green

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

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#### ACCOMPLISHMENTS continued: RAWD

Initiated procurement activities for the treatment of the 618-4 Burial Ground drummed uranium waste (located in the 300 Area). Bid proposals were submitted in August, and technical reviews are underway. These drums, which contain depleted uranium shavings and oil from past fuel production, were unearthed in 1998 during excavation of the burial ground.

Completed Rev. 0 of the 300-FF-2 Operable Unit FFS and Proposed Plan, and also supported public comment meetings.

Deployed a geo-probe with a sodium iodide detector for *in situ* characterization at the 126-F-1 ash pit remediation site, resulting in a potential 50% reduction of waste. The project utilized EM-70 return-on-investment funds to deploy this technology.

Transported and disposed the first Spent Nuclear Fuel waste shipment from K Basin into ERDF during June.

Placed the first waste shipment into ERDF Cell #4 in June.

Completed installation of an interim cover over ERDF Cells #1 and #2. The interim cover is a vapor barrier covered with fill dirt and grass.

Traveled over 7 million kilometers (4.4 million miles) transporting contaminated waste to ERDF without an at-fault accident (one truck rear-ended by non-ER vehicle in July.) This safety record exceeds the industry standard.

Green

#### Completion/Removal: ("what's done and what's gone")

Completed construction of ERDF Cells #3 and #4 in December 1999 (satisfying Tri-Party Agreement Milestone M-16-92B). The two new cells doubled the capacity of waste storage at ERDF.

Completed remediation and backfill of contaminated liquid waste sites in the 100 B/C Area on February 25, five weeks ahead of schedule. 100 B/C Area remediation, which began in 1996, was the first remediation work activity initiated by the ERC towards meeting a Tri-Party Agreement milestone (Tri-Party Agreement Milestone M-16-08B due March 31). Only pipeline and burial ground remediation remains in the 100 B/C Area.

Completed backfill operations for the Group 2 waste sites (DR high-priority, near-river sites) and pipeline segments.

Transferred 32 metric tons (35 tons) of excess steel rail to a local railcar repair facility for reuse. The rail was removed from the 300 Area South Process Pond to accommodate plume remediation. This activity supported RL's economic development and waste minimization programs.

Completed ERDF disposal of Pacific Northwest National Laboratory (PNNL) 331-A Building demolition waste in February. This was the first non-ER waste disposal into ERDF.

#### SAFETY/ISMS/CONDUCT OF OPERATIONS: RAWD

See Executive Summary.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

### NOVEMBER 2000

#### BREAKTHROUGHS/OPPORTUNITIES FOR IMPROVEMENT: RAWD

Following is a summary of significant breakthroughs identified during FY00:

**Waste Minimization 126-F-1 Ash Pit:** The project deployed two off-the-shelf technologies (geo-probe and sodium iodide detector) to perform in-situ characterization that resulted in 50% reduction in waste site volume. Preliminary cost savings is estimated at \$5M.

Green

#### LONG-TERM (6 MONTHS PLUS) IMPORTANT ITEMS: RAWD

Following is a summary of significant long-term important items identified during FY00:

**100 Area Burial Grounds:** The Environmental Protection Agency (EPA) signed the Record of Decision for the 100 Area Burial Ground on September 25. This is the last ROD required for 100 Area Remediation.

Green

#### MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS): RAWD

- **DOE Secretarial:**

None identified at this time.

- **DOE EM Performance Agreement:**

None identified at this time.

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**MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS): RAWD**

• **TPA Milestones:**

<b>Milestone</b>	<b>Description</b>	<b>Due Date</b>	<b>(F)/(A) Date</b>
<b>M-15-23B</b>	<i>Submit 300-FF-2 Focus Feasibility Study (FFS) and Proposed Plan for Regulator Review</i>	11/30/99	11/22/99 (A)
<b>M-15-00B</b>	<i>Complete all 300 Area Operable Unit Pre-ROD Site Investigations under Approved Work Plan Schedules</i>	12/31/99	11/22/99 (A)
<b>M-16-92B</b>	<i>ERDF Cells 3 &amp; 4 Ready to Accept Remediation Waste</i>	12/31/99	12/09/99 (A)
<b>M-15-00A</b>	<i>Complete all Remaining 100 Area Operable Unit Pre-ROD Site Investigations under Approved Work Plan Schedules (100-KR-2, 100-KR-3, 100-FR-2, 100-IU-2, and 100-IU-6)</i>	12/31/99	12/21/99 (A)
<b>M-16-08B</b>	<i>Complete Remediation and Backfill of 19 Waste Sites in the 100-BC-1 and 100-BC-2 Operable Units as Defined in the Remedial Design Report/Remedial Action Work Plan for the 100 Area</i>	3/31/00	2/25/00 (A)
<b>M-16-13A</b>	<i>Initiate Remedial Action for 100-FR-1 Operable Unit</i>	9/29/00	7/10/00 (A)
<b>*M-16-26B</b>	<i>Complete Remediation, Backfill and Revegetation of 51 Liquid Waste Sites and Process Effluent Pipelines in the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, and 100-HR-1 Operable Units as defined in the Remedial Design Report/Remedial Action Work Plan for the 100 Area (DOE/RL-96-17)</i>	2/28/01	2/25/05 (F)

Green

\*Unrecoverable due to funding constraints. Bid proposals were received on September 29 for the 100 B/C pipeline remediation, and are being evaluated. A Tri-Party Agreement change request is being prepared that proposes a new milestone date to be established by January 31, 2001, after the subcontract has been awarded.

• **DNFSB Commitment:**

None identified at this time.

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
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**PERFORMANCE OBJECTIVES: RAWD**

Outcome	Performance Indicator	Status
<b>Restore the River Corridor for Multiple Uses</b>	100/300 Area waste excavation, disposal and backfill/regrade.	Baseline work has been completed per Performance Incentive (PI) requirements.

Green

**PERFORMANCE MEASURES: RAWD - (River and Plateau)**

	DWP FY00	FY00 Mgmt Commitments	Current Baseline (Incl. Baseline Changes)	Forecast For FY00	Completed YTD
<b>Waste Sites</b>	24	41	43 <sup>a</sup>	42 <sup>a</sup>	42
<b>100 Area Burial Ground Assessments</b>	0	46	47	47	47
<b>300-FF-2 Assessments</b>	119	119	119	119	119
<b>Other Assessments</b>	2	2	2	2	2
<b>Tons</b>	389K	N/A	654K <sup>b</sup>	642K <sup>b</sup>	639K

Green

<sup>a</sup> Lab results indicate that two sites at 100 H will require some additional excavation in FY01.

<sup>b</sup> JA Jones and 600-23 (Superstretch work) will be carried over into FY01.

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**STRETCH AND SUPERSTRETCH GOALS: RAWD**

FY00 RAWD "Stretch" Goals	Scope Dollars (K)	Approved BCPs (K)
<i>Perform Excavation in Unfunded Sites in 100 B/C, HR-1, FR-1, 100, and 300 Area and Plumes:</i>		
(1) Extended Plumes at 316-1 S Pond (BCP-20043)		\$1,202.8K
(2) Additional Plumes at 100-DR (BCP-20050)		\$905.8K
(3) Additional Plumes at 100-HR (BCP-20119)		\$240.3K
(4) Additional Plumes at 100-HR (BCP-20130)		\$425.0K
(5) Additional Plumes at 300-FF (BCP-20113)		\$669.4K
(6) Additional Plumes at 100-DR (BCP-20116)		\$175.2K
(7) Defer Backfill at 100-DR (BCP-20166)		(\$93.2K)
(8) Additional Plumes at 100-DR (BCP-20189)		\$124.9K
(9) Additional Plumes at 100-DR (BCP-20215)		\$101.1K
<i>S/Total Remedial Action Stretch Goals:</i>	<b>\$4,560.0K</b>	<b>\$3,751.2K</b>

Green

FY00 RAWD "Superstretch" Goals	Scope Dollars (K)	Approved BCPs (K)
<i>Complete Remediation of 60 Sq. Mi. of Hanford Site:</i>		
(1) Complete Remediation of Hanford Townsite	\$755.0K	\$0.0K
(2) Complete Remediation of JA Jones Pit #1 and 600-23 (300-FF-2) *	\$1,500.0K	\$1711.7K
(3) Other Remedial Actions	\$1,395.0K	\$0.0K
<i>S/Total Remedial Action Superstretch Goals:</i>	<b>\$3,650.0K</b>	<b>\$1711.7K</b>

Red \*

Green

Red \*\*

\*Status: BCP-20270 endorsed by DOE-RL Assistant Manager for Environmental Restoration & Waste Management (AMEW) for \$1,707.1K on August 10. Work is scheduled for completion.

\*\*Efficiencies applied to Superstretch projects in Groundwater Management and Decommissioning Projects.

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**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE: RAWD**

- *Schedule:*

Remedial Action & Waste Disposal Project	BCWS	BCWP	Variance
	\$K	\$K	\$K
<i>ER01 100 Area Remedial Actions</i>	30,358	28,682	-1,676
<i>ER03 300 Area Remedial Actions</i>	6,676	6,291	-385
<i>ER04 ER Waste Disposal</i>	20,555	20,197	-358
<b>TOTAL Remedial Actions</b>	<b>57,589</b>	<b>55,170</b>	<b>-2,419</b>

Green

**PBS-ER01 – 100 Area Remedial Action**

*Schedule Variance = -\$1676K; -5.5% [Last Month: -\$669K; -2.5%]*

**Cause:** 100-DR south pipeline confirmation sampling behind schedule due to design document preparation delays; start of DR north pipeline backfill delayed pending resolution of differing chromium lab results; efficiencies allowed Superstretch remediation sites (JA Jones and 600-23) to be initiated in FY00, but major work activities are in FY01 (planned SV/carryover).

**Resolution:** South pipeline sampling design has been completed and variance sampling is in progress. Confirmation sampling will be carried over for completion in early FY01.

**PBS-ER03 – 300 Area Remedial Action**

*Schedule Variance = -\$385K; -5.8% [Last Month: -\$233K; -3.7%]*

**Cause:** Procurement package for drum disposal is behind schedule due to additional evaluation time requested by the prospective bidders. 300-FF-1 verification packages on hold pending regulator determination of format revision.

**Resolution:** Project unable to recover procurement delay. RL working with regulators on package requirements; remaining work will be carried over to FY01 for completion.

**PBS-ER04 – Environmental Restoration Waste Disposal**

*Schedule Variance = -\$358K; -1.7% [Last Month: +\$60K; +0.3%]*

**Cause:** Waste disposal for JA Jones and 600-23 multi-year Superstretch sites scheduled for FY01.

**Resolution:** None required, workscope will be carried over to FY01 for completion.

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**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE continued: RAWD**

• **Cost:**

<b>Remedial Action &amp; Waste Disposal Project</b>	<b>BCWP</b>	<b>ACWP</b>	<b>Variance</b>
	<b>\$K</b>	<b>\$K</b>	<b>\$K</b>
<b>ER01 100 Area Remedial Actions</b>	28,682	23,751	4,931
<b>ER03 300 Area Remedial Actions</b>	6,291	4,794	1,497
<b>ER04 ER Waste Disposal</b>	20,197	18,324	1,873
<b>TOTAL Remedial Actions</b>	<b>55,170</b>	<b>46,869</b>	<b>8,301</b>

**Green**

**PBS-ER01 – 100 Area Remedial Action**

*Cost Variance = +\$4931K; +17.2% [Last Month: +\$4166K; +16.3%]*

**Cause:** More efficient asbestos abatement methods utilized (asbestos and piping removed and disposed concurrently) in 100 D and H Areas; savings in sampling and analyses by using local laboratory and on-site resources; F Area savings in site prep and reallocating resources between F and H Areas; labor savings on B/C backfill activities; lower costs for 116-N-1 design.

**Resolution:** Savings were used to perform other remediation work.

**PBS-ER03 – 300 Area Remedial Action**

*Cost Variance = +\$1497K; +23.8% [Last Month: +\$1314K; +21.4%]*

**Cause:** Savings in Landfill 1A/1B remediation (such as working two sites concurrently, less down time, less Level B protection); FY99 accrual reversal in South Process Pond remediation.

**Resolution:** Savings were used to perform other remediation work.

**PBS-ER04 – Environmental Restoration Waste Disposal**

*Cost Variance = +\$1873K; +9.3% [Last Month: +\$2157; +11.4%]*

**Cause:** ERDF cover design and construction closeout completed with fewer resources than planned, transportation cost efficiencies from mild winter; and FY99 over accrual.

**Resolution:** Savings were used to perform other remediation work.

**REGULATORY ISSUES: RAWD**

A number of significant issues were identified and resolved during FY00. Those remaining at fiscal year end include:

**Green**

**Tri-Party Agreement Milestone M-16-26B:** An outyear milestone, M-16-26B, "Complete Remediation, Backfill, and Revegetation of 51 Liquid Waste Sites and Process Effluent Pipelines in the B/C, DR, and HR Operable Units" by February 28, 2001, will need to be renegotiated due to lack of funding in FY99 and FY00 for 100 B/C pipeline remediation activities, and the arsenic issue at the 100 H Area.

**Status:** Bid proposals were received on September 29 for the 100 B/C pipeline remediation, and are being evaluated. A Tri-Party Agreement change request is being prepared that proposes a new milestone date be established by January 31, 2001, after the subcontract has been awarded.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

### NOVEMBER 2000

#### REGULATORY ISSUES continued: RAWD

**Tri-Party Agreement Milestone M-16-26C:** M-16-26C, "Complete Remediation and Backfill of 10 Liquid Waste Sites and Process Effluent Pipelines in the 100-HR-1 Operable Unit" by May 31, 2001, will need to be renegotiated due to additional plumes and unanticipated elevated arsenic levels encountered during confirmation sampling/verification activities. Elevated levels of chromium are also being encountered that are above the remedial action goals.

Green

**Status:** When the impact of the elevated chromium results is evaluated, a Tri-Party Agreement change package will be prepared.

**100 D Area Backfill:** Backfill concurrence for the remaining north segment of the 100-DR north pipeline continues to be delayed pending resolution of a chromium issue. Additional samples have been collected and independently analyzed by three laboratories, with conflicting results. Ecology prefers that another qualified laboratory be utilized for further analysis.

Green

**Status:** Samples were sent to a fourth qualified laboratory for analysis. Based on results, a strategy will be developed to achieve final resolution of this issue.

#### EXTERNAL ISSUES (i.e. HAB, Congress, etc.): RAWD

None identified at this time.

#### DOE-RL & HQ ISSUES/REQUESTS (not covered elsewhere): RAWD

None identified at this time.

#### INTEGRATION ACTIVITIES: RAWD

Following is a summary of significant integration activities identified during FY00:

**ERDF:** In support of Hanford Site partnering, draft waste shipping and receiving plans (WSRPs) were prepared for the two initial waste streams expected from the Spent Nuclear Fuel (SNF) Project's K Basin clean out work. Initial delivery of waste from the SNF began on June 26.

Green

**331A Facility:** The ERDF successfully completed handling its first waste stream from outside the ERC. Transportation and disposal of demolition waste from the 331-A building took place from February 21 to March 6. The demolition contractor, Fluor Federal Services, experienced an equipment-related delay that stretched the completion date out further than originally anticipated. Teaming and coordination between all parties (PNNL, Fluor, D&D and RAWD) was excellent and the job proceeded smoothly. A lessons learned/feedback meeting was held to identify how ERDF processes can be optimized.

Green

**K-Basin Waste:** ERDF personnel in conjunction with members of the Spent Nuclear Fuels Project Team initiated and implemented a successful waste shipment program in support of K-Basin Wastes. Shipments began in June and continue as required.

Green

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# **Decommissioning Projects (D&D)**

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## SECTION B – RESTORING THE RIVER CORRIDOR

**Financial / Performance Measures data as of month-end September.  
All other data as of October 26, 2000 (unless otherwise noted).**

### Decommissioning Projects (D&D)

#### ACCOMPLISHMENTS: D&D

##### FY00 SUMMARY

Following is a summary of significant Decommissioning Project accomplishments achieved during FY00. The FY00 accomplishments are grouped into three categories: momentum, progress, and completion/removal. The Project's top five accomplishments (reactor and 233-S each) are underlined for easy recognition.

**Momentum:** (how Hanford cleanup has been "sped up")

##### **ISS:**

Completed demolition of the remaining ancillary structures for both F and DR Reactors, except for the F Reactor fuel storage basin (FSB) and DR Reactor FSB stairwells. Demolition of the F Reactor FSB began on September 25, and demolition of the DR Reactor stairwells began on October 20. F Reactor interim safe storage (ISS) is scheduled for completion in 2002 (one year ahead of schedule). DR Reactor ISS is scheduled for completion in 2001 (four years ahead of schedule).

Completed D and H Reactor presurveys, walkdowns, estimates, and biological cleanup activities, and issued all required D and H Reactors' engineering documents for review prior to initiating ISS demolition activities in FY01 (accelerated from 2004 [D Reactor] and 2006 [H Reactor]).

**Progress:** ("things" achieved in terms of amounts or percentages)

Green

##### **ISS:**

Completed characterization of the top 5 meters (17 feet) of fill in the F Reactor FSB. Engineering for removal of fill debris in the F Reactor FSB, along with agreements to handle any spent nuclear fuel found in F and H Reactor FSBs, was also completed.

Completed 90% of the safe storage enclosure pourbacks required for the F and DR Reactors.

##### **233-S Plutonium Concentration Facility:**

Achieved an average of 250 monthly entries (since February) into 233-S facility with no lost workdays occurring.

Completed loadout hood dismantlement and decontamination activities.

Completed dry cleanup and gross decontamination of the process hood floor. A total of 51 polyjars (0.5 liter in size) containing loose material was collected.

Completed removal and disposal (to ERDF) of 59 meters (193 feet) of exhaust and supply roof duct. A new work approach that allowed removal of larger duct sections improved efficiency and lowered worker safety risks.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

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#### ACCOMPLISHMENTS continued: D&D

*Completed removal of a total of 19 lines from the viewing room south end pipe trench.*

*Completed removal of all 70 PMMA panels from the process hood.*

*Completed removal of all piping, valve canisters, conduit, and panels from the instrument loft in the viewing room.*

**224-B Plutonium Concentration Facility:** *(Halted decommissioning activities in May due to higher priority work)*

*Submitted the draft engineering evaluation/cost analysis (EE/CA) for regulator review.*

*Completed initial radiological survey and walkdown of the 224-B offices and storage areas.*

**Completion/Removal:** *("what's done and what's gone")*

#### ISS:

*Completed Project Closeout reports for four facilities including the 108-F Biological Laboratory, 119-DR Exhaust Air Filter Sampling Building, 116-D and 116-DR exhaust stack demolitions. Demolition of these structures was accelerated from outyears and was completed in FY99. Submittal of the closeout reports formally constitutes completion of facility demolition.*

*Completed F Reactor Hazards Assessment and Characterization Report (satisfying Tri-Party Agreement Target Milestone M-93-08-T01).*

#### B Reactor:

*Completed B Reactor Museum Feasibility Assessment (Phase II) Project document (satisfying Tri-Party Agreement Milestone M-93-05). Supplemental cost estimates for hazard mitigation were also completed.*

Green

#### SAFETY/ISMS/CONDUCT OF OPERATIONS: D&D

*See Executive Summary.*

#### BREAKTHROUGHS/OPPORTUNITIES FOR IMPROVEMENT: D&D

*Following is a summary of significant breakthroughs identified during FY00:*

**233-S:** *The 233-S Radiological Control group is utilizing a digital camera and photo editing software to place actual photographs of survey locations into Radiological Control Survey Records. This provides the workers with an actual work location picture with radiological survey information annotated on the document. This has given them a better physical understanding of the potential hazards.*

Green

#### LONG-TERM (6 MONTHS PLUS) IMPORTANT ITEMS: D&D

*None identified at this time.*

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**MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS): D&D**

- **DOE Secretarial:**  
None identified at this time.

**MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS) continued: D&D**

- **DOE EM Performance Agreement:**

None identified at this time.

- **TPA Milestones:**

Milestone	Description	Due Date	(F)/(A) Date
<b>*M-93-05</b>	Issue B Reactor Phase II Feasibility Study Engineering Design Report for Public Comment	6/30/00	7/10/00 (A)

Green

\*The B Reactor milestone deliverable was submitted to DOE-RL (PM) on June 27 and delivered to the DOE-RL Office of Regulatory Liaison on June 28 for concurrence and submittal through the remainder of the signature cycle. The document was received by the regulators on July 10, ten days later than the milestone completion date of June 30. An EPA letter received on July 25 documented comments on the content of the document.

**Status:** RL responded to EPA's comments on August 1. The letter reaffirmed RL's commitment to deliver Draft A Engineering Evaluation/Cost Analysis (EE/CA) to EPA by January 31, 2001. Support will also be provided with the public comment period and through the approval of the Action Memorandum. EPA concurred that all requirements for TPA Milestone M-93-05 and EPA's comments had been addressed. In subsequent meetings with DOE and EPA, it has been agreed to move the Draft A EE/CA deliverable date to April 30, 2001 due to the additional alternatives being considered.

- **DNFSB Commitment:**

None identified at this time.

**PERFORMANCE OBJECTIVES: D&D**

Outcome	Performance Indicator	Status
<b>Restore the River Corridor for Multiple Uses</b>	Reactor ISS and preparation of facilities for decommissioning.	Baseline reactor ISS work has been completed per PI requirements.
<b>Transition Central Plateau to Support Long-Term Waste Management</b>	233-S Decommissioning 224B Decommissioning	All PI work has been completed per PI requirements.  All PI requirements have been completed; balance of performance measure deleted due to suspension of 224B work activities.

Green

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**PERFORMANCE MEASURES: D&D**

	DWP FY00	FY00 Mgmt. Commitments	Current Baseline (Incl. Baseline Changes)	Forecast For FY00	Completed YTD
<b>Facilities</b>	0	0	4 <sup>3</sup>	4 <sup>3</sup>	4 <sup>3</sup>

*<sup>3</sup> 116-D, 116-DR, 119-DR, and 108-F.*

**Green**

**STRETCH AND SUPERSTRETCH GOALS: D&D**

FY00 D&D "Superstretch" Goals	Scope Dollars (K)	Approved BCPs (K)
<i>Continue F Reactor Interim Safe Storage (ISS) (BCP-20151)</i>	\$2,000.0K	\$1,490.8K
<i>*Public Access to Hanford Townsite and B Reactor</i>	\$750.0K	50.0K
<b>S/Total D&amp;D Superstretch Goals:</b>	<b>\$2,750.0K</b>	<b>\$1,490.8K</b>

**Green**

**Red\***

*\*Status: Requires funding support outside of ER to execute work. Presentation made to Keith Klein on 9/20/00 outlining options and costs for public access via bike path and boat dock.*

**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE): D&D**

• *Schedule:*

Decommissioning Projects	BCWS	BCWP	Variance
	\$K	\$K	\$K
<i>ER06 Decontamination &amp; Decommissioning</i>	17,129	15,420	-1,709
<b>Total D&amp;D</b>	<b>17,129</b>	<b>15,420</b>	<b>-1,709</b>

**Green**

**PBS-ER06 – Decontamination and Decommissioning**

*Schedule Variance = -\$1709K; -10.0% [Last Month: -\$207K; -1.4%]*

**Cause:** Efficiencies allowed F Reactor ISS scope (Superstretch) to be initiated with completion planned for FY01; 233-S decommissioning: disposal of duct delayed pending approval of asbestos abatement plan. Ventilation system modifications are required at the 233-S project.

**Resolution:** Superstretch work will be carried over to FY01 for completion; a baseline change proposal has been submitted to performing ventilation system modifications.

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**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE) continued: D&D**

- *Cost:*

Decommissioning Projects	BCWP	ACWP	Variance
	\$K	\$K	\$K
<i>ER06 Decontamination &amp; Decommissioning</i>	15,420	15,376	44
<b>TOTAL D&amp;D</b>	<b>15,420</b>	<b>15,376</b>	<b>44</b>

Green

**PBS-ER06 – Decontamination and Decommissioning**

*Cost Variance = +\$44K; +0.3% [Last Month: +\$291K; +2.1%]*

**Cause:** F and DR ISS sample analysis costs are significantly lower than expected due to utilizing larger data groups (economies of scale).

**Resolution:** Savings were used to perform other remediation work.

**Cause:** 233-S – Additional cost to correct airflow and installing electrical upgrades in the viewing room.

**Resolution:** Cost overruns were trended and are reflected in the project EAC.

**REGULATORY ISSUES: D&D**

A number of significant issues were identified and resolved during FY00. Those remaining at fiscal year end include:

**D and H Reactor Impacts of TPA Milestones:** The acceleration of the reactor ISS projects is no longer consistent with the current M-93 milestones, especially the competitive procurement and renegotiating milestone (M-93-12) for DR Reactor.

Green

**Status:** Initial discussions with the regulators have begun which should lead to resolution in the near future. This will need to be discussed as part of RL's 100 Area acceleration vision.

**Demolition Equipment:** Demolition equipment (track hoe excavators and shuttle truck) breakdowns continue to cause delays to demolition activities.

Green

**Status:** Mechanics continue to repair the equipment as quickly as possible. Impact sheets are being completed to track the delays. Issues/impacts were presented to the Results Management Team (RMT). Based on information provided, the Field Support organization was directed to prepare a procurement plan for purchase of a new excavator. Procurement is evaluating a path forward for purchase of the equipment. \$1.2M for purchase of an excavator and shear is included on the FY01 supplemental funding list.

**EXTERNAL ISSUES (i.e. HAB, Congress, etc.): D&D**

*None identified at this time.*

**DOE-RL & HQ ISSUES/REQUESTS (not covered elsewhere): D&D**

*None identified at this time.*

**INTEGRATION ACTIVITIES: D&D**

*None identified at this time*

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# **Program Management and Support (PM&S)**

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## **SECTION B – RESTORING THE RIVER CORRIDOR**

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All other data as of October 26, 2000 (unless otherwise noted).**

### **Program Management & Support (PM&S)**

#### **ACCOMPLISHMENTS: PM&S**

##### **FY00 SUMMARY**

Following is a summary of significant Program Management and Support Project accomplishments achieved during FY00. The FY00 accomplishments are grouped into three categories: momentum, progress, and completion/removal. The Project's top five accomplishments are underlined for easy recognition.

**Momentum:** (how Hanford cleanup has been "sped up")

Completed 9 technology deployments (FY00 HQ performance measure identified 4 technology deployments). These deployments were instrumental in providing efficiencies in the efforts of waste site remediation, reactor ISS, and CDI characterization activities.

**Progress:** ("things" achieved in terms of amounts or percentages)

Completed and received HQ approval of the FY00 Baseline Update and Reconciliation change proposal. The Integrated Priority List for the FY02 budget submittal was also completed.

Conducted FY01-FY03 DWP management review meetings with ERC, RL, HQ, regulators, and stakeholders to reach agreement on future workscope. The FY01-FY03 DWP was approved on September 26. The 7-volume document establishes the basis for FY01 ER work execution.

Exceeded FY00 Small Business socioeconomic contractual goals. All small, small disadvantaged, and women-owned small business prime contract goals have been met or exceeded for the entire six years of BHI's prime contract. In addition, this past year BHI was recognized as having the best small business statistics in Bechtel Systems and Infrastructure (parent company of BHI).

Completed HQ Integrated Planning, Accountability, and Budget System Part B budget formulation data for FY02.

Completed the 100 Area and the 200 West Area inspections as required by the Hanford Site RCRA permit. No concerns or violations were noted as a result of the inspections. The semi-annual site-wide RCRA inspection of the Columbia River during high water was also conducted with no concerns noted.

Completed 56 environmental compliance assessments/surveillance/audits.

Received results from the FY99 Procurement DOE Complex Balanced Score Card indicating that BHI shared highest score in the DOE complex in four of the eleven tracked categories.

Received recognition from the Secretary of Energy with a Certificate of Appreciation for contributions to DOE's mission to prevent pollution in operations, processes, and programs.

Green

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

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### ACCOMPLISHMENTS continued: PM&S

#### *Completion/Removal: ("what's done and what's gone")*

*Maintained a major sustained effort across all ERC projects and functional departments on implementing, maintaining, and improving our Integrated Environment, Safety, and Health Management System (ISMS). Initial efforts focused on preparing for and supporting DOE verification of our ISMS and addressing opportunities for improvement. The Phase II verification audit, which was conducted by a DOE-led team, was successfully completed and resulted in no major findings.*

*Completed successful Y2K transition. All aspects of Y2K operations performed exceptionally well through the rollover weekend to ensure operations were ready for the first days of business in 2000.*

*Accomplished emergency repainting of the 100 B/C controlled area and the 200 Area 216-S ditch within a week of the Hanford Site range fire in June. Over 250 ERC signs were damaged by the fire.*

*Completed targets for the Waste Minimization performance incentive including redeployment of a concrete crusher to Ohio, recycling absorbents, recycling flat bed trailer and generator, and recycling 100 drum overpacks.*

Green

### SAFETY/ISMS/CONDUCT OF OPERATIONS: PM&S

*See Executive Summary.*

### BREAKTHROUGHS/OPPORTUNITIES FOR IMPROVEMENT: PM&S

*None identified at this time.*

### LONG-TERM (6 MONTHS PLUS) IMPORTANT ITEMS: PM&S

*None identified at this time.*

### MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS): PM&S

- **DOE Secretarial:**

*None identified at this time.*

- **DOE EM Performance Agreement:**

*None identified at this time.*

- **TPA Milestones:**

*None identified at this time.*

- **DNFSB Commitment:**

*None identified at this time.*

### PERFORMANCE OBJECTIVES: PM&S

*None identified at this time.*

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**PERFORMANCE MEASURES: PM&S**

BHI committed to perform four technology deployments for FY00. A list of planned/committed FY00 technology deployments was transmitted to RL on January 27. Nine technology deployments have been completed through September.

<b>Technology Deployment</b>	<b>PBS</b>	<b>Planned Date</b>	<b>(F)/(A) Date</b>
<i><b>Small Diameter Geographical Logging System (ROI Funded)</b></i>	RL-ER01	10/99	10/99 (A)
<i><b>Liquid-Level Detection Technology (Ultrasonics)</b></i>	RL-ER05	10/99	10/99 (A)
<i><b>Remote Concrete Sampling System (Brokk™ with automated concrete coring attachment)</b></i>	RL-ER05	03/00	09/00 (F) <sup>a</sup>
<i><b>3-D Visual and Gamma Ray Imaging System</b></i>	RL-ER06	06/00	07/00 (A) <sup>b</sup>
<i><b>Liquid-Level Detection Technology (Thermography and/or Ultrasonics)</b></i>	RL-ER05	09/00	
<i><b>In Situ Object Characterization Survey (ISOCS) System</b></i>	RL-ER06	09/00	07/00 (A) <sup>c</sup>
<i><b>Remote Drain Line Characterization Technology</b></i>	RL-ER05		08/00 (A)
<i><b>Overview Video System (OVS)</b></i>	RL-ER05		01/00 (A)
<i><b>Passive Soil Vapor Extraction (SVE)</b></i>	RL-ER08		10/99 (A)
<i><b>Wireline Cone Penetrometer</b></i>	RL-ER01		08/00 (A)

Green

<sup>a</sup> The Brokk™ concrete coring machine successfully obtained a total of eight concrete cores within four process cells in support of the CDI project.

<sup>b</sup> Equipment procurement delay. Not needed at CDI, but is being used by D&D ISS.

<sup>c</sup> Technology not needed.

<sup>d</sup> This deployment was identified as a planned (not committed) deployment for FY00, and is currently being used by D&D ISS. Additional deployments may occur at 233-S and 221-U facilities.

<sup>e</sup> New EM-40 successful technology deployments which were not in the original FY00 deployment plan.

**STRETCH AND SUPERSTRETCH GOALS: PM&S**

*None identified at this time.*

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**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE): PM&S**

• *Schedule:*

<b>Program Management &amp; Support</b>	<b>BCWS</b>	<b>BCWP</b>	<b>Variance</b>
	<b>\$K</b>	<b>\$K</b>	<b>\$K</b>
<b>ER10 ERC Program Management &amp; Support</b>	28,522	26,775	-1,747
<b>ER10 RL Program Management &amp; Support</b>	5,835	4,553	-1,282
<b>TOTAL PM&amp;S</b>	<b>34,357</b>	<b>31,328</b>	<b>-3,029</b>

Green

**PBS-ER10 – Program Management and Support**

*Schedule Variance = -\$3029K; -8.8% [Last Month: -\$1430K; -5.3%]*

**Cause:** ERC performance fee on base and Superstretch work for F Reactor ISS, two remedial action sites, and well decommissioning will be paid upon planned completion in FY01.

**Resolution:** Performance fee will be carried over to FY01 relative to work scheduled.

**Cause:** Late billing on RL site-wide assessments.

**Resolution:** RL is discussing billing/timing with other site contractors/government agencies.

**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE) continued: PM&S**

• *Cost:*

<b>Program Management &amp; Support</b>	<b>BCWP</b>	<b>ACWP</b>	<b>Variance</b>
	<b>\$K</b>	<b>\$K</b>	<b>\$K</b>
<b>ER10 ERC Program Management &amp; Support</b>	26,775	26,248	527
<b>ER10 RL Program Management &amp; Support</b>	4,553	4,553	0
<b>TOTAL PM&amp;S</b>	<b>31,328</b>	<b>30,801</b>	<b>527</b>

Green

**PBS-ER10 – Program Management and Support**

*Cost Variance = +\$527K; +1.7% [Last Month: +\$722K; +2.8%]*

**Cause:** Fewer special requests and audits have resulted in savings; baseline and strategic planning, staff savings.

**Resolution:** Savings were used to perform other remediation work.

**REGULATORY ISSUES: PM&S**

*None identified at this time.*

**EXTERNAL ISSUES (i.e. HAB, Congress, etc.): PM&S**

*None identified at this time.*

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**DOE-RL & HQ ISSUES/REQUESTS (not covered elsewhere): PM&S**

*None identified at this time.*

**INTEGRATION ACTIVITIES: PM&S**

*Following is a summary of significant integration activities identified during FY00:*

**"Strength through Science" Exhibit:** Bechtel Hanford, Inc. led the effort with assistance from Fluor and PNNL in the preparation, assembling and shipping of posters and handout materials for the DOE-RL Capital Hill exhibit titled "Strength through Science". The exhibit was attended by several Congressmen, Senators and their staff and was judged as one of the best among the DOE Complex.

Green

**Planning & Controls:** Represented ER at the Hanford Site Change Control Performance Improvement Team (PIT) meeting. The February meeting included preparation of material and presentation of several ER BCPs to the PIT members. ERC's process for administering the Stretch and Superstretch performance incentives was also discussed. The PIT consists of RL and Hanford contractor representatives.

Green

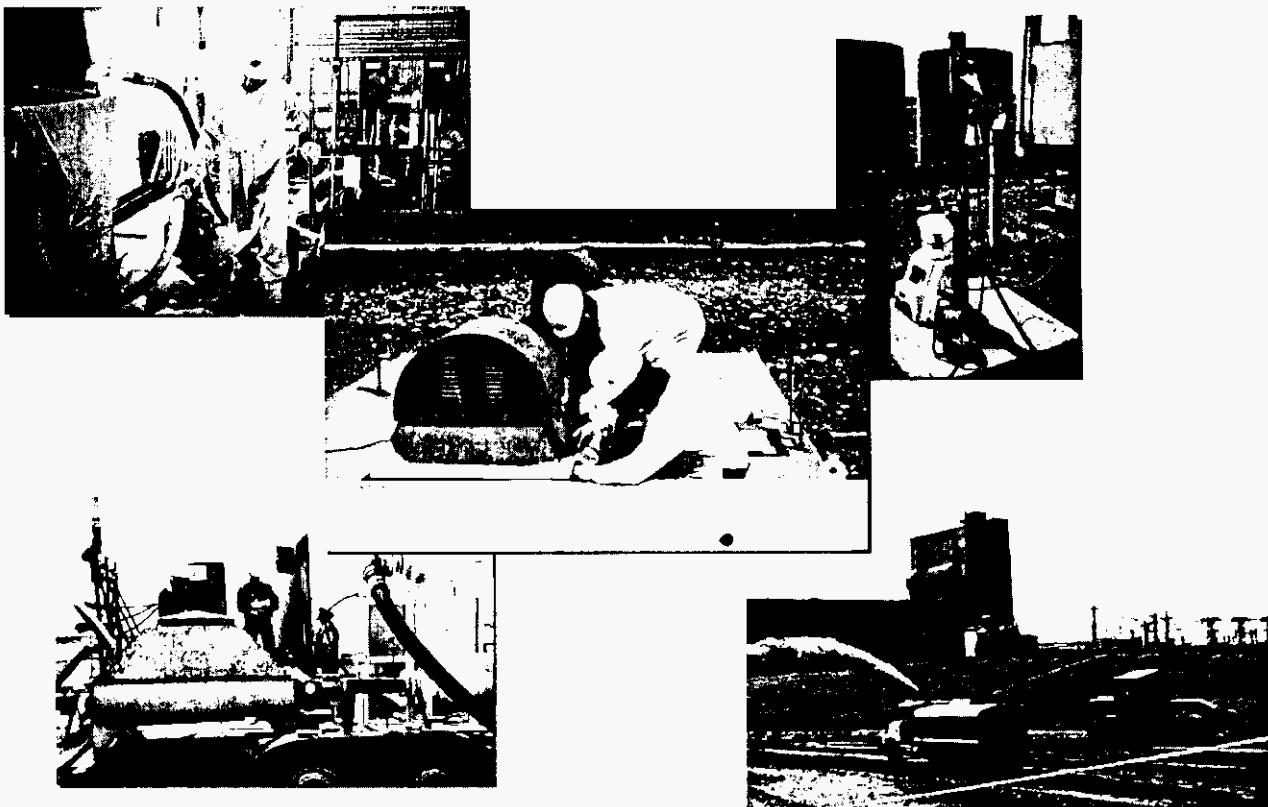
Richland Operations Office  
Environmental Restoration

# Environmental Management Performance Report

## Section C - Central Plateau Information

November 2000

- Groundwater / Vadose Zone Integration Project
- Surveillance / Maintenance & Transition Projects



*Focused on Progress...*

*Focused on Outcomes!*



Department of Energy  
Richland Operations Office



Bechtel Hanford, Inc.  
Environmental Restoration Contractor

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**Groundwater/Vadose Zone  
Integration Project  
(GW/VZ)**

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## **SECTION C – TRANSITIONING THE CENTRAL PLATEAU**

**Financial / Performance Measures data as of month-end September.  
All other data as of October 26, 2000 (unless otherwise noted).**

### **Groundwater/Vadose Zone Integration Project(GW/VZ):**

**ACCOMPLISHMENTS: GW/VZ**

#### **FY00 SUMMARY**

*Following is a summary of significant Groundwater/Vadose Zone Integration Project accomplishments achieved during FY00. The FY00 accomplishments are grouped into three categories: momentum, progress, and completion/removal. The Project's top five accomplishments are underlined for easy recognition.*

**Momentum:** (*how Hanford cleanup has been "sped up"*)

#### **Groundwater Management:**

*Received regulator approval for the ISRM Project ROD Amendment. The ISRM technology involves injecting a chemical (sodium dithionite) into an aquifer to create a chemically-altered treatment zone. Studies completed to date indicate that, when the chromium-contaminated groundwater passes through the permeable chemical zone (barrier), chromium is transformed into a harmless chemical and is immobilized.*

**Progress:** (*"things" achieved in terms of amounts or percentages*)

#### **Groundwater/Vadose Zone:**

*Completed technical and management reviews of the SAC resulting validation of the approach being taken to develop the SAC and in Integration Project Expert Panel support for the SAC activity. The SAC Rev. 0 software development and testing were also completed. The SAC is being designed to provide a cumulative assessment of the impacts and risks associated with Hanford Site contaminants.*

*Completed field activities at the Vadose Zone Transport Field Study site and commenced data interpretation. The main objectives of this field study are to focus on the underground tank leak issues, improve vadose monitoring capabilities, identify key transport processes, and provide data for model verification.*

*Issued the S&T Roadmap, Rev. 1 (satisfying a FY00 HQ Management Commitment Milestone). This document links science to address the contaminant concerns relating to Inventory, Vadose Zone, Groundwater, Columbia River, and Risk technical elements.*

*Developed enhanced conceptual and numerical models of the groundwater/Columbia River interface.*

*Completed database development to support characterization of systems by defining issues management, and features, events, and processes protocols.*

*Hosted meetings with the Integration Project Expert Panel and the National Academy of Sciences. Participated in meetings with the Oregon Hanford Waste Board, Oregon Office of Energy, Hanford Advisory Board, public interest groups, and several open Project meetings. Initiated the subpanel review of the Partitioning Interwell Tracer Test.*

**Green**

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

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#### ACCOMPLISHMENTS continued: GW/V2

##### **Groundwater Management:**

Completed FY00 ISRM Project activities including awarding the contract, constructing an evaporation pond, installing 16 wells, and initiating chemical barrier injections and withdrawals in 10 wells (satisfying a FY00 HQ Management Commitment Milestone). The subterranean chemical barrier is 31 meters (100 feet) deep and extends 198 meters (650 feet) between the DR Reactor and the Columbia River. By 2002, the barrier is expected to reach its final length of 702 meters (2,300 feet).

Completed Phase I for the 618-11 Burial Ground elevated tritium investigation. Phase I involved sampling and analysis of 22 wells for tritium and other constituents. Results indicated two areas of high concentrations of helium, which is a natural byproduct of the radioactive decay process of tritium. Phase II of the tritium investigation will include obtaining additional soil gas samples and two groundwater samples. The results of the additional tests will help determine if the helium is coming from a tritium source buried in the waste site or from tritium contamination in the groundwater. The 618-11 Burial Ground is located adjacent to a commercial nuclear reactor complex and is about 6 kilometers (3.5 miles) from the Columbia River.

Completed routine well maintenance and groundwater monitoring activities. At the end of FY00, maintenance had been completed on 179 wells, 27 less than the 206 planned wells (planned carryover).

Operated all five groundwater pump and treat systems above the planned 90% availability during FY00 (97% actual; 90% planned). The pump and treat systems remove contaminants (carbon tetrachloride, strontium, and chromium) from the groundwater and mitigate further migration to the Columbia River. Approximately 1.1 billion liters of groundwater were processed during FY00; over 4.3 billion liters of groundwater have been processed to date.

Green

##### **Completion/Removal:** ("what's done and what's gone")

##### **Groundwater/Vadose Zone:**

Completed the Semi-Annual Groundwater/Vadose Zone Report to Congress (satisfying a FY00 HQ Management Commitment Milestone).

##### **Groundwater Management:**

Completed installation of a total of 13 Resource Conservation and Recovery Act (RCRA) groundwater wells. The first eight RCRA wells were installed in February which satisfied Tri Party Agreement Milestone M-24-00K. An additional five RCRA wells were installed through September which satisfied Tri-Party Agreement Milestone M-24-46, due December 31, 2000 (15 weeks ahead of schedule). Timely installation of these five wells also supported CH2M HILL Hanford Group (CHG) in meeting one of their FY00 performance incentives.

##### **200 Area Assessments:**

Completed FY00 field characterization activities for the 200-CW-1 Gable Mountain/B Pond Cooling Water Operable Unit. This included 12 test pits and one borehole. Significant cost savings resulted from utilizing prior-year lessons learned on this project.

Completed Draft A 200-CW-5 Operable Unit Remedial Investigation/Feasibility Study Work Plan (satisfying Tri-Party Agreement Milestone M-13-22) and Draft A 200-TW-1 and 200-TW-2 Operable Unit RI/FS Work Plan (satisfying Tri-Party Agreement Milestones M-13-23 and M-13-24). A portion of the FY00 savings from other ER work was allocated to allow full scale 200 Area assessment work to commence in FY01.

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**SAFETY/ISMS/CONDUCT OF OPERATIONS: GW/VZ**

*See Executive Summary.*

**BREAKTHROUGHS/OPPORTUNITIES FOR IMPROVEMENT: GW/VZ**

*None identified at this time.*

**LONG-TERM (6 MONTHS PLUS) IMPORTANT ITEMS: GW/VZ**

*Following is a summary of significant long-term important items identified during FY00:*

**Key ISRM FY 2000 Activities:** Initiated ISRM technology.

Green

**FY 2001 Activities: (Planned Activities)**

*Activities: Drill and install twenty-four ISRM Barrier Wells. Utilize all wells for ISRM Barrier emplacement.*

*(Approximately 240 meters of additional ISRM Barrier length to be constructed in FY 2001.) Drill and install four ISRM compliance wells.*

**FY 2002 Activities: (Planned Activities)**

*Activities: Drill and install twenty-four ISRM Barrier Wells. Utilize all remaining wells for ISRM Barrier emplacement.*

*(Approximately 240 meters of additional ISRM Barrier length to be constructed in FY 2002.) Demobilize evaporation pond (FY 2002 or FY 2003 Activity).*

**MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS): GW/VZ**

**• DOE Secretarial:**

*Transmit Update of the Vadose Zone Science and Technology Roadmap (PBS VZ01) due April 30.*

Green

***Status:*** Complete. Draft was transmitted to RL on April 28.

*Install Wells and Initiate Injection of the Barrier for Phase I of the In Situ Reduction Oxidation (REDOX) Groundwater Remediation (PBS ER08) due September 30.*

Green

***Status:*** Complete.

- 16-well installations were completed on April 24.
- The evaporation pond was ready on July 31 for use in managing extraction wastes.
- Well injections began on August 1, as scheduled. Ten wells were chemically injected as of the end of September.
- Scope for Phase II includes installation of 28 injection wells and 4 compliance monitoring wells.
- Well planning activities, including preparation of Description of Work and initiation of site walk downs, are underway.
- A chemical injection into one well is scheduled for the end of October.

*Complete the Semi-Annual Groundwater/Vadose Zone Report (December 1999 ~ March 2000) (PBS VZ01) due May 31.*

Green

***Status:*** Complete. Final document was transmitted to RL on May 31.

**• DOE EM Performance Agreement:**

*None identified at this time.*

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**MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS) continued: GW/VZ**

• **TPA Milestones:**

<b>Milestone</b>	<b>Description</b>	<b>Due Date</b>	<b>(F)/(A) Date</b>
<b>M-13-22</b>	<i>Submit U-Pond/Z-Ditches Cooling Water Group Work Plan</i>	12/31/99	12/14/99 (A)
<b>M-24-00K</b>	<i>Install RCRA Groundwater Monitoring Wells at the Rate of up to 50 in Calendar Year 1999 if Required</i>	2/29/00	2/17/00 (A)
<b>M-24-41</b>	<i>Install Three (3) Additional RCRA Wells for the SST WMA S-SX</i>	2/29/00	2/17/00 (A)
<b>M-24-42</b>	<i>Install One (1) Replacement Well for the 216-S-10 Pond</i>	2/29/00	2/17/00 (A)
<b>M-24-43</b>	<i>Install One (1) Additional RCRA Well for the SST WMA TX-TY</i>	2/29/00	2/17/00 (A)
<b>M-24-44</b>	<i>Install One (1) Replacement Well for the 216-B-3 Pond (This is an extension of a CERCLA vadose borehole.)</i>	2/29/00	2/17/00 (A)
<b>M-24-45</b>	<i>Install Two (2) Additional RCRA Wells for the SST WMA B-BX-BY</i>	2/29/00	2/17/00 (A)
<b>M-13-23</b>	<i>Submit 200-TW-1 Work Plan</i>	8/31/00	8/14/00 (A)
<b>M-13-24</b>	<i>Submit 200-TW-2 Work Plan</i>	8/31/00	8/14/00 (A)
<b>M-13-00K</b>	<i>Submit One (1) 200 NPL RI/FS (RFI/CMS) Work Plan</i>	12/31/00	12/29/00 (F)
<b>M-13-25</b>	<i>Submit Uranium Rich Process Waste Group (200-PW-2) Work Plan</i>	12/31/00	12/29/00 (F)
<b>M-24-46</b>	<i>Install two (2) additional wells at SST WMA S-SX</i>	12/31/00	9/14/00 (A)
<b>M-24-47</b>	<i>Install four (4) additional wells at SST WMA T</i>	12/31/00	11/28/00 (F)
<b>M-24-48</b>	<i>Install four (4) additional wells at SST WMA TX-TY</i>	12/31/00	12/13/00 (F)
<b>M-24-00L</b>	<i>Install RCRA Groundwater Monitoring Wells at the Rate of up to 50 in Calendar Year 2000 if Required</i>	12/31/00	12/13/00 (F)
<b>M-16-27A</b>	<i>Complete 100-HR-3 Phase I, ISRM Barrier Emplacement</i>	12/31/00	12/22/00 (F)

Green

• **DNFSB Commitment:**

None identified at this time.

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**PERFORMANCE OBJECTIVES: GW/VZ**

Outcome	Performance Indicator	Status
<b>Restore the River Corridor for Multiple Uses</b>	Manage groundwater plumes per interim Record of Decisions (RODs).	Baseline work has been completed per Performance Incentive (PI) requirements.
	Complete system assessment capability.	Baseline work has been completed per PI requirements.
<b>Transition Central Plateau to Support Long-Term Waste Management</b>	Soil sites assessments.	All PI requirements completed.
	Manage groundwater plumes per interim RODs.	Baseline work has been completed per PI requirements.

Green

**PERFORMANCE MEASURES: GW/VZ**

*None planned in FY 2000.*

**STRETCH AND SUPERSTRETCH GOALS: GW/VZ**

FY00 GW/VZ "Stretch" Goals	Scope Dollars (K)	Approved BCPs (K)
<i>*Complete Partitioning Interwell Tracer Test (PITT) at 200-ZP-1 and 200-ZP-2</i>	<i>\$706.0K</i>	<i>\$414.0K</i>
<i>S/Total GW – Vadose Zone Stretch Goals:</i>	<i>\$706.0K</i>	<i>\$0K</i>

*\*Status: BCP-20246 (\$414K) was approved in July to deepen selected 200-PW-1 wells in preparation for the PITT test; work has been initiated with expected completion in FY01. Not identified as Stretch since would not complete in FY00.*

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**STRETCH AND SUPERSTRETCH GOALS continued: GW/VZ**

FY00 GW/VZ "Superstretch" Goals	Scope Dollars (K)	Approved BCPs (K)	
<i>Provide Permanent Solution for Hanford Groundwater Plumes</i>	\$750.0K	50.0K	Red **
<i>Complete Remediation of 60 Sq. Mi. of Hanford Site:</i>			
(1) *Decommission 4 wells	\$450.0K	\$104.0K	Green
(2) *Evaluate 300 wells and decommission up to 90	\$900.0K	\$1478.0K	
<b>S/Total GW – Vadose Zone Superstretch Goals:</b>	<b>\$2,100.0K</b>	<b>\$1582.0K</b>	

\*Status: Efficiencies identified. BCPs 20248 and 20185 were endorsed by DOE-RL Assistant Manager for Environmental Restoration & Waste Management (AMEW) on August 10 to administratively verify and decommission wells within the Columbia River Corridor.

\*\*Efficiencies applied to Superstretch projects in Remedial Action and Decommissioning Projects.

**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE: GW/VZ**

• *Schedule:*

GW/VZ Integration Project	BCWS	BCWP	Variance
	\$K	\$K	\$K
<b>ER02 200 Area Remedial Actions</b>	3,592	3,497	-95
<b>ER08 Groundwater Management</b>	25,770	21,335	-4,435
<b>VZ01 Groundwater/Vadose Zone</b>	11,276	10,359	-917
<b>TOTAL Groundwater</b>	<b>40,638</b>	<b>35,191</b>	<b>-5,447</b>

**PBS-ER02 – 200 Area Remedial Action (Assessment)**

Schedule Variance = **-\$95K; -2.6%** [Last Month: **-\$44K; -1.3%**]

**Cause:** Removal of the irrigation system for the Hanford Prototype Barrier was deferred pending an evaluation of excessing-in-place scenario.

**Resolution:** The evaluation is complete. The system will be removed. Workscope will be carried over to FY01.

**PBS-ER08 – Groundwater Management**

Schedule Variance = **-\$4435K; -17.2%** [Last Month: **-\$1853K; -8.8%**]

**Cause:** Efficiencies allowed well installation and decommissioning superstretch workscope to be initiated in FY00 but major work activities will occur in FY01.

**Resolution:** None required. Well decommissioning is underway. Planned carryover.

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**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE) continued: GW/VZ**

**Cause:** 200-ZP 2 PITT well deepening workscope was approved in FY00 with the understanding that most of the work would be completed in FY01.

**Resolution:** None; planned carryover.

**Cause:** Groundwater monitoring activities consisting of sample collection, analysis, interpretation and reporting, and hydrologic assessment are behind schedule due to resource limitations.

**Resolution:** Sampling teams working overtime when possible. Workscope will be carried over into FY01.

**PBS-VZ01 – Groundwater/Vadose Zone**

Schedule Variance = **-\$917K; -8.1%** [Last Month: **-\$942K; -9.1%**]

**Cause:** Field investigation at representative sites behind schedule due to delayed distribution of samples to the lab and receipt of sample analysis.

**Resolution:** Schedule is not recoverable this fiscal year. RPP Field Investigation Report milestone extended; project in sync with RPP schedule; carryover initiated.

**Cause:** Technical resource availability (formation of the core team) delayed Characterization of Systems initiation.

**Resolution:** Workscope will be carried over to FY01.

• **Cost:**

GW/VZ Integration Project	BCWP	ACWP	Variance
	\$K	\$K	\$K
<b>ER02 200 Area Remedial Actions</b>	3,497	2,456	1,041
<b>ER08 Groundwater Management</b>	21,335	21,058	277
<b>VZ01 Groundwater/Vadose Zone</b>	10,359	10,179	180
<b>TOTAL Groundwater</b>	<b>35,191</b>	<b>33,693</b>	<b>1,498</b>

Green

**PBS-ER02 – 200 Area Remedial Action(Assessment)**

Cost Variance = **+\$1041K; +29.8%** [Last Month: **+\$1133K; +32.6%**]

**Cause:** Efficiencies learned in prior work were applied to Gable Mountain and B Pond test pit trenching, resulting in savings. Borehole drilling was combined with RCRA drilling resulting in cost savings.

**Resolution:** Savings were used to perform other remediation work.

**PBS-ER08 – Groundwater Management**

Cost Variance = **+\$277K; +1.3%** [Last Month: **+\$597K; +3.1%**]

**Cause:** Routine well maintenance and sample collection were less than planned due to unresolved waste issues.

**Resolution:** Savings were used to perform other remediation work.

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**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE) continued: GW/VZ**

**PBS-VZ01 – Groundwater/Vadose Zone**

Cost Variance = **+\$180K; +1.7%** [Last Month: **+\$484K; +5.1%**]

**Cause:** Science & Technology and Characterization of Systems used fewer resources than planned; Expert Panel meeting completed for less than planned.

**Resolution:** Savings were used to perform other remediation work.

**REGULATORY ISSUES: GW/VZ**

A number of significant issues were identified and resolved during FY00. Those remaining at fiscal year end include:

**Monitoring Wells:** Tritium investigation is being conducted near the 618-11 Burial Ground.

Green

**Status:** The results from the 618-11 soil gas investigation have been evaluated, compiled, and mapped. The helium ratios indicate important tritium sources along the eastern half of the northern boundary and the northern third of the eastern boundary. The ratios do not indicate important tritium sources along the western or southern boundaries of the burial ground.

Based on the soil gas helium ratios, additional sampling and analyses tasks have been initiated to further define the nature and extent of the tritium contamination near the 618-11 burial ground. These tasks include:

- Groundwater grabs from boreholes C-32-64 and C-32-65 to assess tritium levels in the groundwater and verify the correlation between groundwater concentrations and the helium ratios measured
- Additional soil gas sampling (helium analysis) along the northern boundary to assess the potential extent of contamination based on helium ratio results
- soil moisture sampling (tritium analysis) along the eastern and northern boundaries to assess the extent of contamination in the vadose zone
- variable depth soil gas sampling (helium analysis) at the northern boundary peak helium ratio locations to establish the tritium source (i.e., groundwater or vadose)

Borehole C-32-6 (about midway along the northern boundary of the 618-11 Burial Ground) was completed to groundwater and a groundwater grab sample was collected on October 9. The initial results from the C-32-64 groundwater grab indicated tritium levels less than 30,000 pCi/liter. The final results for this borehole are expected by November 1.

Borehole C-32-65 (in the Energy Northwest parking lot, east of the 618-11 Burial Ground) was completed to groundwater and a groundwater grab sample was collected on October 13. The groundwater sample has been submitted for laboratory analysis and the initial results are expected in early November.

The placement of additional soil gas sampling ports, soil gas sampling, and soil moisture sampling are scheduled.

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#### **REGULATORY ISSUES continued: GW/VZ**

**200-ZP-1/200-ZP-2:** Need for enhanced characterization, enhance removal efficiency, and Dense Non-Aqueous Phase Liquid (DNAPL) investigation.

Green

**Status:** Project personnel met with EPA (Doug Sherwood), to discuss the need to restart ZP-2 pending completion of the cost estimate to perform the Partitioning Interwell Tracer Test (PITT) for DNAPL investigation. Decision was made to proceed with the PITT test in lieu of restarting ZP-2 this fiscal year. Drilling will proceed to deepen three wells in support of the PITT and to enhance the current vapor extraction system. A preliminary cost estimate and proposal submitted by a potential contractor is currently being reviewed by a subpanel of the GW/VZ Integration Project's Expert Panel. Evaluation is to be completed by the end of October. A preliminary cost estimate was prepared by BHI for the cost to provide support to the potential contractor.

**200 Area Remedial Investigation/Feasibility Study:** Approximately 800 contaminated soil sites in the 200 Area, which have been grouped into 23 process-based operable units, are to be characterized by 2008 and remediated by 2018. \$5M to \$6M per year are required to meet Tri-Party Agreement milestones. A budgetary position toward assessment and cleanup of the 200 Area liquid waste sites is needed for the long term. The regulator position is to submit Tri-Party Agreement change packages for each operable unit work plan, to support enforceability in completing remedial investigations through the ROD, based on existing Tri-Party Agreement milestones.



**Status:** Tri-Party Agreement change packages for the 200-CW-1, 200-CW-5, and 200-CS-1 Operable Units containing RI/FS interim milestones were approved on August 23. In addition, RL is currently working on ways to revise the existing long-term strategy for prioritizing the 200 Area assessment and remediation activities in conjunction with other site cleanup decisions. RL is also seeking to justify and identify additional funds for characterization. RL is pursuing \$2.5M additional authorization from other RL funding sources, and the ERC has identified \$2.0M (from FY00 efficiencies) for FY01 workscope. The ERC team, in conjunction with RL management, will meet with the regulators to discuss a proposed strategy for initiation of this work.

#### **WASTE MANAGEMENT ISSUES:**

**BioSite Notice of Correction:** On May 31, a Notice of Correction (NOC) letter was received by RL from Ecology. This NOC detailed the violations and corrections regarding the shipments of mixed solid wastes that contacted groundwater that contains listed waste (FY01 and FY03), and the drums of M-24 drilling waste at the BioSite.



**Status:** RL/BHI response was issued on June 26. Requirements include (1) Issue formal notification to Rabanco and City of Richland Landfills (completed), and (2) Designation and shipment of BioSite Waste (135 drums) was completed in September.

**200-CW-1 IDW Waste Disposal at ERDF:** A request for a contained-in determination was approved for the 200-CW-1 investigation derived waste (IDW) by Ecology. Waste had to be removed from the site by July 14, as per Ecology's approved extension. Waste was shipped to ERDF, with approval from EPA. Disposal into ERDF was delayed pending either approval of the 200-CW-1 work plan by Ecology or signature of the change package.



**Status:** A TPA change package was signed on August 23. There were 46 drums on a truck at ERDF. Approval was received from both regulatory agencies to dispose of 38 drums with a contained-in determination. Ecology has approved the remaining 8 drums for disposal in October.

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**REGULATORY ISSUES continued: GW/VZ**

- **Purgewater Secondary Waste Management:** There is a discrepancy in the interpretation of the Purgewater Strategy applicability. Direction was given by RL to become compliant with all land disposal restriction (LDR) requirements.

**Green**

**Status:** An interim phase was initiated, and a screening was completed for the potential listed waste codes to be applied. Activities on Site will be conducted as planned, with a conservative application of the listed waste codes to the secondary wastes. A long-term resolution has also been accepted by RL, to conduct a Listed Waste Applicability Assessment to minimize the listed waste codes to be applied on this waste stream. Meetings with the regulators to resolve pending issues are being planned to take place by mid-November 2000.

**EXTERNAL ISSUES (i.e. HAB, Congress, etc.): GW/VZ**

None identified at this time.

**DOE-RL & HQ ISSUES/REQUESTS (not covered elsewhere): GW/VZ**

None identified at this time.

**INTEGRATION ACTIVITIES: GW/VZ**

Following is a summary of significant integration activities identified during FY00:

**Green**

**CHG:** Five RCRA well installations were completed prior to September 30 in support of TPA Milestone M-24-00L (due December 31, 2000). This effort supported CHG in meeting one of their FY00 performance incentives.

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**Surveillance/Maintenance  
and Transition Project  
(SM&T)**

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## SECTION C – TRANSITIONING THE CENTRAL PLATEAU

Financial / Performance Measures data as of month-end September.  
All other data as of October 26, 2000 (unless otherwise noted).

### Surveillance/Maintenance & Transition Project (SM&T):

#### ACCOMPLISHMENTS: SM&T

##### FY00 SUMMARY

Following is a summary of significant Surveillance/Maintenance and Transition Project accomplishments achieved during FY00. The FY00 accomplishments are grouped into three categories: momentum, progress, and completion/removal. The Project's top five accomplishments are underlined for easy recognition.

**Momentum:** (how Hanford cleanup has been "sped up")

Completed the CDI drain header characterization in U Plant (221-U Building) utilizing a robotic crawler in August. The robot traveled the equivalent of nearly three football fields to visually inspect the 24-inch diameter drain line for structural integrity, to obtain radiation readings, and to collect samples of contaminated materials within the line.

Completed accessing 38 process cells in U Plant in support of CDI in August. Data gathered from these cells will be used to determine the final disposition of the five defunct chemical processing facilities (canyons) on the Hanford Site.

Completed successful concrete core sampling in four process cells in U Plant in September to determine chemical, radiological, and physical characterization (depth of liquid penetration) conditions of the concrete floors.

**Progress:** ("things" achieved in terms of amounts or percentages)

Completed plutonium loadout hood stabilization activities in the REDOX facility.

Green

Initiated S&M activities in the B Plant interior after FH completed required corrective actions to the building ventilation system. There was no evidence of any degradation due to the ventilation system being inoperable for more than ten months. No entry was allowed into the facility while the ventilation system was being repaired.

Completed sample collection and stabilization of the KE/KW acid tanks, and issued final report.

Completed annual surveillance and housekeeping activities at D, H, KE, and KW Reactors.

Completed the REDOX railroad cut interim stabilization.

Completed backfill/downpost of all the outdoor contamination areas around REDOX.

Completed the RARA Annual Report, spring revegetation activities, and fall herbicide spraying.

Completed bare ground herbicide applications.

**Completion/Removal:** ("what's done and what's gone")

Completed deactivation of the old 100 N Area water plant, and completed construction and startup of the new replacement water plant.

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**ACCOMPLISHMENTS continued: SM&T**

*Completed legacy waste removal at KE, KW, and H Reactors.*

*Completed the Waste Management Plan for legacy waste removal from the KE and KW Reactors. Also completed the 100 D and 100 H Reactors' Waste Management Plans.*

*Completed sealing all planned 84 passive vents at RARA sites, three weeks ahead of schedule.*

Green

**SAFETY/ISMS/CONDUCT OF OPERATIONS: SM&T**

*See Executive Summary.*

**BREAKTHROUGHS/OPPORTUNITIES FOR IMPROVEMENT: SM&T**

*None identified at this time.*

**LONG-TERM (6 MONTHS PLUS) IMPORTANT ITEMS: SM&T**

*None identified at this time.*

**MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS): SM&T**

**• DOE Secretarial:**

*None identified at this time.*

**• DOE EM Performance Agreement:**

*None identified at this time.*

**• TPA Milestones:**

*None identified at this time.*

**• DNFSB Commitment:**

*None identified at this time.*

**PERFORMANCE OBJECTIVES: SM&T**

Outcome	Performance Indicator	Status
<b>Restore the River Corridor for Multiple Uses</b>	<i>Deactivation and preparation for decommission of facilities in 100/200 Areas.</i>	<i>Baseline work has been completed per PI requirements.</i>
<b>Transition Central Plateau to Support Long-Term Waste Management</b>	<i>Perform S&amp;M/risk reduction on inactive facilities to eliminate/stabilize environmental, human health hazards until D&amp;D; Perform CDI activities.</i>	<i>CDI baseline work has been completed per PI requirements.</i>

Green

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**PERFORMANCE MEASURES: SM&T**

*None planned in FY 2000.*

**STRETCH AND SUPERSTRETCH GOALS: SM&T**

FY00 SM&T "Stretch" Goals	Scope Dollars (K)	Approved BCPs (K)
<i>Deactivate 183-N Water Treatment Plant (Phase I) (BCP-20111)</i>	\$131.0K	\$131.0K
<i>Deactivate 183-N Water Treatment Plant (Phase II) (BCP-20175)</i>	\$159.0K	\$159.0K
<i>Asbestos Abatement &amp; Repairs (100, 200, &amp; 300 Areas)</i>	\$470.0K	\$64.2K
<i>Complete the CDI Technical Work to Support the Phase III Feasibility Study</i>	\$490.0K	\$0.0K
<b>S/Total SM&amp;T -Facility Transition Stretch Goals:</b>	<b>\$1,250.0K</b>	<b>\$354.2K</b>

\*Workscope initiated; completion impacted by delay in sampling analysis.

\*\*Efficiencies not identified until late in the fiscal year to support initiation and completion of work in FY00. Efficiencies applied to higher priority and emerging workscope.

**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE): SM&T**

• *Schedule:*

Surveillance/Maintenance & Transition Project	BCWS	BCWP	Variance
	\$K	\$K	\$K
<i>ER05 Surveillance &amp; Maintenance</i>	14,530	13,338	-1,192
<i>ER07 Long-Term Surveillance &amp; Maintenance</i>	46	46	0
<b>TOTAL SM&amp;T</b>	<b>14,576</b>	<b>13,384</b>	<b>-1,192</b>

**Green**

**Red**

**Red**  
\*\*

**PBS-ER05 – Surveillance and Maintenance**

*Schedule Variance = -\$1192K; -8.2% [Last Month: -\$793K; -6.1%]*

**Cause:** Completion of the B Reactor hazards mitigation (including roof repair) was approved in FY00 with work planned for FY01.

**Resolution:** None; planned carryover.

**Cause:** Major repairs on REDOX compressor and exhaust fan delayed pending evaluation of work priorities.

**Resolution:** The immediate need for repairs/maintenance is being assessed.

**Green**

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**PROJECT STATUS (COST/SCHEDULE/MAJOR BASELINE CHANGE) continued: SM&T**

**Cause:** 200 Area surveillance and maintenance activities for REDOX repairs and U-Plant roof repair were initiated in FY00 with most of the work planned for FY01.

**Resolution:** None; planned carryover.

**PBS-ER07 – Long-Term Surveillance and Maintenance (BCWS \$46K for FY00)**

Schedule Variance = N/A

• **Cost:**

Surveillance/Maintenance & Transition Project	BCWP	ACWP	Variance
	\$K	\$K	\$K
<b>ER05 Surveillance &amp; Maintenance</b>	13,338	13,093	245
<b>ER07 Long-Term Surveillance &amp; Maintenance</b>	46	39	7
<b>TOTAL SM&amp;T</b>	<b>13,384</b>	<b>13,132</b>	<b>252</b>

Green

**PBS-ER05 – Surveillance and Maintenance**

Cost Variance = **+\$245K; +1.8%** [Last Month: **+\$374K; +3.1%**]

**Cause:** Herbicide application and KE/KW acid tank stabilization less than planned.

**Resolution:** Underrun was utilized for other ER work.

**Cause:** Underruns on B Plant S&M due to delays in completing the filter changeout and duct work repair on stack.

**Resolution:** Costs will be increasing as B Plant stack was turned over to ERC in August.

**Cause:** KE/KW legacy waste removal cost overrun; estimate did not account for difficulties encountered.

**Resolution:** Overrun reflected in estimate at completion (EAC).

**PBS-ER07 – Long-Term Surveillance and Maintenance (BCWS \$46K for FY00)**

Cost Variance = N/A

**REGULATORY ISSUES: SM&T**

A number of significant issues were identified and resolved during FY00. Those remaining at fiscal year end include:

**PUREX and B Plant Canyon Roof Repairs:** Funding for PUREX and B Plant canyon roof repairs has not been identified for FY01.

**Status:** The source and timing of the funding has not been resolved. On July 6, BHI transmitted a letter to RL recommending PUREX canyon roof repair funding be provided no later than the beginning of FY01 per the Memorandum of Agreement.

**EXTERNAL ISSUES (i.e. HAB, Congress, etc.): SM&T**

None identified at this time.

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**DOE-RL & HQ ISSUES/REQUESTS (not covered elsewhere): *SM&T***

*None identified at this time.*

**INTEGRATION ACTIVITIES: *SM&T***

*None identified at this time.*

# Pacific Northwest National Laboratory Environmental Management Performance Report

**November 2000**

**PREPARED FOR THE U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE  
OFFICE OF ENVIRONMENTAL MANAGEMENT**

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Pacific Northwest National Laboratory  
Operated for the U.S. Department of Energy  
by Battelle Memorial Institute

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**Introduction**

This document provides the Department of Energy Richland Operations Office (DOE-RL) with a report of the Pacific Northwest National Laboratory (PNNL) performance by Battelle Memorial Institute and its subcontractors.

In Section A, the Executive Summary, text and graphics report the safety metrics status for all PNNL activities. Senior management's overall performance assessment of all Environmental Management activities conducted at PNNL is presented in a stoplight chart.

Section B, Project Performance Summary, provides a brief summary of the month's performance for the PNNL lead activity, PNNL Waste Management (PBS RL-ST01). More detailed information can be found within PNNL-7911-108a, PNNL's Project Status Report for September 2000. Summary analyses pertaining to PNNL's support to other Project Baseline Summaries (PBSs) are addressed in the contractor's report having lead responsibility for that scope.

Unless otherwise noted, information in this report is current as of September 30, 2000.

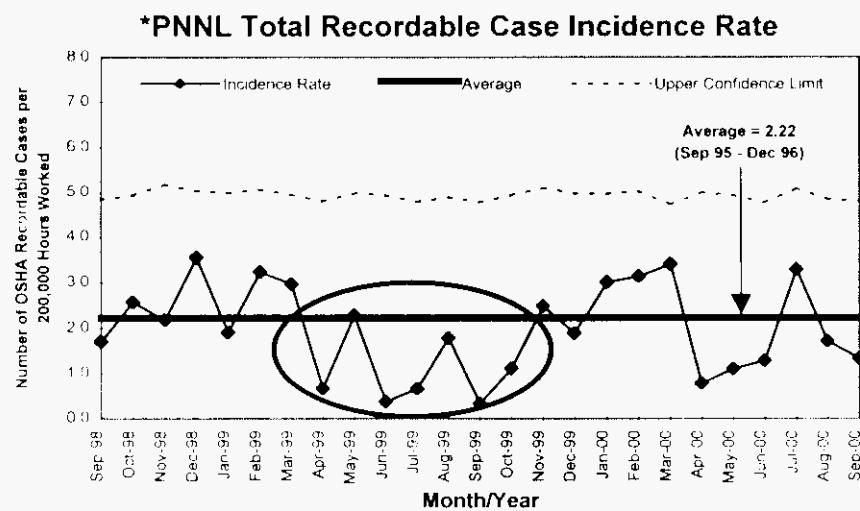
This section provides an executive-level summary of performance information and is intended to bring to management's attention that information considered to be most noteworthy. The section begins with overview of safety, a summary of FY 2000 performance, a summary of Fiscal Year (FY) 2000 Voluntary Protection Program (VPP) activities, followed by a stoplight chart on overall performance.

## Safety Overview

The focus of this section is on documenting trends in work-related injury and illness rates. The rates are presented graphically in this section and are tracked for significant changes. Current efforts to improve performance are being made through the continued implementation of the Integrated Environment, Safety and Health Maintenance System (ISMS), and the development and implementation of the Voluntary Protection Program (VPP).

## Summary of Fiscal Year 2000 Performance

The three FY 2000 performance indicators for injury and illness statistics were met this year with rates below the goals (lab upper limits) for Total Recordable Case Incidence Rate, Lost Workday Case Incidence Rate, and Lost Workday Incidence Rate (Severity Rate). The specific year end rates and goals (Lab Upper Limit) are noted in the text blocks associated with each of the following graphs:



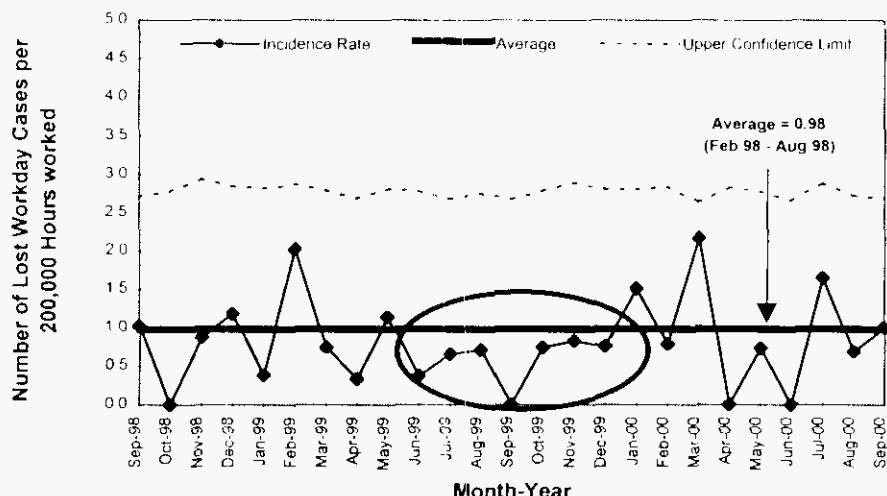
**FY 00 Rate Overview:**  
Cumulative To Date = 2.0  
Lab Upper Limit = 2.3

This indicator has been generally stable over the long term. There was a decrease in the rates during the period of April 99 - October 99 followed by a return back to an expected randomly fluctuating pattern within the anticipated control limits.

Green

\*Includes all Pacific Northwest National Laboratory Operations.

**\*PNNL Lost Workday Case Incidence Rate**



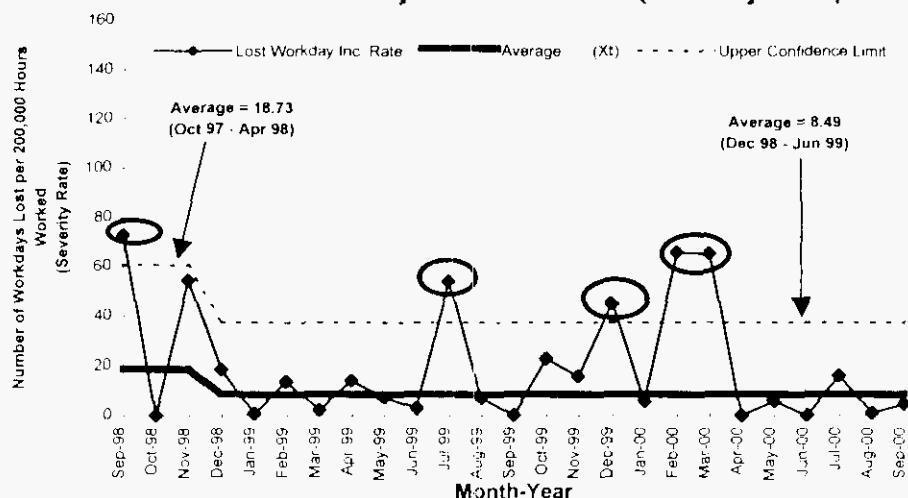
**FY 00Rate Overview:**  
Cumulative To Date = 9  
Lab Upper Limit = 1.2

This indicator has been generally stable over the long term. There was a temporary short-term decrease during the period of June 99 - December 99 followed by a return back to an expected randomly fluctuating pattern within the anticipated control limits.

Green

\*Includes all Pacific Northwest National Laboratory Operations

**\*PNNL Lost Workday Incidence Rate (Severity Rate)**



**FY 00Rate Overview:**  
Cumulative To Date = 20.7  
Lab Upper Limit = 30.0

The data for the last six months have been randomly cycling within the normal anticipated control limits. Past months that are above the upper control limit with cases currently accumulating lost workdays are February 00 and March 00.

Green

\*Includes all Pacific National Laboratory Operations.

## Summary of Fiscal Year 2000 VPP Activities

### ***Employee Participation***

Nine PNNL staff members represented PNNL at the VPP Region X conference in May in Seattle.

Ten PNNL staff members represented PNNL at the VPP national conference in August in Seattle.

### ***Staff Awareness Campaign***

The VPP Steering Committee distributed an informational brochure that addressed five basic questions on VPP. Shortly after the brochure was sent out, staff received an electronic survey containing the five basic questions. Close to 2,000 staff members responded to the survey and received a safety award.

### ***VPP Application for STAR Status***

PNNL is the first organization to be submitting their VPP application via web site. DOE Richland Operations Office staff are currently reviewing this site, and DOE-Headquarters staff will review this site in November 2000. Access issues are currently being worked so that the external reviewers can access the site.

## Cost/Schedule Performance Stoplight

The following rating reflects overall cost and schedule performance for activities conducted by PNNL. (Narrative not required when rating is green.)



Green: Satisfactory  
Yellow: Significant improvement required  
Red: Unsatisfactory

This section provides cost and schedule performance, any significant issues, upcoming baseline change requests for the period covered, and Fiscal Year (FY) 2000 accomplishments. In FY 2000, Battelle Memorial Institute has lead responsibility over PBS RL-ST01, PNNL Waste Management WBS 1.7.1.

## Mission

WBS 1.7.1 provides PNNL with waste management services and compliant operations in support of science and technology development for the multiprogram needs of the U.S. Department of Energy (DOE) Complex. These services include:

- essential surveillance and maintenance of DOE laboratory facilities assigned to PNNL for safe containment of radioactive and hazardous materials
- infrastructure required to manage wastes and effluents currently generated at the PNNL
- operational compliance services to meet regulatory requirements and operating permits including environment, safety, and health regulations
- management of legacy wastes and contamination remaining from past PNNL research operations.

## Performance Data and Analysis

As of September 30, 2000 the cumulative costs are \$13.9 million with a positive cost variance of \$0.7M and a cumulative schedule variance of negative \$0.2M. Though cost and schedule variances are within 10% reporting threshold, a brief explanation of the primary activities that were not completed this fiscal year are described following the tables and chart.

<b>Cost Performance (\$M):</b>			
	<b>BCWP</b>	<b>ACWP</b>	<b>Variance</b>
<b>PNNL Waste Management</b>	\$14.6	\$13.9	\$0.7

<b>Schedule Performance (\$M):</b>			
	<b>BCWP</b>	<b>BCWS</b>	<b>Variance</b>
<b>PNNL Waste Management</b>	\$14.6	\$14.9	(\$0.2)

## FY 2000 Cost/Schedule Performance - All Fund Types Cumulative to Date Status - (\$000)

<b>WBS</b>	<b>PBS</b>	<b>BCWS</b>	<b>BCWP</b>	<b>ACWP</b>	<b>CV</b>	<b>%</b>	<b>SV</b>	<b>%</b>
1.7.1	RL-ST01	\$14,870	\$14,628	\$13,888*	\$739	5	\$(242)	-2
<b>Total</b>		\$14,870	\$14,628	\$13,888*	\$739	5	\$(242)	-2

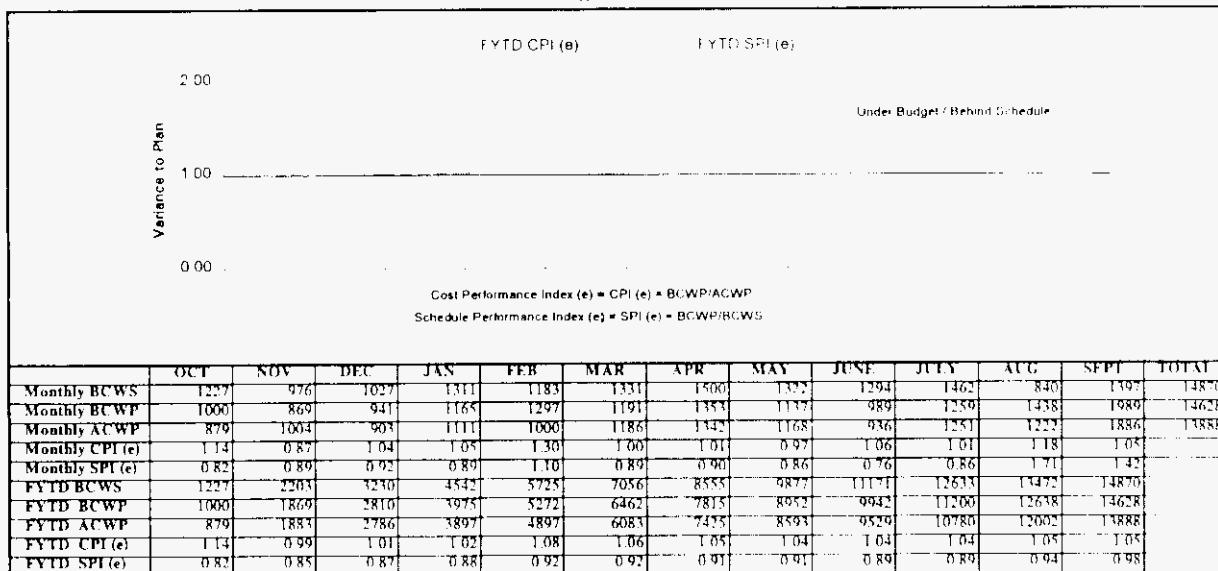
# PNNL Environmental Management Performance Report - November 2000

## Section B - Project Performance Summary

\* Numbers reflect PNNL only, \$127K expended by Fluor for S&M of 242B-BI bringing actuals to \$14,015K

### Cost / Schedule Performance Indices

FY 2000 Cum to Date Status  
(\$'000s)



The positive cost variance of \$0.7M results from reduced overhead rates and efficiencies. A change request was approved on October 2 to replace/upgrade the heating, ventilation, and air conditioning (HVAC) system within Radiochemical Processing Laboratory (RPL) using programmatic underruns. A baseline change request is in process to redirect the remaining program underrun to replacement of RPL's electrical switchgear. The reliability of the switchgear is crucial for maintaining the facility safety envelop in the RPL according to the SAR.

The cumulative schedule variance is within reporting thresholds. The primary activities making up the year-end negative schedule variance are as follows:

- Difficulties were encountered completing the final details in the High Dose Solid Waste container design as well as a late start in fabrication of the drums. As a result of this delay the drum shipping dates for the 73 cans of transuranic (TRU)/low-level waste (LLW) is expected to occur in early FY 2001. Concerted efforts are being made to streamline the fabrication process and set priorities for which type of drums need to be available first.
- Four events delayed the cleanout of the RPL 604 glovebox 1) shutdown of the area because of the range fire, 2) unplanned shutdown of the LAI, 3) three glove change outs, and 4) high-efficiency particulate air (HEPA) filter replacement. All but one of the liquid samples from the eight columns with liquids in them was found to have a very high activity count, which made analysis more difficult. In order to handle the samples in the fume hoods, extensive dilution or chemical separation of the silver was required on all but one of the samples. The dilution required would make it impossible to meet the required detection levels. On September 7, 2000 a routine Dioctyl-sebacate (DOS) test of the

HEPA filter on the exhaust line from the glovebox failed, indicating a hole or leakage past the filter. Under these conditions, no work is allowed in the glovebox until the filter is replaced. Normally a routine activity, a new radiation work permit (RWP) had to be generated and a new bioassay requirement had to be satisfied. Liquids and the resins will be removed from the columns and tanks and put in plastic containers, ready for bag-out. These plastic containers are not suitable for long-term storage in a radioactive environment. Therefore, funding must be continued into next FY so that these materials will not be left in an unsafe condition.

- Remaining work with the 6652H Radiological Contamination facility includes disposal of fluorescent lights from the growth chamber; removal of construction support equipment; completion of the final release survey; and excess of salvaged equipment. The waste is currently at a subcontractor for size reduction.
- The integrity assessment of the radioactive liquid waste tank (RLWT)-piping is currently on hold with no defined completion date. The integrity assessment was delayed because the 204-AR Facility (receiver facility) is not ready, and Pacific Northwest did not want to add any liquids to the tank to make it a radiologically controlled tank until the receiver facility is ready. The earliest the 204-AR Facility will receive waste via the LR-56 Truck is FY 2001.

Four FY 2000 change requests were approved either deferring or adding scope to FY 2001 baseline using FY 2000 funds.

- PWM2000-009, "High Dose Waste and 604 Glovebox Schedule Revisions, RI, Milestone Delays," deferred \$139K of legacy waste disposal scope into FY 2000. (Approved 8/28/00)
- PWM2000-013, "Adjust Project Baseline to Reflect Basis of Estimate Revision and Deferral of Activities into FY 2001," deferred \$165.3K of scope associated with liquid waste disposal using radioactive liquid waste system (RLWS). (Approved 10/2/00)
- PWM2000-014, "Scope Deferral from FY 2000 to FY 2001," deferred \$34.2K of scope to conduct air emissions inventory and air compliance inspections for six Research and Development (R&D) laboratories into FY 2001. (Approved 10/2/00)
- PWM2000-016, "HVAC Controller Replacement/Upgrade," added \$335K of scope in FY 2001. (Approved 10/2/00)

## Top Five Accomplishments for FY 2000

The following reflect the top five (5) accomplishments of the Waste Management & Operational Compliance Program in FY 2000.

(Categories are as follows:

**Momentum** How in terms of waste processing rates, etc. the cleanup of Hanford has been "sped up".

## **PNNL Environmental Management Performance Report - November 2000**

### **Section B - Project Performance Summary**

**Progress** What "things" have been achieved this year in terms of amounts and percentages.

**Completion & Removal** What's done and what's gone.)

Completed demolition of the 331A Building under Comprehensive Environmental Response, Compensation, and Liability Act CERCLA process (Completion and Removal).

Completed cleanout of 9,000 gallons of potentially radioactive material contained in the 331 Building Animal Waste Septic Tanks (Completion and Removal).

Completed implementation of the FY 1999 and FY 2000 updates to the RPL Safety Analysis Report (SAR) in order to maintain the facility safety envelope (Progress).

Increased amount of waste processed through the Hazardous Waste Treatment Unit (HWTU) more than ten times previous years (3,174 kgs treated vs. 309 kgs in last two FYs) (Momentum).

Twenty-six (26) metric tons (MT) of hazardous (HAZ), 64 m<sup>3</sup> of LLW, 12 m<sup>3</sup> of low-level mixed waste (LLMW), and 1 m<sup>3</sup> of TRU currently generated wastes shipped for storage or disposal (Progress).

## **Additional FY 2000 Accomplishments**

### Progress -

Significant progress was achieved in integrating environmental compliance activities throughout all environmental management services provided to the Laboratory.

A \$19K investment in three Pollution Prevention (P2) projects generated from a 5% P2 fee will result in annual savings of \$26,067 to the Laboratory.

Successfully obtained required approvals from regulators to allow continued compliant laboratory operations

Completed 15,701 radiological surveys and 178 preventive maintenance checks and routines; collected and counted 6,206 air samples; conducted 702 nuclear material inspections; supervised 10,257 access entries into radiological control areas within the RPL.

Completed 77 individual routine surveillance & maintenance (S&M) inspections on 30 excess facilities assigned to PNNI.

Submitted Multi-Year Work Plan (MYWP) deliverables on schedule and provided timely support for the proposed restructure of the Hanford Work Breakdown Structure (WBS).

### Completion -

Suggested improvements from the FY 1999 self-assessment survey were implemented.

**PNNL Environmental Management Performance Report - November 2000**  
**Section B - Project Performance Summary**

Positive feedback was received from the FY 2000 Independent Cost Estimate review of the program conducted by the US Army Corps of Engineers.



# Regulatory Unit

## Monthly Performance Report

**September 2000**

**Office of Safety  
Regulation of the  
RPP-WTP  
Contractor**

**November 2000  
Environmental Management  
Performance Report Submittal**

Richland Operations Office  
P.O. Box 550, A4-70  
Richland, Washington  
9352

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# **EXECUTIVE OVERVIEW**

## EXECUTIVE SUMMARY

On May 8, 2000, U.S. Secretary of Energy Bill Richardson announced that he would terminate the BNFL Inc. privatization contract and seek bidders for a new contract to be awarded early in the next calendar year. On August 31, 2000, the request for proposal (RFP) under a different contracting approach to continue the design, construction, and commissioning of the waste treatment plant project was issued. The new contract is expected to be in place by January 15, 2001. These events have resulted in a decision to transition the Regulatory Unit's (RU's) organization and workscope to the Office of River Protection (ORP), and future monthly reporting will be to that office.

Highlights of fiscal year 2000 are captured below.

### INTEGRATED SAFETY MANAGEMENT (ISM) APPROACH

The RU confirmed implementation of Safety Management six months ahead of the Department's goal of September 30, 2000. Standard 4 of the Contract's Statement of Work required BNFL to "develop and implement an integrated standards-based safety management program." The contract approach to safety required compliance with applicable laws, regulations, and requirements; conformance to DOE-stipulated top-level safety standards and principles; and adherence to the DOE process for establishing safety standards and requirements. The process for establishing safety standards was based on the principles of ISM. The RU emphasized that a clear, central concept of ISM was that contractors should tailor the basic framework for ensuring protection of the public, workers and the environment to the specifics of their work. This concept emphasized the need to fit the safety measures to the specific hazards of the work. The Contract provided for initial and subsequent approvals of changes to the Contractor's Integrated Safety Management Plan (ISMP) and ongoing assessment of the Contractor's ISMP implementation. These provisions, executed under the authority and means established by the Regulatory Official, demonstrated that ISM had been implemented for the Contract.

### INDUSTRIAL HYGIENE AND SAFETY (IH&S)

The RU developed an IH&S Regulatory Plan. The original belief was that the Occupational Safety and Health Administration (OSHA) would regulate the IH&S of the RPP-WTP Contractor. OSHA declined, and in order to ensure that an adequate IH&S regulatory program was defined and in place before the start of construction, Dr. Carolyn Huntoon named the RU as the DOE element responsible for regulating occupational safety and health. The RU defined a comprehensive program for regulating IH&S, and issued the Regulatory Plan in May 2000.

In April 2000, the RU received the BNFL plan for protecting workers, subcontractors, and visitors from non-radiological hazards. The plan covered the period from the start of limited construction through cold startup. The RU completed an initial review and found the plan to be acceptable for a formal, detailed review. The RU completed its formal review of the BNFL Non-radiological Worker Safety and Health Plan and provided comments to BNFL. Although the document was available to the public and the document was provided to the Confederated Tribes and Bands of the Yakama Nation at their request, no external comments were received. Due to contract termination, BNFL was unable to respond to the RU's comments; accordingly, the RU documented its review and issued an Assessment

Report. The RU found that the BNFL Plan was acceptable subject to three conditions:

1. Addition of a clear statement of who has ultimate responsibility for safety.
2. Definition of the terms "stop work," "imminent danger," and "unsafe acts or conditions."
3. Commitment to completing and implementing the equipment and tool inspection program before start of construction.

As a result of the RU reporting changes, H&S regulatory responsibility will be transferred to ORP Office of Environmental, Safety, Health, and Quality (ESH&Q).

## **REVIEW OF THE BNFL PART B-1 FACILITY AND PROCESS DESIGN DELIVERABLES**

At the request of ORP, the RU completed its review of BNFL's Part B-1 facility and process design deliverables. The RU review team consisted of RU staff, RU contractors, and U.S. Nuclear Regulatory Commission (NRC) staff from the Special Projects Branch.

The RU reviewers determined that the BNFL facility and process design documents were not at a level of detail required to support the Hazard Analysis Report (HAR) or the Preliminary Safety Analysis Report (PSAR). In the absence of the required information regarding which standards BNFL had invoked, it was not possible to determine if the design achieved adequate safety. Additional design information required to support the Construction Authorization Request (CAR) included further development of the design integrated with identification of items that have been determined to be important to safety.

## **SELF-ASSESSMENT OF THE RU'S READINESS-TO-PROCEED INTO PART B-2 OF THE RPP-WTP CONTRACT**

The RU performed a self-assessment to determine if management systems and processes were in place to accomplish assigned regulatory functions. The self-assessment examined ten areas of interest against specific review criteria. The team reviewed project documents and interviewed personnel from the RU and its support contractors, RL, ORP, DOE-Headquarters, the NRC, and BNFL.

In general, the team concluded that the RU management systems and processes are in place to accomplish the RU's responsibilities during Part B-2, and that the RU is effectively managing the regulatory program. In particular, the RU accomplished its regulatory responsibilities as outlined in RI/REG-97-10, *Regulatory Plan*, which defines implementation objectives of DOE/RL-96-25, *Policy for Safety Regulation of the RPP Waste Treatment Plant Contractor*, and DOE/RL-96-26, *Memorandum of Agreement for Safety Regulation of the RPP Waste Treatment Contractor*.

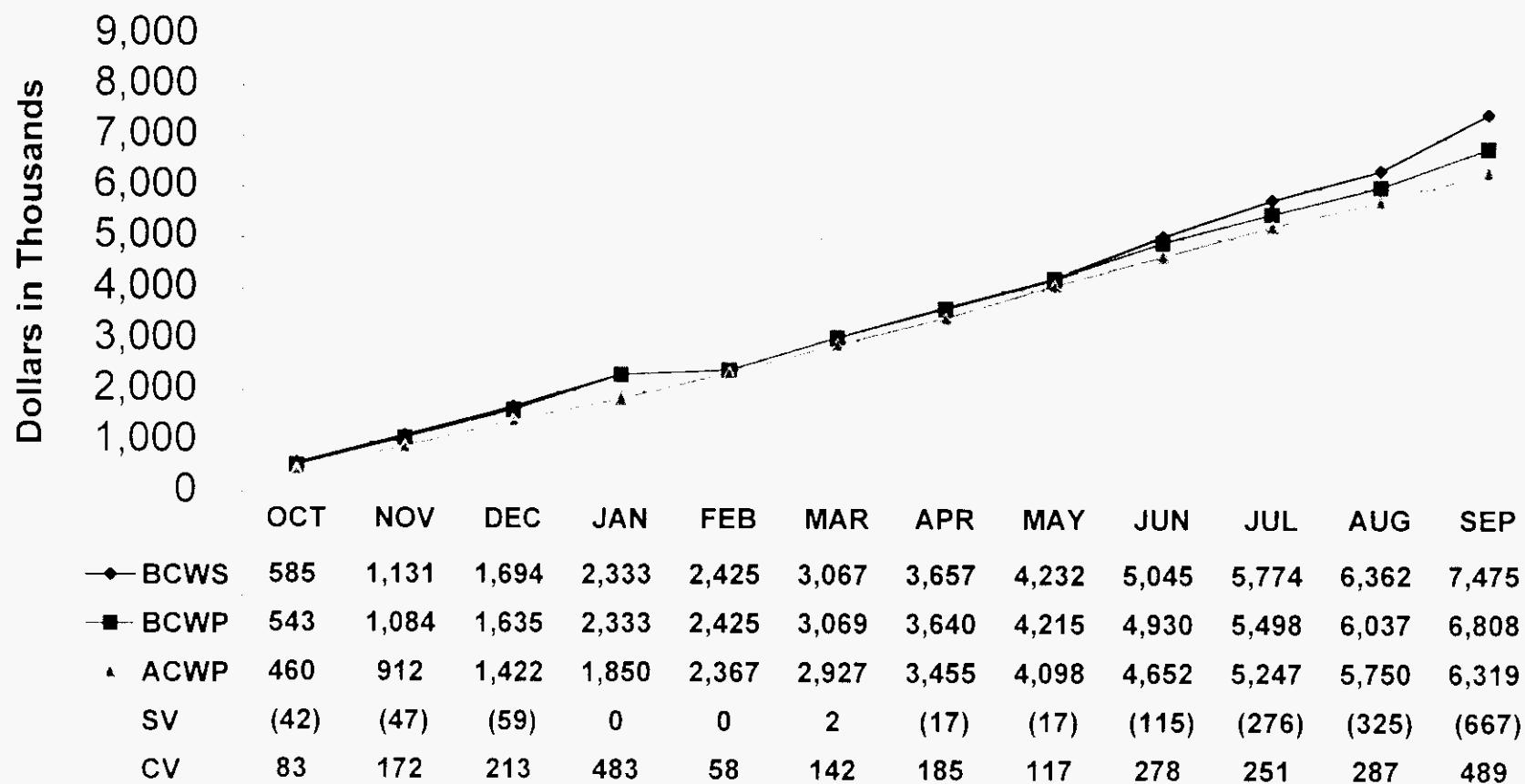
## **TOPICAL MEETINGS, INSPECTIONS & DESIGN REVIEWS**

The RU conducted 8 Topical Meetings, observed 47 Design Reviews, and completed 7 Inspections of BNFL during FY 2000. The topical meetings provided a mechanism for addressing issues which the Initial Safety Analysis Report review identified as not adequately resolved. The Design Reviews contributed to the RU's mission by providing detailed information concerning structures, systems and components that are important to safety and that are part of the facility design. The Inspections provided oversight in accordance with the contract with BNFL, Inc.

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## COST PERFORMANCE (Graph)

## Regulatory Unit Cost Performance



## **COST PERFORMANCE SUMMARY**

The FY 2000 fiscal year end performance reflected an unfavorable schedule variance of \$667K and a favorable cost variance of \$489K. The unfavorable schedule variance is due to various delays in receipt of deliverables for RU review (SAP, LCAR, CAR) as a result of the BNFL contract termination. The favorable cost variance is a result of lower than anticipated costs associated with developing Inspection procedures, observing Design Reviews and resolving Topical Issues.

## **NEAR-TERM LOOK AHEAD**

The termination of the BNFL contract and the impending transition of the RU to ORP have impacted a majority of FY 2000 and FY 2001 RU work activities. Planned first quarter activities include:

### **October - December**

- Review CHG Radiological Protection Program for Construction
- Evaluate CHG capability to safely change the authorization basis
- Participate in K-Basin Operational Readiness Reviews

# **PROGRAM PERFORMANCE OVERVIEW**

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## PERFORMANCE SUMMARY (Chart) – Program Direction and Program Support

DOLLARS IN THOUSANDS									
		BILLS		BUDGET		ACTUAL		VARIANCE	
		BY CATE	BY ACT	BY CATE	BY ACT	BY CATE	BY ACT	BY CATE	BY ACT
<b>RU1</b>	<b>Program Management</b>								
	<i>Program Direction</i>	\$1,461	1,461	1,586	0	(\$125)	\$1,462	1,586	(\$124)
	<i>Program Support</i>	1,655	1,655	1,651	0	4	1,656	1,651	5
	<b>Total RU1</b>	<b>3,116</b>	<b>3,116</b>	<b>3,237</b>	<b>0</b>	<b>(121)</b>	<b>3,118</b>	<b>3,237</b>	<b>(119)</b>
<b>RU2</b>	<b>Regulatory Policy &amp; Practices</b>								
	<i>Program Direction</i>	141	141	137	0	4	143	137	6
	<i>Program Support</i>	410	410	371	0	39	410	371	39
	<b>Total RU2</b>	<b>551</b>	<b>551</b>	<b>508</b>	<b>0</b>	<b>43</b>	<b>553</b>	<b>508</b>	<b>45</b>
<b>RU5</b>	<b>Recurring Safety Reviews</b>								
	<i>Program Direction</i>	437	406	390	(31)	16	435	390	45
	<i>Program Support</i>	1,406	1,247	1,112	(159)	135	1,406	1,112	294
	<b>Total RU5</b>	<b>1,843</b>	<b>1,653</b>	<b>1,502</b>	<b>(190)</b>	<b>151</b>	<b>1,841</b>	<b>1,502</b>	<b>339</b>
<b>RU6</b>	<b>Construction Authorization</b>								
	<i>Program Direction</i>	245	158	91	(87)	67	245	91	154
	<i>Program Support</i>	401	150	144	(251)	6	402	144	258
	<b>Total RU6</b>	<b>646</b>	<b>308</b>	<b>235</b>	<b>(338)</b>	<b>73</b>	<b>647</b>	<b>235</b>	<b>412</b>
<b>RU9</b>	<b>Oversight &amp; Inspections</b>								
	<i>Program Direction</i>	278	223	205	(55)	18	276	205	71
	<i>Program Support</i>	599	515	392	(84)	123	598	392	206
	<b>Total RU9</b>	<b>877</b>	<b>738</b>	<b>597</b>	<b>(139)</b>	<b>141</b>	<b>874</b>	<b>597</b>	<b>277</b>
<b>RU10</b>	<b>Special Projects</b>								
	<i>Program Direction</i>	\$9	9	41	0	(\$32)	\$9	41	(\$32)
	<i>Program Support</i>	433	433	199	0	234	432	199	233
	<b>Total RU10</b>	<b>\$442</b>	<b>442</b>	<b>240</b>	<b>0</b>	<b>\$202</b>	<b>\$441</b>	<b>240</b>	<b>\$201</b>
<b>Total Regulatory Unit Program</b>									
	<i>Program Direction</i>	\$2,571	2,398	2,450	(173)	(\$52)	\$2,570	2,450	\$120
	<i>Program Support</i>	4,904	4,410	3,869	(494)	541	4,904	3,869	1,035
	<b>Total RU Program</b>	<b>\$7,475</b>	<b>6,808</b>	<b>6,319</b>	<b>(667)</b>	<b>\$489</b>	<b>\$7,474</b>	<b>6,319</b>	<b>\$1,155</b>

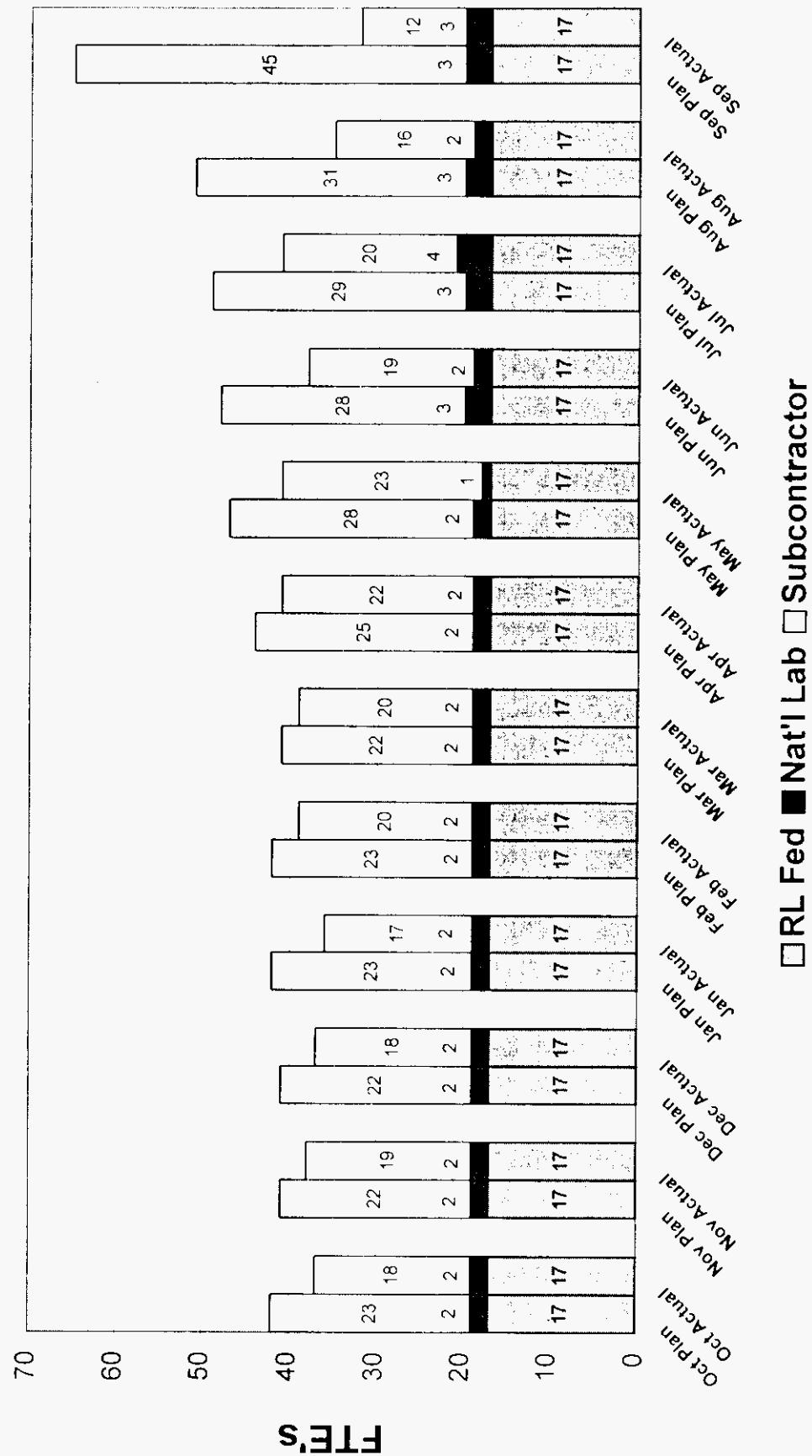
Milestone	WBS	Milestone Control Log					
		BASELINE COMPLETION DATE	FORECAST COMPLETION DATE	ACTUAL COMPLETION DATE	STATUS	SCHEDULE	STAKEHOLDERS
<b>FINANCIALS</b>							
RL	00-010	RU902	Standards Selection Inspection rpt issued	10/12/99	Complete	10/06/99	10/06/99
RL	00-011	KU902	Authorization Basis Inspection rpt issued	11/08/99	Complete	12/13/99	12/13/99
RL	00-012	RU902	Safety Integration Basis Inspection rpt issued	12/07/99	Complete	12/03/99	12/03/99
FO	00-013	RU203	IHS&S Plan issued	5/10/00	Complete	5/10/00	5/10/00
FO	00-015	RU205	Revised Interface Plan issued	1/31/00	Complete	1/28/00	1/28/00
RL	00-016	RU902	Design Process Inspection rpt issued	2/14/00	Complete	2/08/00	2/08/00
RL	00-017	RU902	Employee Concems Program Inspection rpt issued	3/13/00	Complete	3/10/00	3/10/00
RL	00-018	RU902	Training & Qualifications Inspection rpt issued	4/07/00	Complete	4/05/00	4/05/00
RL	00-019	RU608	SAP Revw Handbook issued	7/31/00	Complete	6/29/01	7/21/00
RL	00-020	RU605	LCA/R Planning Handbook issued	6/16/00	Complete	6/16/00	6/16/00
FO	00-004	RU502	ER & Approval of QAPI for construction issued	6/16/01	On Schedule	6/26/01	6/16/00
RL	00-014	RU902	Standards Implementation Inspection rpt issued	9/29/00	TBD	TBD	9/26/00
FO	00-026	RU605	Initiate Review of LCA Request	6/27/00	Complete	6/27/00	6/27/00
FO	00-002	RU204	Openness Plan Rev. 3 issued	6/30/00	Complete	6/30/00	6/30/00
RL	00-021	RU902	QA Inspection rpt issued	7/28/00	TBD	TBD	9/26/00
RL	00-022	RU602	CAR Planning Handbook issued	8/23/01	On Schedule	8/23/01	8/23/01
FO	00-023	RL1502	Approval of RPP for LCA issued	6/19/01	On Schedule	6/19/01	5/31/00
RL	00-024	RU902	Corrective Actions Inspection rpt issued	5/30/00	Complete	5/31/00	5/31/00
RL	00-025	RL902	ALARA Inspection rpt issued	9/11/00	TBD	TBD	
FO	00-003	RL1102	FY 2001 PMP issued	9/29/00	Complete	9/29/00	9/26/00

### FISCAL YEAR 2000

Milestone	WBS	Milestone Description					
		ACTUAL COMPLETION DATE	COMPLETION DATE	BASELINE COMPLETION DATE	FORECAST COMPLETION DATE	ACTUAL COMPLETION DATE	STAKEHOLDERS
<b>REGULATORY</b>							
RL	00-010	RU902	Standards Selection Inspection rpt issued	10/12/99	Complete	10/06/99	10/06/99
RL	00-011	KU902	Authorization Basis Inspection rpt issued	11/08/99	Complete	12/13/99	12/13/99
RL	00-012	RU902	Safety Integration Basis Inspection rpt issued	12/07/99	Complete	12/03/99	12/03/99
RL	00-013	RU203	IHS&S Plan issued	5/10/00	Complete	5/10/00	5/10/00
FO	00-015	RU205	Revised Interface Plan issued	1/31/00	Complete	1/28/00	1/28/00
RL	00-016	RU902	Design Process Inspection rpt issued	2/14/00	Complete	2/08/00	2/08/00
RL	00-017	RU902	Employee Concems Program Inspection rpt issued	3/13/00	Complete	3/10/00	3/10/00
RL	00-018	RU902	Training & Qualifications Inspection rpt issued	4/07/00	Complete	4/05/00	4/05/00
RL	00-019	RU608	SAP Revw Handbook issued	7/31/00	Complete	6/29/01	7/21/00
RL	00-020	RU605	LCA/R Planning Handbook issued	6/16/00	Complete	6/16/00	6/16/00
FO	00-004	RU502	ER & Approval of QAPI for construction issued	6/16/01	On Schedule	6/26/01	6/16/00
RL	00-014	RU902	Standards Implementation Inspection rpt issued	9/29/00	TBD	TBD	9/26/00
FO	00-026	RU605	Initiate Review of LCA Request	6/27/00	Complete	6/27/00	6/27/00
FO	00-002	RU204	Openness Plan Rev. 3 issued	6/30/00	Complete	6/30/00	6/30/00
RL	00-021	RU902	QA Inspection rpt issued	7/28/00	TBD	TBD	9/26/00
RL	00-022	RU602	CAR Planning Handbook issued	8/23/01	On Schedule	8/23/01	8/23/01
FO	00-023	RL1502	Approval of RPP for LCA issued	6/19/01	On Schedule	6/19/01	5/31/00
RL	00-024	RU902	Corrective Actions Inspection rpt issued	5/30/00	Complete	5/31/00	5/31/00
RL	00-025	RL902	ALARA Inspection rpt issued	9/11/00	TBD	TBD	
FO	00-003	RL1102	FY 2001 PMP issued	9/29/00	Complete	9/29/00	9/26/00

## FULL-TIME EQUIVALENCY PROFILE (Graph)

### Regulatory Unit FTE Profile



## CHANGE CONTROL STATUS LOG

Regulatory Unit FY 2000 Change Control Log								
Change ID#	Change Category	Author	WBS	Date Change Originated	Change Request Explanation		CEB Review Date	CEB Disposition
00-001	I	K.D. Grindstaff	1.10	11/99	Processing of the FY 1999 Carryover into FY 2000 Baseline and Realignment of FY 2000 Cost Savings to Emergent Priority Workscope.		11/24/99	Approved
00-002	II	K.D. Grindstaff	1.10	12/99	Added new emergent workscope associated with impact risk balancing between TWRS and the TWRS-P facility.		12/03/99	Approved
00-003	III	K.D. Grindstaff	1.10	1/00	Redistributed funds associated with a task package titled Other Direct Cost (0424ODC).		1/18/00	Approved
00-004	II	K.D. Grindstaff	1.10	1/00	Renamed Cost Account RU1002 from K Basin SAR to Misc. RU Reg. Activities and separated the CAP into three tasks; K Basin SAR, RL Quality Assurance Program Plan, and WIPP Reg. Program Development.		1/20/00	Approved
00-005	I	K.D. Grindstaff	1.10	2/00	Implemented the most recent resource/activity planning effort, utilizing the Project's FYTD cost savings. Mid-year rebaselining effort.		2/25/00	Approved
00-006	II	K.D. Grindstaff	1.10	5/00	Initiated the detailed review of the BNFL process and facility design, which will provide the RU a current understanding of the BNFL process and facility design.		5/02/00	Approved
00-007	I	K.D. Grindstaff	1.10	5/00	Aligned the RU to the latest BNFL schedule delay prior to the decision to terminate the BNFL Hanford Contract.		5/30/00	Approved
00-008	II	K.D. Grindstaff	1.10	6/00	Implemented workscope to support decisions related to the relative risk of TWRS compared to the TWRS-P facility.		6/22/00	Approved
00-009	II	K.D. Grindstaff	1.10	7/00	This change request documented \$750K of Programmatic efficiencies that are being made available for other Hanford Site priority workscope. This is a funds only change request.		8/02/00	Approved
00-010	I	K.D. Grindstaff	1.10	9/00	This BCR bridges the RU's detailed CAP planning from FY 2000 to FY 2001.		9/26/00	Approved

## **GLOSSARY**

**Actual cost of work performed (ACWP):** The actual cost incurred and applied or distributed for the work performed within a given time period. It includes all labor categories, material, any other direct costs, subcontract work, and function overhead.

**Approved baseline:** The budget authorized to perform the workscope that has been agreed upon by the customer and the contractor(s). It is portrayed in the Multi-Year Work Plan with all approved changes. This baseline may or may not be fully funded, and could be more or less than the compliance baseline.

**Budget at completion (BAC):** The sum of budgets established to complete a program and/or project or any component of a program and/or project.

**Budgeted cost of work performed (BCWP):** The value for completed work measured in terms of the planned budget for that work. It is synonymous with earned value.

**Budgeted cost of work scheduled (BCWS):** The time-phased budgeted value of work scheduled to be accomplished over a given time period. The BCWS for a total cost account through its entire period of performance is equal to the BAC for the cost account.

**Carryover Workscope:** The estimated dollar amount of the workscope that was not completed during the fiscal year and which will be carried over and completed in the next fiscal year.

**Compliance baseline:** The budget that is required to perform the workscope necessary to be in compliance with State and Federal regulations, enforceable agreement milestones, and DNFSB milestones. The level of activity required to be in compliance assumes sufficient funding. **Note:** Because approved baselines are considered to be compliant, this column will likely be eliminated.

**Contract Inherited:** The assumed budget for the planned scope of work at the time a new contract is signed by the company responsible for performing the work.

**Cost variance (CV):** The difference between BCWP and ACWP ( $CV = BCWP - ACWP$ ). At any time, it shows whether the work actually performed has cost more or less than the amount budgeted for the same work.

**Cost Performance Indicator (CPI):** The CPI is the ratio of BCWP to ACWP, or  $(BCWP/ACWP)$ .

**Earned value (EV):** The periodic, consistent, and objective measurement of work performed in terms of the budget planned for that work. The EV is synonymous with the BCWP and it is compared to the BCWS to obtain schedule performance and to the ACWP to obtain cost performance.

## **GLOSSARY (CONTINUED)**

**Estimate at completion (EAC):** Cost allocated to the work breakdown structure element to date, plus the estimate of costs for authorized work remaining. Authorized work remaining includes any undistributed budget.

**Fiscal Year Spending Forecast (FYSF):** The estimated total that will be spent from October through September (current Fiscal Year).

**Funding carryover and new Budget Authorization (BA):** This funding represents both the funding allocated to perform workscope planned in the prior fiscal year, not completed, and approved to be performed in the current fiscal year, as well as new BA to perform the approved baseline workscope.

**Funding target:** The level of funding that is anticipated (as a result of the Integrated Priority List process) in a given Fiscal Year based on an assumed funding level for the Site.

**Multi-Year Work Plan – 10/1/XX:** The Project's approved cost/schedule/technical baseline at the beginning of the fiscal year.

**Project Execution Module (PEM):** The Project Execution Module (PEM) of the Integrated Planning, Accountability, and Budgeting System-Information System (IPABS-IS) replaces the Progress Tracking System (PTS) as EM Headquarters' centralized system for reporting financial, milestone, performance, and other execution-year information for PBSs, sub-PBSs, TTPs, and line item construction projects. In addition, this module collects mid-year and year-end actual performance information against the agreed upon management commitments for the current execution year.

**Schedule Performance Indicator (SPI):** The SPI is the ratio of BCWP to BCWS, or (BCWP/BCWS).

**Schedule variance (SV):** The difference between BCWP and BCWS (SV = BCWP - BCWS). At any time, or for a given period of time, it represents the difference between the planned dollar value of work actually accomplished and the value of the work scheduled to be accomplished.

**Work breakdown structure (WBS):** A product-oriented family tree division of real estate, hardware, software, services, and data products that organize, define, and display all of the work to be performed in accomplishing the program and/or project objectives.