

# Environmental Management Performance Report

October 2001



Lewis Canal Pipe Trench Excavation



Scaffold Erection at 233-S



Cable Tool Drilling at 241-U

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

Data as of month-end August (unless otherwise noted).  
Key data as of September 27.



**Department of Energy**  
Richland Operations Office



**Bechtel Hanford, Inc.**  
Environmental Restoration Contractor

E0110024.3

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT**  
**ENVIRONMENTAL RESTORATION**  
OCTOBER 2001

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# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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## 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 data is current as of August 31, unless otherwise noted.

**Section A – Executive Summary.** This section provides an executive level summary of Bechtel Hanford, Inc.'s (BHI) performance information for the current reporting month 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. Major commitments are summarized that encompass *Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)* milestones, and fiscal year 2001 (FY01) Environmental Management (EM) corporate performance measures. Safety statistics are also included. Issues that require management and/or regulator attention and resolution status are addressed. Fiscal year-to-date Environmental Restoration Contractor (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 monthly 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 (RAWWD) Project, Decommissioning Projects, and the Program Management and Support (PM&S) Project.

**Section C – Transitioning the Central Plateau.** This section contains more detailed monthly 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.

# Section A: Executive Summary

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## SECTION A – EXECUTIVE SUMMARY

Data as of month-end August (unless otherwise noted).

Key data as of September 27, 2001.

### NOTABLE ACCOMPLISHMENTS:

#### RIVER CORRIDOR:

In the 100 F Area, variance sampling (144 samples taken) was completed on the 116-F-19 pipeline overburden piles. Closeout sampling was also completed on the UPR-100-2 basin leak waste site. The area of the 100-UPR-F-2 unplanned release waste site (that extended into the Columbia River shore bank) was backfilled and revegetated. The early backfill was accomplished to take advantage of this year's low river water levels.

Demolition and size reduction of the 116-N-3 pipeline, associated buildings, and valve structures are nearing completion in the 100 N Area. Test pit excavation activities were completed at 116-N-1 to characterize the site in preparation for access and remediation activities. Initial laboratory results confirmed an estimated 18,144 metric tons (20,000 tons) of additional contaminated material will require excavation.

A baseline change proposal (BCP) was approved to accelerate the 618-4 Burial Ground remediation. The BCP included preparation of an integrated 618-4 and 618-5 Burial Ground design and bid package. The request for proposal is on schedule for release in October. The 618-4 Burial Ground drum staging evaluation was also presented to the U.S. Department of Energy (DOE) Richland Operations Office (RL). The evaluation indicated the Environmental Restoration Disposal Facility (ERDF) is the most feasible option for waste staging. The evaluation also indicated that receipt of regulatory approval is a time-critical step in the implementation schedule for this option.

Reactor interim safe storage (ISS) activities proceeded at the 100 Area F, D, DR, and H Reactors during August. The Brokk™ excavator was used in excavating two hot spots located in the F Reactor Fuel Storage Basin (FSB).

At the D Reactor FSB, a radiological survey was completed and all openings were sealed prior to fogging. Fogging technology is a process used to eliminate airborne radioactivity and fix contamination in place remotely without requiring workers or equipment to enter the contaminated area. It is estimated that a collective total effective dose equivalent of 1,600 mrem will be saved. Liquid pipe checks and hazardous material removal were also completed in the accumulator/rod room areas (Area 5).

At H Reactor, samples were taken from the water-filled pits associated with the FSB and transfer pits. Samples will be sent off-site for analysis. Fixative application was completed in the gas wing (Area 1), and liquid pipe checks were completed in the ball 3X room. Oil removal was also completed in several rooms.

During August, 233-S Plutonium Concentration Facility decommissioning activities included the removal of the L-12 vessel. Seven of the eight vessels planned for fiscal year 2001 (FY01) removal have been completed, on or ahead of schedule. A total of 15 vessels are planned for removal by June 2002. Work commenced on removal of the next vessel, L-6.

Individual Environmental Restoration (ER) Project Detailed Work Plan (DWP) management reviews were held on August 28-29. Participants included ERC, RL, DOE Headquarters (HQ) personnel, regulators, and stakeholders.

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## NOTABLE ACCOMPLISHMENTS continued:

### CENTRAL PLATEAU:

The Groundwater/Vadose Zone (GW/VZ) Integration Project (Integration Project) deployed the first module of the virtual library during August. The virtual library is a Web-based application that provides data important for Hanford Site characterization and contaminant transport modeling.

Through August, 19 of 28 FY01 well injections were completed for the In Situ Redox Manipulation (ISRM) project barrier emplacements. Remaining planned injections will be completed by the end of September.

During August, decommissioning of all 90 wells planned for FY01 was completed.

All five groundwater pump and treat systems operated above the planned 90% availability levels in August. Since system inception, these systems have processed over 5 billion liters of groundwater, removing approximately 5,722 kilograms of carbon tetrachloride, 257 kilograms of chromium, and 1.07 curies of strontium. Approximately 1 billion liters of groundwater have been processed in FY01, removing approximately 1,141 kilograms of carbon tetrachloride, 64 kilograms of chromium, and 0.18 curies of strontium.

Approximately 148.5 million liters of vapor were processed through the 200-ZP-2 soil vapor extraction system during August, removing 123.7 kilograms of carbon tetrachloride. Approximately 2 billion liters have been processed in FY01, with 512 kilograms of carbon tetrachloride removed.

Drilling, sampling, geophysical logging, and decommissioning of the 216-B-38 borehole operations were completed during August.

Site surveillance and maintenance (S&M) activities proceeded in August to ensure inactive facility integrity and safety. All planned FY01 roof repairs/maintenance were accomplished with completion of the REDOX facility roof repairs.

Passive vents were closed at U Plant and 224-U facility.

All planned FY01 200 Area asbestos abatement activities were completed.

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## MAJOR COMMITMENTS:

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

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There are currently 14 *Tri-Party Agreement* milestones scheduled for completion during FY01. Through August, a total of 15 milestones have been completed, all ahead of schedule (14 FY01 milestones and one FY02 milestone). On August 28, a change request was approved that deleted two milestones and established three new outyear milestones. The deleted milestones were M-16-03E, "Complete Remediation of Waste Sites in 300-FF-1 Operable Unit (excluding 618-4 Burial Ground) to Include Excavation, Verification, and Backfilling" (due September 30); and M-16-03F, "Complete Excavation, Verification, Soil and Drummed Waste Treatment and Disposal, and Backfilling of 618-4 Burial Ground" (date was to be determined).

<b>Total <i>Tri-Party Agreement</i> Milestones Due in FY01</b>	<b>14</b>
Total Planned Through August	12
Total Completed Through August (includes one completed FY02 milestone)	15

<b>Remaining <i>Tri-Party Agreement</i> Milestones to be Completed in FY01</b>	<b>0</b>
Forecast Ahead of Schedule	0
Forecast On Schedule	0
Forecast Unrecoverable	0

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**MAJOR COMMITMENTS continued:**

**EM Corporate Performance Measures:**

	<b>DWP FY01</b>	<b>FY01 Mgmt Commitments</b>	<b>Current Baseline</b>	<b>Completed YTD</b>
<b>Waste Site Excavations</b>	12	12	16	13
<b>Technology Deployments</b>	0	5	9	9

**Green**

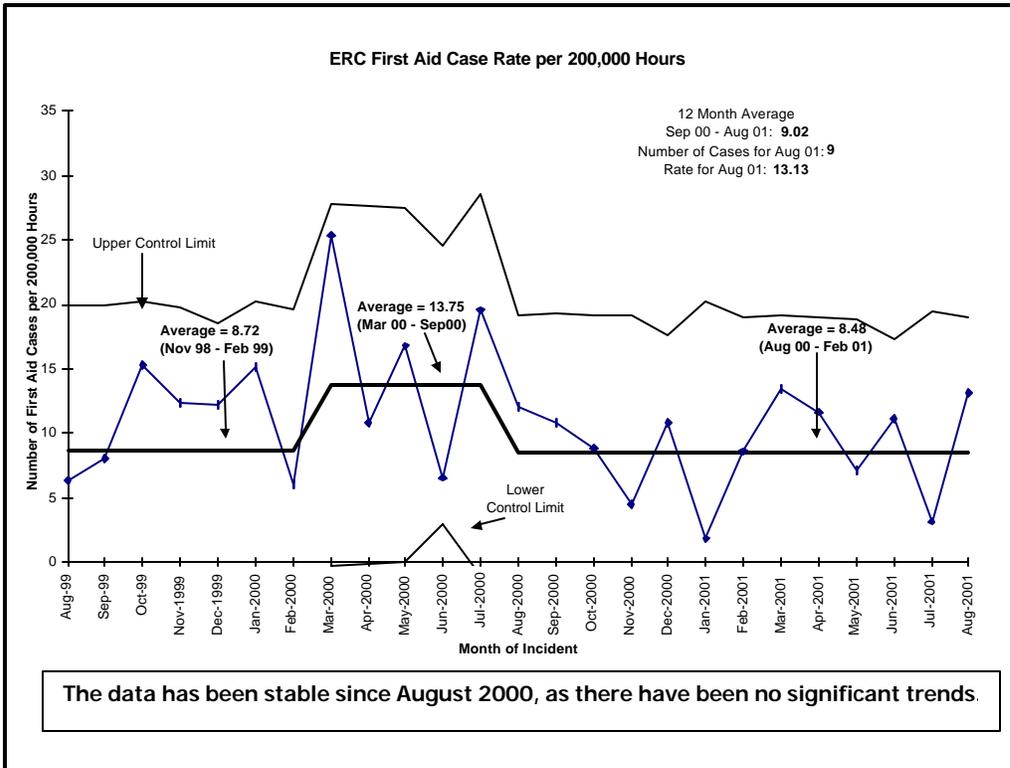
**EM Management Commitment:**

The Environmental Restoration (ER) Project had one FY01 management commitment milestone, which has been achieved. The management commitment, "Install Four Additional Wells at SST WMA" by September 30, was met on April 2, when installation of five wells was completed.

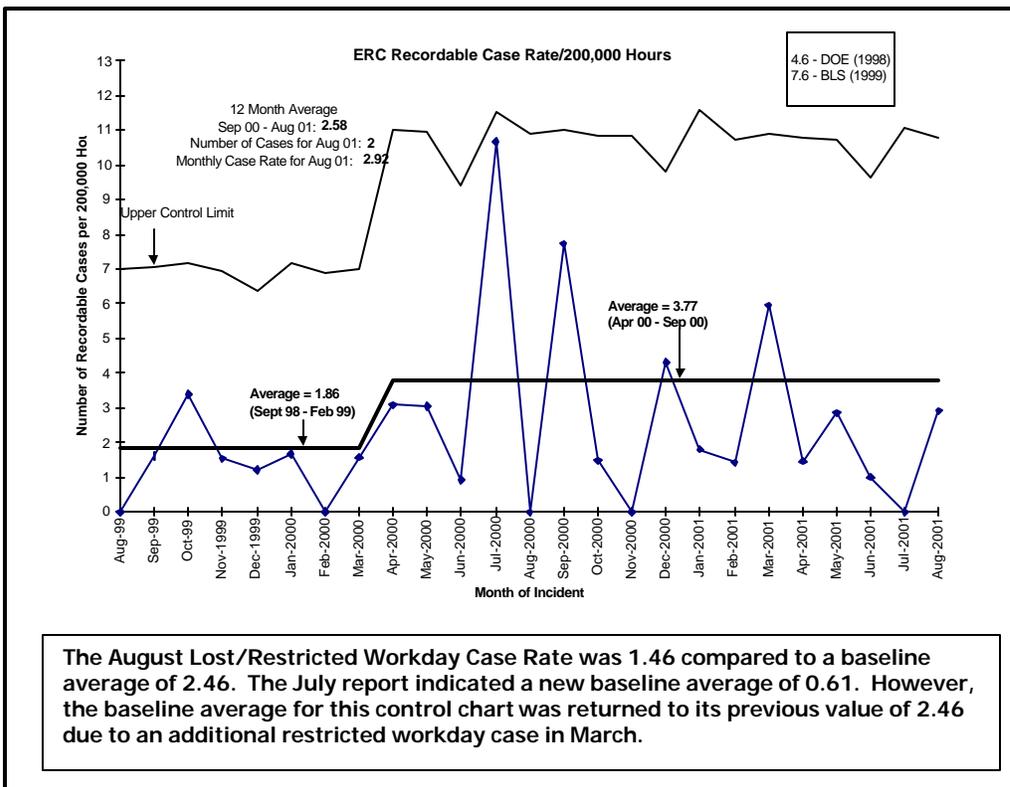
**Green**

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION OCTOBER 2001

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



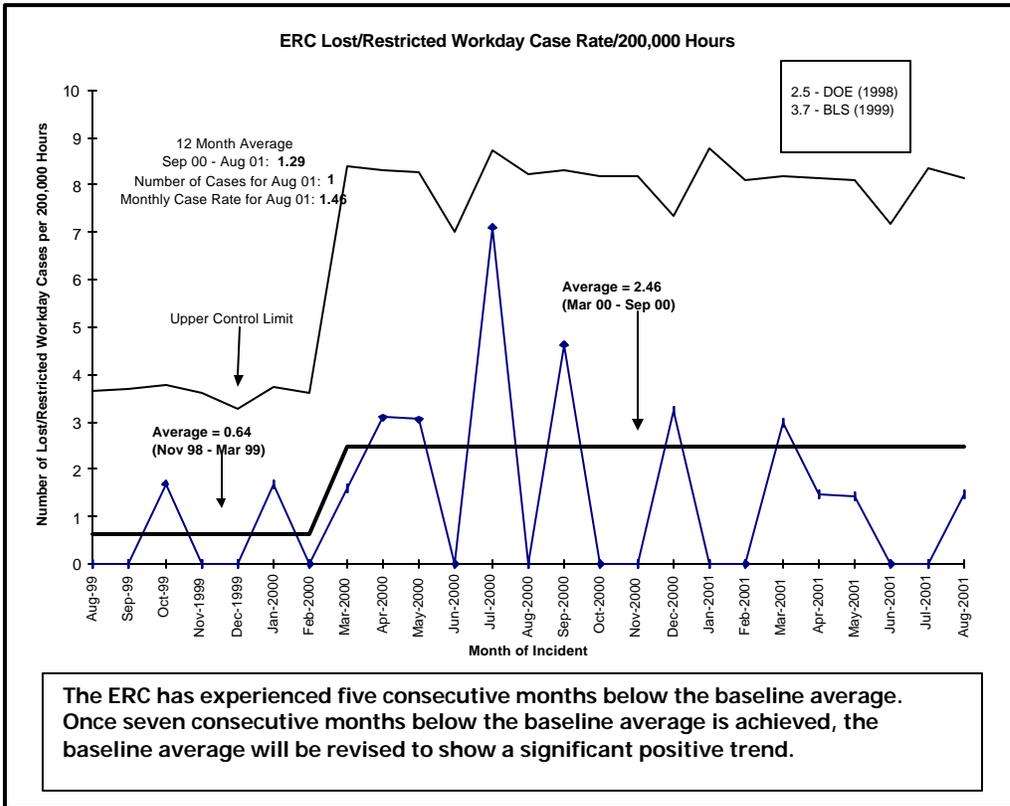
Green



Green

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION OCTOBER 2001

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



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

The following actions have or are being taken by the ERC to focus on safety improvement:

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- BHI has developed a Medical Case Management desktop instruction for ERC managers, supervisors, and safety representatives. The purpose is to provide consistent management of occupational and non-occupational injuries and illnesses. Medical Case Management desktop instruction continues for ERC managers and supervisors. BHI Safety personnel visit the projects and provide the training to ERC managers and supervisors.
- The ERC is half-way to the million hour benchmark, as approximately 535,650 hours have been worked without a lost workday case. Continuous employee involvement is being fostered by the Integrated Safety Management System (ISMS), Voluntary Protection Program (VPP), and labor alliance programs, plus e-mail and one-on-one meetings with employees. Year to date comparison to fiscal year 2000 (FY00) safety statistics indicate that the ERC is experiencing a 26% reduction in overall incidents.
- An ERC Chemical Management Field Guide was developed to aid Chemical Custodians and Project Environmental Leads with all aspects of chemical management including chemical compatibility and storage, Chemical Inventory Database desk instructions, points of contact, and implementing procedures. The guide was developed to provide key information to ERC employees who are managing chemicals in the field on a daily basis. The ERC Chemical Management Team published the first issue of the ERC Chemical Management Program bulletin to provide employees managing chemicals answers to frequently asked questions and information updates to continually improve safety in managing chemicals.
- The Labor Alliance has approved the new Sharing for Success program for FY02 with an added award category for individual safety performance. The ERC starts and ends every meeting with a Safety Topic. More management walk throughs are being performed and documented. The results of the National Safety Council safety survey showed very positive results.
- BHI held its first Senior Incident Review Board chaired by the Vice President of Operations during this reporting period. This review board will ensure that the ERC has correctly and thoroughly determined the cause of the incidents and identified correctable opportunities. In addition, lessons learned based on these incidents will be used to prevent future occurrences.
- All accidents are thoroughly investigated. Emphasis is placed on causes and corrective actions that can be implemented where applicable. Timely discussions are expected to take place in safety meetings and plan of the days (PODs). When investigations have been completed, the results of each investigation are sent to the Area Superintendents, Field Superintendents and Supervisors to review at the PODs.
- Continue to look for trends and consult with corporate and other Bechtel National, Inc. (BNI) contacts for ways to enhance performance.
- BHI continues to work closely with the Hanford Atomic Metal Trades Council (HAMTC) Safety Representative to resolve safety issues as they arise.
- Senior management continues to meet with small groups of employees in the field to discuss safety and personal commitment.
- The Field Support General Superintendent and Project Safety Manager continue to visit different projects on a regular basis, meet with project team members, and conduct a safety walk around. Information from the walk around is shared with the team and other Field Support personnel. Safety conditions requiring corrective action are assigned to project personnel or support personnel for action and are tracked to closure. This activity is ongoing.

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

	<b>FYTD</b>	<b>Current Period (7/21/01- 8/19/01)</b>	<b>Current Period Comments</b>
<b>First Aid</b>	75	9	(3) bite/sting, (1) puncture, (1) irritation, (1) laceration, (1) foreign body to eye, (1) contusion, (1) strain
<b>OSHA Recordable</b>	16	2 (includes restricted workday case below)	(1) employee was surveying truck, when he discovered a small white spot on his lower left arm. The employee was examined at a medical aid station and returned to work without restrictions. He was later given multiple doses of prescription medication.
<b>Restricted Workday Case</b>	3	1	(1) employee was starting to survey when he slipped on a rock and fell. He had a survey instrument in his hand, smashing a finger between the instrument and a rock. This caused pain, swelling, and bruising of the end of his left third finger. Employee was examined at a medical aid station and returned to work with restrictions.
<b>Lost Workday Case</b>	5	0	N/A

**Green**

The ERC, as of September 22, 2001, reports approximately 535,650 hours since the last lost workday incident. The last incident occurred on May 7, 2001 and became a lost time on May 31, 2001.

**Green**

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

### ISMS:

**DOE EM Performance Agreement:** Maintain and improve the approved Integrated Safety Management System (ISMS).

Green

### Status:

- BHI-01550, the Bechtel Hanford, Inc. Integrated ES&H Management System Performance Objectives, Measures and Indicators Process document was approved by RL on September 7, 2001. The approval letter identified four opportunities for improvement.
- Revision 3 of BHI-01199, Integrated Environment, Safety, and Health Management Description is on schedule for submittal to RL for review and approval by October 1, 2001.
- Implementation of the new hazard identification and analysis process continued. The Six Sigma yellow belt team continues to evaluate the Field Support Hazards Identification (Haz ID) Process to identify process improvement(s). The evaluation team meets on a regular basis and is currently evaluating specific elements in several areas of the programmatic implementation of the Haz ID process.
- The Mitigation Plan for the 100 Areas and 600 Area of the Hanford Site has been updated and submitted to RL as a draft document for review and comment. This plan describes the efforts necessary to reduce impacts to waste site areas from remedial action activities and restore the environment impacted from past Hanford operations by creating native plant communities and wildlife habitat.
- An Industrial Mineral Resource Management Plan was drafted with contributions from Bechtel Hanford, Inc., DynCorp, and Pacific Northwest National Laboratories to fulfill a commitment of the Hanford Land Use Plan Environmental Impact Statement. The plan provides for managing industrial mineral resources (e.g., sand and gravel) while being protective of the environment. The plan is consistent with other environment management plans for biological, cultural, and historic resources.
- The Waste Management Work Process was revised based on the results of ERC's first Six Sigma Process Improvement initiative. The detailed analysis and evaluation of waste management data resulted in improvements that streamlined the process and reduced the average cycle time for storage of *Resource Conservation and Recovery Act of 1976* (RCRA) waste from 95 days to 59 days.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION OCTOBER 2001

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

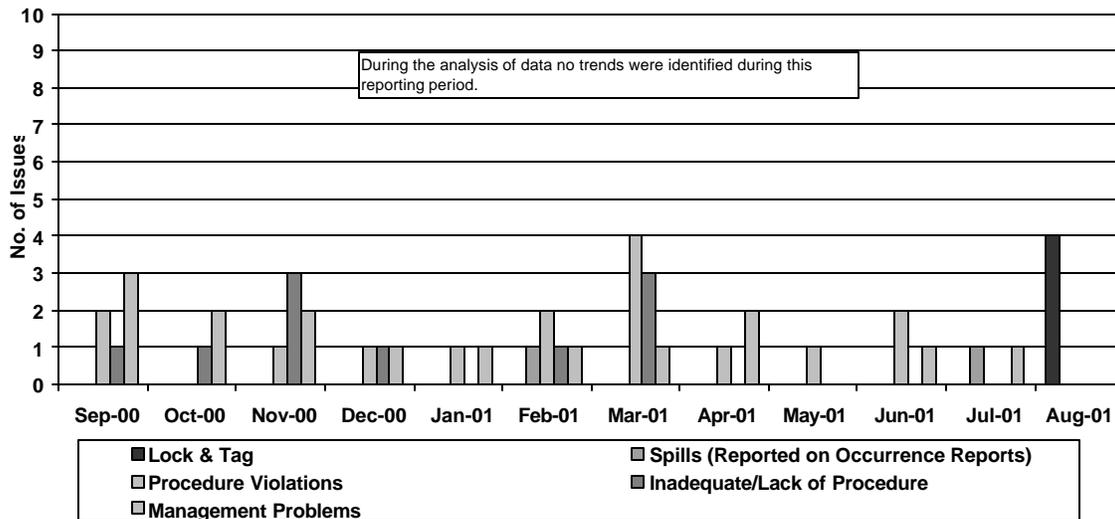
### Conduct of Ops:

#### ERC-CATS (Corrective Action Tracking System) Trend Data 9/1/00 through 8/31/01

	Sep-00	Oct-00	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Apr-01	May-01	Jun-01	Jul-01	Aug-01
Lock & Tag	0	0	0	0	0	0	0	0	0	0	0	4
Spills (Reported on Occurrence Reports)	0	0	0	0	0	1	0	0	0	0	1	0
Procedure Violations	2	0	1	1	1	2	4	1	1	**2	0	0
Inadequate/Lack of Procedure	1	1	3	1	0	1	3	0	0	0	0	0
Management Problems	3	2	2	1	1	1	1	2	0	*1	*1	0

\* Trend data not received until August 2001.

\*\* Trend data not received for one item until August 2001



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.

### August Conduct of Operations Issues:

#### Lock and Tag Issue:

**Condition Description:** The BHI self-assessment process did not identify long-standing inconsistencies and administrative deficiencies in implementation of the BHI Hazardous Energy Program.

**Corrective Action Plan:** Field Support personnel will revise procedure BHI-FS-01, Field Support Administration, Vol. 1, procedure 1.13, "Control of Hazardous Energy and Materials (Lockout/Tagout)" to include management's expectations while conducting a Lockout/Tagout Self-Assessment. Estimated completion date of October 31, 2001.



(Continued on next page)

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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

**Condition Description:** All of the required elements and actions for lock and tag were not included in Task Instruction 2000-08-14-002, Lower Fill and Removal.

**Correction Action Plan:** The Field Engineering Supervisor will reinforce the need for all Area Field Engineers to review all existing work packages that contain lockout/tagout instructions. This review will assure that work packages have sufficient information included in the work package as required by BHI-FS-01, Field Support Administration, Vol. 1, procedure 1.13, "Control of Hazardous Energy and Materials (Lockout/Tagout)", and clearly addresses the inclusion of hold points in the work package. Field Engineering Support will provide written guidance to the Area Field Engineers of the requirements for reviewing and approving work packages. This guidance will include management's expectations for the quality of work process and the work package review and approval process. Estimated completion date of October 31, 2001.

Green

**Condition Description:** Corrective action implemented to address deficiencies in filling out lockout/tagout logs did not prevent recurrence.

**Corrective Action Plan:** Field Support personnel will revise BHI-FS-01, Field Support Administration, Vol. 1, procedure 1.13, "Control of Hazardous Energy and Materials (Lockout/Tagout)", to include management's expectations while conducting a Lockout/Tagout Self-Assessment. Estimated completion date is October 31, 2001.

Green

**Condition Description:** Appendix 7.10 of Task Instruction 2000-08-14-002, Lower Fill and Removal did not include any references to pressurized liquids (Lock and Tag). Observation distinguished that a piece of equipment being worked on was electrically powered, but operates based on hydraulic systems. The work instructions for energy isolation made no reference to the hydraulic system.

**Correction Action Plan:** The Field Engineering Supervisor will reinforce the need for all Area Field Engineers to review all existing work packages that contain lockout/tagout instructions. This review will assure that work packages have sufficient information included in the work package as required by BHI-FS-01, Field Support Administration, Vol. 1, procedure 1.13, "Control of Hazardous Energy and Materials (Lockout/Tagout)", and clearly addressed the inclusion of all potential energy sources in the work package were required. Field Engineering Supervisor will provide written guidance to the Area Field Engineers of the requirements for reviewing and approving work packages. This guidance will include management's expectations for the quality of work process and the work package review and approval process. Estimated completion date of October 31, 2001.

Green

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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

### Previous Conduct of Operations Issues Reported in August:

#### Procedure Violation:

**Condition Description:** On June 20, 2001, Bechtel Hanford, Inc. (BHI) Decontamination and Decommissioning (D&D) project management conducted a fact finding meeting concerning a potential procedure violation. The incident involved an electrician at 105-F who stood next to a 14' pit, without adequate fall protection, and attempted to remove a light fixture. The light fixture was attached to a temporary metal fence (cattle guard), that extended from the side of the reactor wall to a temporary trailer. The fence is 2'-4' from the edge of the pit, which still has its walls intact. The fence is capable of supporting sufficient weight to provide adequate fall protection, however, the cattle guard section by which the electrician was working, did not have one end sufficiently secured to the building. Preliminary information indicates a shifting of the light fixture caused soil and rocks to slide into the pit, directly in front of the electrician. The electrician believed the cattle guard was not secure enough to provide adequate fall protection and exited the area.

#### Corrective Action Plan:

1. Field Support reaffirmed with site supervisor that a supervisor or temporary supervisor will be on-site at all times.
2. Field Support management has assigned a temporary supervisor to the site.
3. Discussed the incident with workers and emphasized the requirement that no one is allowed on-site (workers/visitors) without first checking in with the site supervisor and reviewing the plan of the day (POD), site briefing, and Site-Specific Health and Safety Plan (SSHASP).

Green

#### Management Problem:

**Condition Description:** Hazards Control Requirement 5, which is a defense-in-depth commitment to the control of combustible materials found [in the current Safety Evaluation Report (SER) contained within 233S-AB-G0002 (233-S Authorization Basis Manual)] was not fully implemented.

**Corrective Action Plan:** A justification for continued operation (JCO) JCO-2001-001, was prepared and transmitted to DOE-RL for approval. Approval was provided in the SER (CCN 089277), dated 5/25/01. The 233-S Authorization Basis document is being revised to ensure consistency in its requirements concerning fire hazards controls. The Authorization Basis is currently under review by DOE-RL.

Green

**Condition Description:** An Environmental Restoration Disposal Facility (ERDF) shuttle truck driver backed the truck into the parking area and struck a light pole. The pole broke at the base and toppled to the ground.

**Corrective Action Plan:** Install a bumper around parking lot light and install lights on the Radiological Control Technician (RCT) trailer. Driver cautioned.

Green

## REGULATORY/EXTERNAL/DOE-RL & HQ ISSUES AND REQUESTS:

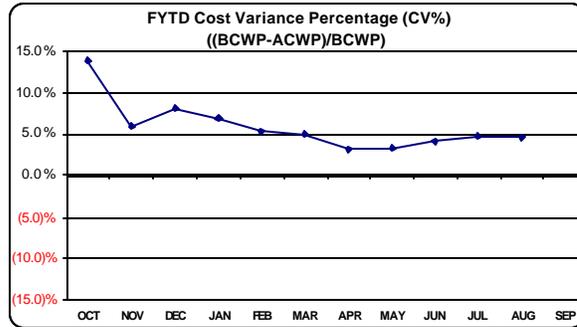
Refer to individual Project issues in the following Section B and Section C.

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## TOTAL COST/SCHEDULE OVERVIEW (Total ER Contract incl. RL/PNNL):

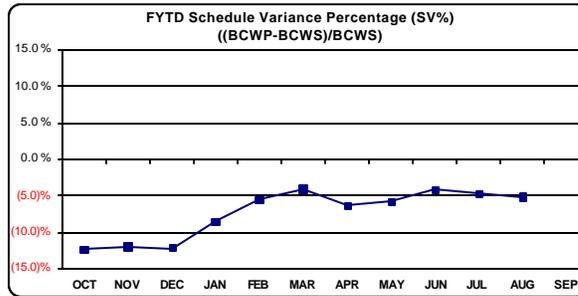
### FY01 PERFORMANCE FYTD AUGUST 2001 (\$K)

Green



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Out-Year FCST
<b>CURRENT PERIOD</b>													
ACWP	9,656	10,998	11,610	12,274	13,040	12,559	14,963	13,102	12,815	13,323	12,469		
BCWP	11,195	10,749	13,140	12,755	12,916	13,101	14,098	13,660	14,262	14,805	12,871		
<b>FISCAL YEAR TO DATE</b>													
ACWP	9,656	20,654	32,264	44,538	57,578	70,137	85,100	98,202	111,017	124,339	136,808		
BCWP	11,195	21,944	35,085	47,839	60,755	73,856	87,955	101,614	115,876	130,681	143,553		
CV	1,539	1,290	2,820	3,301	3,177	3,720	2,855	3,412	4,860	6,342	6,745		
CV%	13.7%	5.9%	8.0%	6.9%	5.2%	5.0%	3.2%	3.4%	4.2%	4.9%	4.7%		
EAC (Cumulative)	9,656	20,654	32,264	44,538	57,578	70,137	85,100	98,202	111,017	124,339	136,808	157,324	163,589
Yr End Budget Variance	195	544	2,241	2,200	2,274	3,316	3,610	4,856	5,051	5,628	6,170		

For variance explanation by PBS, see Project Status Section of each project.



Green

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
DWP	11,110	10,286	12,233	10,282	10,058	11,813	14,703	11,619	11,559	13,381	11,497	13,404
DWP (Accum)	11,110	21,396	33,629	43,911	53,968	65,781	80,484	92,103	103,662	117,043	128,540	141,944
<b>CURRENT PERIOD</b>												
BCWS	12,782	12,103	15,015	12,418	12,003	12,656	16,859	13,957	13,038	16,158	14,253	18,518
BCWP	11,195	10,749	13,140	12,755	12,916	13,101	14,098	13,660	14,262	14,805	12,871	
<b>FISCAL YEAR TO DATE</b>												
BCWS	12,782	24,885	39,900	52,318	64,322	76,977	93,836	107,793	120,831	136,989	151,241	169,759
BCWP	11,195	21,944	35,085	47,839	60,755	73,856	87,955	101,614	115,876	130,681	143,553	
SV	(1,587)	(2,940)	(4,815)	(4,479)	(3,566)	(3,121)	(5,882)	(6,179)	(4,955)	(6,307)	(7,688)	
SV%	-12.4%	-11.8%	-12.1%	-8.6%	-5.5%	-4.1%	-6.3%	-5.7%	-4.1%	-4.6%	-5.1%	

For variance explanation by PBS, see Project Status Section of each project.

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## TOTAL COST/SCHEDULE OVERVIEW (Total ER Contract incl. RL/PNNL) continued:

### FY01 PERFORMANCE FYTD AUGUST 2001 (\$K)

	FY01 DWP BCWS	CURRENT BCWS	FYTD			YTD SCHEDULE VARIANCE		YTD COST VARIANCE		EAC
			BCWS	BCWP	ACWP	\$	%	\$	%	
ER01 100 Area R/A	29617	30656	27325	26595	24663	-730	-2.7%	1932	7.3%	28685
ER03 300 Area R/A	4127	2840	2233	1858	1767	-375	-16.8%	91	4.9%	2685
ER04 ER Waste	17420	18942	17130	16872	16485	-258	-1.5%	387	2.3%	18490
<b>RA-Subtotal</b>	<b>51164</b>	<b>52438</b>	<b>46688</b>	<b>45325</b>	<b>42915</b>	<b>-1363</b>	<b>-2.9%</b>	<b>2410</b>	<b>5.3%</b>	<b>49860</b>
ER02 200 Area R/A	443	4339	3837	3470	2727	-367	-9.6%	743	21.4%	3852
ER08 GW Management	24942	31135	28039	25630	24397	-2409	-8.6%	1233	4.8%	30158
VZ01 GW/VZ	10833	10998	10362	9257	8684	-1105	-10.7%	573	6.2%	10301
<b>GW/VZ-Subtotal</b>	<b>36218</b>	<b>46472</b>	<b>42238</b>	<b>38357</b>	<b>35808</b>	<b>-3881</b>	<b>-9.2%</b>	<b>2549</b>	<b>6.6%</b>	<b>44311</b>
ER06 ISS	2065	13790	11114	11012	10851	-102	-0.9%	161	1.5%	13833
ER06 233-S	5130	6406	5670	5476	6075	-194	-3.4%	-599	-10.9%	7158
<b>DD-Subtotal</b>	<b>7195</b>	<b>20196</b>	<b>16784</b>	<b>16488</b>	<b>16926</b>	<b>-296</b>	<b>-1.8%</b>	<b>-438</b>	<b>-2.7%</b>	<b>20991</b>
ER05 S&M	13024	13737	12754	12581	11557	-173	-1.4%	1024	8.1%	12719
ER07 Long-Term S&M	59	59	47	44	22	-3	-6.4%	22	50.0%	35
<b>S/M-Subtotal</b>	<b>13083</b>	<b>13796</b>	<b>12801</b>	<b>12625</b>	<b>11579</b>	<b>-176</b>	<b>-1.4%</b>	<b>1046</b>	<b>8.3%</b>	<b>12754</b>
ER10 ERC PM&S	28984	31249	27542	26885	25708	-657	-2.4%	1177	4.4%	30063
ER10 RL PM&S	5300	5611	5189	3873	3873	-1316	-25.4%	0	0.0%	5611
<b>PM-Subtotal</b>	<b>34284</b>	<b>36860</b>	<b>32731</b>	<b>30758</b>	<b>29581</b>	<b>-1973</b>	<b>-6.0%</b>	<b>1177</b>	<b>3.8%</b>	<b>35674</b>
<b>GRAND TOTAL</b>	<b>141944</b>	<b>169762</b>	<b>151242</b>	<b>143553</b>	<b>136809</b>	<b>-7689</b>	<b>-5.1%</b>	<b>6744</b>	<b>4.7%</b>	<b>163590</b>

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#### Cost Variance Summary

At the end of August, the ER Project had performed \$143.6M worth of work, at a cost of \$136.8M. This results in a favorable cost variance of \$6.7M (+4.7%). The positive cost variance is attributed to less labor required due to sharing resources between 100 D and 100 B/C Area remediation efforts; less labor required to complete remediation cleanup verification packages (CVPs) due to the use of a streamlined format and consolidation of waste sites; underruns in GW/VZ monitoring and sampling; In-Situ Redox Manipulation (ISRM) subcontract/chemical costs and 200-TW-2 drilling costs less than planned; 200 Area general S&M tasks and herbicide application costs less than planned, and program management support to field operations using fewer resources than planned.

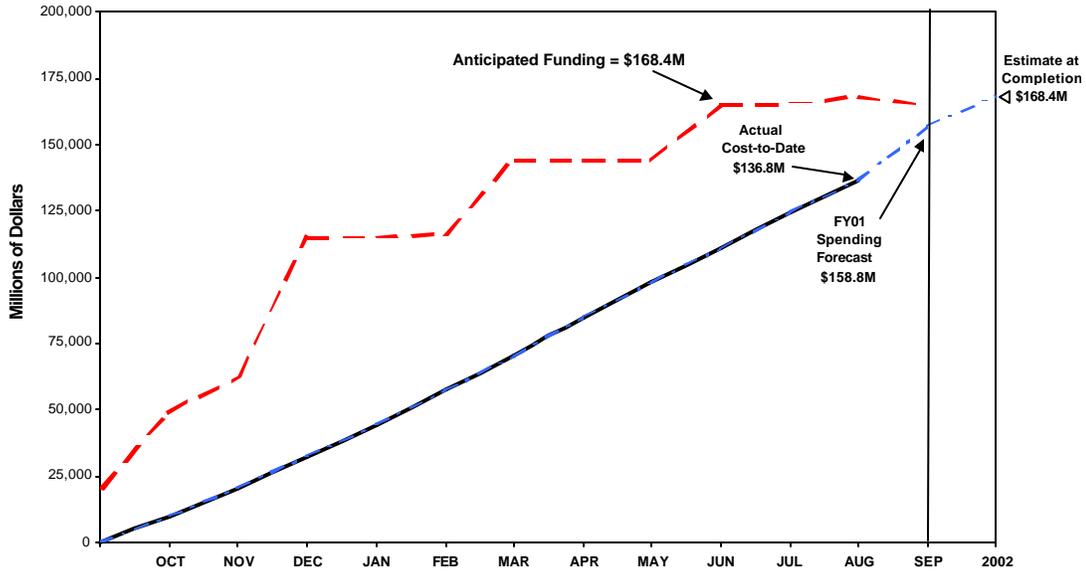
#### Schedule Variance Summary

Through August, the ER Project is \$7.7M (-5.1%) behind schedule. The negative schedule variance is attributed to delays in 100 F/N Area excavation due to plumes, and subcontractor termination at 100 F; waste shipments from *Resource Conservation and Recovery Act of 1976* (RCRA) well drilling placed on hold pending disposition resolution, ISRM injections behind due to very low well extraction rates; 200-ZP-1 Plutonium Finishing Plant (PFP) well drilling setup delays; delays in groundwater monitoring and maintenance activities; testing for System Assessment Capability (SAC) history matching took longer than planned; equipment difficulties during F Reactor Fuel Storage Basin (FSB) demolition; and late billings for site-wide assessments.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION OCTOBER 2001

## TOTAL COST/SCHEDULE OVERVIEW (Total ER Contract) continued:

### FY2001 Funds Management



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	2002	EAC TOTAL
<b>ACTUAL/ANTICIPATED FUNDING</b>	20,500	48,800	62,900	115,100	115,466	116,236	144,126	144,126	144,126	165,088	165,088	168,388	Est. Outyr. ETC	
<b>APPROVED SCOPE</b>														
1 Actual Cost	9,656	20,654	32,264	44,538	57,578	70,137	85,100	98,202	111,017	124,340	136,809			
2 Current Monthly EACs	9,656	10,998	11,610	12,274	13,040	12,559	14,963	13,102	12,815	13,323	12,469	20,516		
3 Cumulative EAC	9,656	20,654	32,264	44,538	57,578	70,137	85,100	98,202	111,017	124,340	136,809	157,325	6,263	163,589
<b>SEPTEMBER FY2001 APPROVED BCPs (Through 09/25/01)</b>														
4 ER02 BCP-21233 200-TW-1 Lab Sample Analysis Giveback													(88)	(88)
5 ER02 BCP-21234 200 Area Borrow Source Study Giveback													(109)	(109)
6 ER02 BCP-21235 200-TW-2 Lab Sample Analysis Giveback													(190)	(190)
7 ER06 BCP-21208 F Reactor ISS (FY01 Supplemental Congressional Funding)													3,300	3,300
8 ER08 BCP-21222 Accelerate 100-HR-3 ISRM Mitigation Planning & Support													50	50
9 VZ01 BCP-21226 Delete Peer Review Activities													(12)	(12)
10 Subtotal Approved Scope Changes													(349)	2,951
<b>FY2001 PENDING BCPs</b>														
11 ER04 BCP-21237 Retrieval of 233-S Assay Box at ERDF														500
12 ER06 BCP-21241 NDA Work Orders at 233-S														500
13 ER10 BCP-212XX Equipment Purchases														848
14 Subtotal Approved BCPs + Pending BCPs													(349)	4,799
15 Current Monthly EAC + September FY2001 Approved BCPs & Pending BCPs	9,656	10,998	11,610	12,274	13,040	12,559	14,963	13,102	12,815	13,323	12,469	20,167		-
16 Cumulative EAC + September FY2001 Approved BCPs & Pending BCPs	9,656	20,654	32,264	44,538	57,578	70,137	85,100	98,202	111,017	124,340	136,809	156,976	11,411	168,388

\*Includes \$3.3M for F Reactor ISS (FY01 Supplemental Congressional Funding) expected in September.

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION  
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**PERFORMANCE OBJECTIVES:**

Refer to individual Project information in the following Section B and Section C.

**KEY INTEGRATION ACTIVITIES:**

**RIVER CORRIDOR:**



**Other Hanford Site Work:** The estimate for the 331-B building demolition workscope in the 300 Area was completed and transmitted to Pacific Northwest National Laboratory (PNNL). This demolition work is tentatively scheduled to be performed in FY02.

Beryllium-assigned worker training will be conducted in September for workers involved with the removal of the high-efficiency particulate air (HEPA) filter and ductwork on the 303-K building roof (Fluor Hanford [FH] building located in the 300 Area).

**Safety and Health:** A presentation was made to RL on the systematic approach used to develop the Bechtel Hanford, Inc. (BHI) Integrated Environment, Safety, and Health Management System (ISMS) metrics. RL requested that BHI provide a similar presentation to other Hanford Site contractors.

**Technology Applications:** ERC Technology Applications personnel drafted the FY02 technology needs package. The package consisted of science needs statements, technology needs statements, and technology insertion points. A meeting was held with RL and other Hanford Site contractor representatives to plan a site-wide Technology Needs Workshop.

**CENTRAL PLATEAU:**

Drilling was completed for four calendar year 2001 (CY01) *Resource Conservation and Recovery Act* (RCRA) wells during August. These four wells were installed in support of the Office of River Protection (ORP). Eleven wells are planned for installation by December 31.

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION  
OCTOBER 2001**

**UPCOMING PLANNED KEY EVENTS:**

**RIVER CORRIDOR:**

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*Tri-Party Agreement* Milestone M-16-00F, Establish Date for Completion of All 100 Area Remedial Actions, due December 31.

**CENTRAL PLATEAU:**

*Tri-Party Agreement* Milestone M-15-42A, Complete 200-TW-2 Operable Unit Field Work Through Drilling and Sample Collection, due October 31.

*Tri-Party Agreement* Milestone M-13-26, Submit Plutonium/Organic-Rich Process Waste Group (200-PW-1) Work Plan, due December 31.

*Tri-Party Agreement* Milestone M-13-00L, Submit 3 200 NPL RI/FS (RFI/CMS) Work Plans, due December 31.

*Tri-Party Agreement* Milestone M-16-27B, Complete 100-HR-3 Phase II, ISRM Barrier Emplacement (Planning, Well Installation, and Barrier Emplacement), due December 31.

*Tri-Party Agreement* Milestone M-24-51, Install Three (3) Additional Wells at SST WMA B-BX-BY, due December 31.

*Tri-Party Agreement* Milestone M-24-52, Install Three (3) Additional Wells at SST WMA U, due December 31.

*Tri-Party Agreement* Milestone M-24-53, Install Two (2) Additional Wells at SST WMA TX-TY, due December 31.

*Tri-Party Agreement* Milestone M-24-54, Install One (1) Additional Well at SST WMA T, due December 31.

*Tri-Party Agreement* Milestone M-24-55, Install Two (2) Additional Wells at SST WMA S-SX, due December 31.

*Tri-Party Agreement* Milestone M-24-00M, Install RCRA Groundwater Monitoring Wells at Rate of Up to 50 in Calendar Year 2001 if Required, due December 31.

# Environmental Management Performance Report

October 2001

## Section B - River Corridor Information

- Remedial Action and Waste Disposal Project
- Decommissioning Projects (Interim Safe Storage and 233-S)
- Program Management and Support



Vessel L-3 Removal at 233-S



Demolition of 54-inch RCP Concrete Man Hole Structure Near F Reactor



Discharge Chute Cleanout at F Reactor Using the Brokk™ Excavator

***Focused on Progress...***

***Focused on Outcomes!***

Data as of month-end August (unless otherwise noted).  
Key data as of September 27.



**Department of Energy**  
Richland Operations Office



**Bechtel Hanford, Inc.**  
Environmental Restoration Contractor

E0110024.1

**Remedial Action and  
Waste Disposal Project  
(RAWD)**

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION  
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**SECTION B – RESTORING THE RIVER CORRIDOR**

**Data as of month-end August (unless otherwise noted).**

**Key data as of September 27, 2001.**

**Remedial Action & Waste Disposal Project (RAWĐ):**

**ACCOMPLISHMENTS: RAWĐ**

**Environmental Restoration Disposal Facility (ERDF) Transportation and Operations:** During August, six ion exchange modules were transported from K Basin to ERDF for disposal.

During August, shipments totaling 49,952 metric tons (55,063 tons) of contaminated waste were transported to ERDF. 506,197 metric tons (557,990 tons) of waste have been disposed in fiscal year 2001 (FY01), which is about 2% behind the plan. A total of 2,812,958 metric tons (3,100,772 tons) of material have been disposed in ERDF since it opened in 1996.

**100 B/C Area Remediation:** During August, breaking of concrete pipelines #3 (1.2-meter [48-inch]) and #6 (0.8-meter [30-inch]) was completed on August 27. Concrete breaking and excavation was also completed at the 132-C-2 outfall structure.

**100 F Area Remediation:** In 100 F Area, variance sampling (144 samples taken) was completed on the 116-F-19 pipeline overburden piles. Closeout sampling was also completed for the UPR-100-2 basin leak waste site. The area of the 100-UPR-F-2 unplanned release waste site (that extended into the Columbia River shore bank) was backfilled and revegetated. The early backfill was accomplished to take advantage of this year's low river water levels.

Ninety percent of the experimental animal farm piping removal was completed during August. Overburden removal and demolition operations continued for the 1.4-meter (54-inch) concrete discharge piping from the F Reactor building to the Lewis Canal. The section of the north Lewis Canal lateral 1.4-meter concrete pipe that is located underneath the existing utilities was grouted.

A pre-bid walkdown was conducted for the remaining remedial action workscope at the Group 4 (F, H, and K Areas) reactor areas. Three proposals were received and evaluated. A recommendation was forwarded to RL for consent to award the contract.

**100 N Area Remediation:** Demolition and size reduction of the 116-N-3 pipeline, associated buildings, and valve structures are nearing completion in the 100 N Area. Test pit excavation activities were completed at 116-N-1 to characterize the site in preparation for access and remediation activities. Initial laboratory results confirmed an estimated 18,144 metric tons (20,000 tons) of additional contaminated material will require excavation. Additional laboratory results are still pending from previous pothole sampling.

100 N Area waste excavation and shipment activities were curtailed during August due to high temperatures, equipment issues, and ongoing planning activities associated with the upcoming 116-N-1 crib remediation work.

**300 Area Remediation:** During August, a plan was developed and a coordination meeting was held that identified all required actions to support shipment and disposal of the 618-4 Burial Ground drums containing granular uranium oxide. The drums will be disposed at ERDF by the end of September.

A BCP was approved to accelerate the 618-4 Burial Ground remediation. The BCP included preparation of an integrated 618-4 and 618-5 Burial Ground design and bid package. The request for proposal is on schedule for release in October. The 618-4 Burial Ground drum staging evaluation was also presented to RL. The evaluation indicated ERDF is the most feasible option for waste staging. The evaluation also indicated that receipt of regulatory approval is a time-critical step in the implementation schedule for this option.

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION**

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<b>ACCOMPLISHMENTS continued:</b> RAWD
<p>A <i>Tri-Party Agreement</i> change request was approved on August 28 that deleted two milestones and established three new outyear milestones. The deleted milestones were M-16-03E, "Complete Remediation of Waste Sites in 300-FF-1 Operable Unit (excluding 618-4 Burial Ground) to Include Excavation, Verification, and Backfilling" (due September 30); and M-16-03F, "Complete Excavation, Verification, Soil and Drummed Waste Treatment and Disposal, and Backfilling of 618-4 Burial Ground" (date was to be determined).</p> <p><b>300/600 Area Remediation:</b> A walkdown was conducted with RL of the J.A. Jones and 600-23 waste sites. CVPs were initiated for the two sites, and also for Landfills 1A, 1B, 1D, and the South Process Pond.</p> <p><b>100/300 Area Design/Assessment:</b> The 100 B/C Burial Ground 60% design package was issued on August 1. Preparation was also initiated for the Remedial Design Report/Remedial Action Work Plan (RDR/RAWP) for twelve 300-FF-2 waste sites.</p>
<b>SAFETY/ISMS/CONDUCT OF OPERATIONS:</b> RAWD
See Executive Summary.
<b>BREAKTHROUGHS/OPPORTUNITIES FOR IMPROVEMENT:</b> RAWD
None identified at this time.
<b>LONG-TERM (6 MONTHS PLUS) IMPORTANT ITEMS:</b> RAWD
None identified at this time.
<b>MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS):</b> RAWD
<ul style="list-style-type: none"><li>• <b>DOE Secretarial:</b> None identified at this time.</li></ul>
<ul style="list-style-type: none"><li>• <b>DOE EM Performance Agreement:</b> None identified at this time.</li></ul>

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION  
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**MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS) continued: RAWD**

• **Tri-Party Agreement Milestones:**

Milestone	Description	Due Date	(F)/(A) Date	
M-16-26D	Begin Excavation Activities at 100 B/C Process Effluent Pipelines.	2/28/01	2/26/01 (A)	
M-16-07B	Complete Remediation and Backfill of 22 Liquid Waste Sites and Process Effluent Pipelines in the 100-DR-1 and 100-DR-2 Operable Units as defined in Remedial Design Report/Remedial Action Work Plan for the 100 Area	7/31/01	2/28/01 (A)	
M-16-41A	Complete Remedial Action Excavation for JA Jones 1 and 600-23 Waste Sites	7/31/01	7/25/01 (A)	
M-16-26C	Complete Remediation and Backfill of 10 Liquid Waste Sites and Process Effluent Pipelines in the 100-HR-1 Operable Unit as defined in the Remedial Design Report/Remedial Action Work Plan for the 100 Area	9/30/01	7/19/01 (A)	
M-16-26G	Remove filter boxes and complete verification sampling for 100-B-12 waste site	9/30/01	5/31/01 (A)	
M-16-00F	Establish Date for Completion of all 100 Area Remedial Actions	12/31/01	12/31/01 (F)*	
M-16-41B	Submit Cleanup Verification Package (CVP) for JA Jones 1 and 600-23 Waste Sites for EPA Approval	3/31/02	3/31/02 (F)	
M-16-26B	Complete Remediation and Backfill of 51 Liquid Waste Sites in the 100-BC-1/-2, 100-DR-1/-2, and 100-HR-1 OUs and Process Effluent Pipelines in the 100-DR-1/-2, and 100-HR-1 OUs. Complete revegetation of 36 Liquid Waste Sites in the 100-BC-1, 100-DR-1/-2, and 100-HR-1 OUs as defined in the RDR/RAWP for the 100 Area.	3/31/02	3/31/02 (F)	

\*RL plans to submit a path forward strategy in early October to the regulators addressing negotiation process for *Tri-Party Agreement* Milestones M-13, 15, 16, 20, and 93 for the 100, 200, and 300 Areas. Target date for reaching tentative agreement is December 31, 2001.

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
ENVIRONMENTAL RESTORATION  
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**MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS) continued: RAWD**

- **DNFSB Commitment:**  
None identified at this time.

**PERFORMANCE OBJECTIVES: RAWD**

RAWD	Task	Status
	<ul style="list-style-type: none"> <li>• 490,000 Tons by 9/30/01</li> </ul>	Complete; Notice of Completion in preparation.
	<ul style="list-style-type: none"> <li>• Backfill 16 Sites by 9/30/01</li> </ul>	Complete; Notice of Completion in preparation.
	<ul style="list-style-type: none"> <li>• 50,000 Additional Tons by 9/30/01 <b>(Stretch)</b></li> </ul>	Complete; Notice of Completion in preparation.
	CV <5.0%; SV <7.5% for grouped PBS ER01, ER03, ER04	(*Detail in Section 6C)

**Green**

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

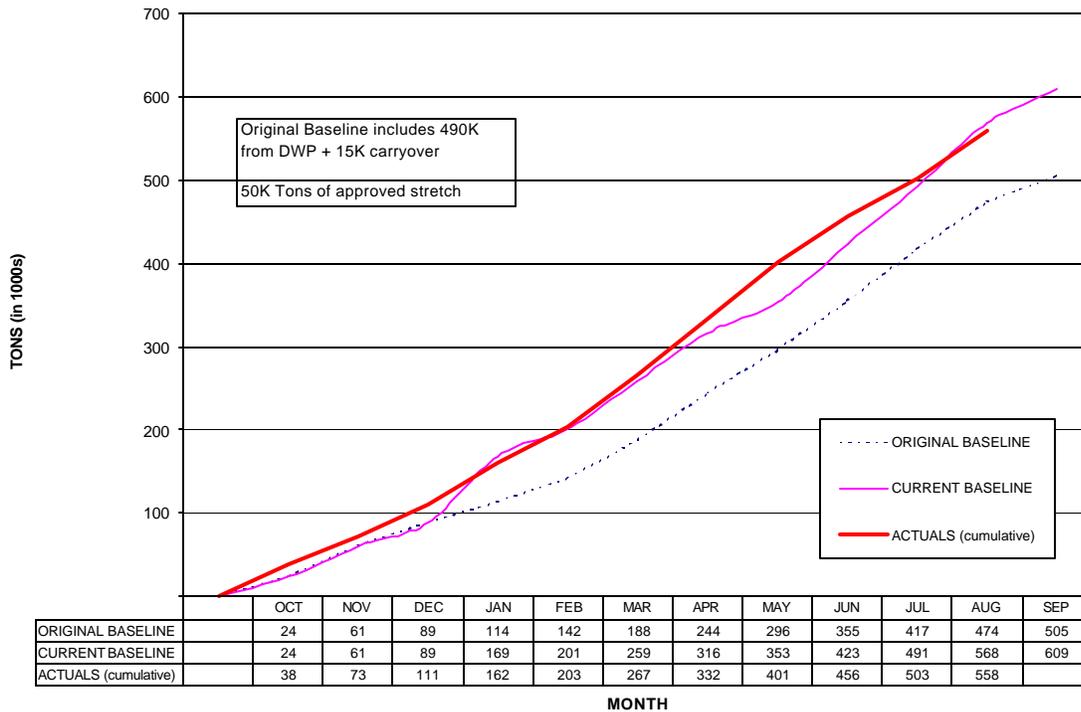
OCTOBER 2001

## PERFORMANCE MEASURES/METRICS: RAWD – (River and Plateau)

	DWP FY01	FY01 Mgmt Commitments	Current Baseline (Incl. Baseline Changes)	Completed YTD
Waste Sites Excavated	12	12	16	13

Green

**Remedial Action and Waste Disposal Project  
Cumulative Tons to ERDF**



## STRETCH AND SUPERSTRETCH GOALS: RAWD

FY01 RAWD "Stretch" Goals	Approved Tons (K)
Remediate Additional 50K Tons of Contaminated Material by 9/30/01	
(1) Additional Contaminated Material at 100-F Pipelines (BCP 21013 approved 11/00)	8.0K
(2) Additional Contaminated Material at 100-H Sites (BCP 21014 approved 11/00)	7.5K
(3) (Additional Contaminated Material at 100-F Sites of 36.4 approved in February) (BCP 21043 approved 2/01)	34.5K
<b>S/Total Remedial Action Stretch Goals:</b>	<b>50.0K</b>

Green

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

OCTOBER 2001

## STRETCH AND SUPERSTRETCH GOALS continued: RAWD

FY01 RAWD "Superstretch" Goals	Approved BCPs (K)
*Complete Remediation of 60 Square Miles of Hanford Site: (1) Complete Remediation of J.A. Jones Pit #1 and 600-23	\$1640.9K
<b>S/Total Remedial Action Superstretch Goals:</b>	<b>\$1640.9K</b>

Green

\*Carried over from FY00. Work complete; Notice of Completion submitted on 8/7/01.

## PROJECT STATUS (COST/SCHEDULE): RAWD

• **Schedule:**

Remedial Action & Waste Disposal Project	BCWS	BCWP	Variance
	\$K	\$K	\$K
ER01 100 Area Remedial Actions	27,325	26,595	(730)
ER03 300 Area Remedial Actions	2,233	1,858	(375)
ER04 ER Waste Disposal	17,130	16,872	(258)
TOTAL Remedial Actions	46,688	45,325	(1,363)

Green

**PBS-ER01 – 100 Area Remedial Action**

Schedule Variance = **(\$730K); (2.7%)** [Last Month: (\$75K); (0.3%)]

**Cause:** Pipeline excavation activities at 100-FR are behind schedule due to subcontractor termination, additional work on plumes, and confirmation sampling activities; lab analysis work at 100-NR-1 is behind schedule due to additional work on plumes.

**Resolution:** Will monitor excavation activities; closeout verification activities for 116-N-3, demolition activities for 116-N-1 trench, and 8000 U.S. tons of 116-N-3 plume material have been identified as carryover.

**PBS-ER03 – 300 Area Remedial Action**

Schedule Variance = **(\$375K); (16.8%)** [Last Month: (\$276K); (14.0%)]

**Cause:** Delays in the 300-FF-1 remediation contract closeout and 300-FF-2 Kd leachability study.

**Resolution:** Subcontractor is reviewing options and subcontract waste stream disposal is being studied; Kd leachability study activities will be performed concurrently, compressing the schedule.

**PBS-ER04 – Environmental Restoration Waste Disposal**

Schedule Variance = **(\$258K); (1.5%)** [Last Month: \$61K; 0.4%]

**Cause:** Behind schedule on increased plume volumes.

**Resolution:** Small waste volume has been identified as carryover.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

OCTOBER 2001

**PROJECT STATUS (COST/SCHEDULE) continued: RAWD**

• **Cost:**

Remedial Action & Waste Disposal Project	FY01 EAC	BCWP	ACWP	Variance
		\$K	\$K	\$K
ER01 100 Area Remedial Actions	28,685	26,595	24,663	1,932
ER03 300 Area Remedial Actions	2,685	1,858	1,767	91
ER04 ER Waste Disposal	18,490	16,872	16,485	387
<b>TOTAL Remedial Actions</b>	<b>49,860</b>	<b>45,325</b>	<b>42,915</b>	<b>2,410</b>

Green

**PBS-ER01 – 100 Area Remedial Action**

Cost Variance = **\$1932K; 7.3%** [Last Month: \$1892K; 7.7%]

**Cause:** Less labor was required due to sharing DR site non-manual resources with the 100-BC work scope needs, shifting of personnel to other waste sites, less design and supervision required; DR backfill was completed six weeks early; subcontract costs at 100-BC-1 were less than planned.

**Resolution:** Reflected in the EAC.

**Cause:** Cleanup Verification Packages (CVPs) continue to require less labor than anticipated to prepare due to the use of a "streamlined" format and the consolidation of waste sites. Estimated completion costs for the lead brick survey have been reduced to reflect actual charges.

**Resolution:** Reflected in the EAC.

**Cause:** 100 Area Burial Ground Design costs were less than planned due to fewer drawings being required; less effort required to prepare the SAP due to consorted efforts in the DQO process. Overrun at 100-NR-1 due to impacts of contamination levels and control issues.

**Resolution:** Reflected in the EAC.

**PBS-ER03 – 300 Area Remedial Action**

Cost Variance = **\$91K; 4.9%** [Last Month: \$163K; 9.6%]

**Cause:** Coordination of 300-FF-2 and 100 Area Burial Grounds design efforts has resulted in savings; savings from reduced integration requirements for preparation of the Kd sampling and analysis plan.

**Resolution:** Reflected in the EAC.

**PBS-ER04 – Environmental Restoration Waste Disposal**

Cost Variance = **\$387K; 2.3%** [Last Month: \$645K; 4.2%]

**Cause:** Transported additional waste volumes from plumes utilizing existing resources.

**Resolution:** Reflected in the EAC.



# Decommissioning Projects (D&D)

**ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT  
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OCTOBER 2001**

**SECTION B – RESTORING THE RIVER CORRIDOR**

**Data as of month-end August (unless otherwise noted).  
Key data as of September 27, 2001.**

**Decommissioning Projects (D&D)**

**ACCOMPLISHMENTS: D&D**

**F and DR Reactor Interim Safe Storage (ISS):** During August, the Brokk™ excavator was used in excavating two hot spots located in the F Reactor Fuel Storage Basin (FSB).

The quality assurance/quality control plan was approved for the F and DR Reactor safe storage enclosure (SSE) roof installations.

**D and H Reactors ISS:** At the D Reactor FSB, a radiological survey was completed and all openings were sealed prior to fogging. Fogging technology is a process used to eliminate airborne radioactivity and fix contamination in place remotely without requiring workers or equipment to enter the contaminated area. The aerosol, or fog, is introduced into the area where it condenses on surfaces and captures the contaminants in place. This technology eliminated the need to have five workers below grade in the FSB for several weeks in an average radiation field of 5 mrem/hour. It is estimated that a collective total effective dose equivalent of 1,600 mrem will be saved. During August, liquid pipe checks and hazardous material removal were also completed in the accumulator/rod room areas (Area 5). Electrical reinstallation was completed within the reactor building.

At H Reactor, samples were taken from the water-filled pits associated with the FSB and transfer pits. Samples will be sent off-site for analysis. During August, fixative application was completed in the gas wing (Area 1), and liquid pipe checks were completed in the ball 3X room. Oil removal was also completed in the electrical room, ball 3X room, east experiment rooms, and the 106/211 corridors.

**233-S Plutonium Concentration Facility Decommissioning Project:** August activities that were accomplished in the highly contaminated 233-S facility included the following:

- Completed removal of the L-12 vessel. Through August, seven of the nine vessels planned for FY01 have been removed, on or ahead of schedule.
- Commenced L-6 vessel removal.
- Removed approximately 50 meters (165 feet) of process hood pipe.
- Completed nondestructive assay (NDA) of 78 waste packages.

**SAFETY/ISMS/CONDUCT OF OPERATIONS: D&D**

See Executive Summary.

**BREAKTHROUGHS/OPPORTUNITIES FOR IMPROVEMENT: D&D**

None identified at this time.

**LONG-TERM (6 MONTHS PLUS) IMPORTANT ITEMS: D&D**

None identified at this time.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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**MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS): D&D**

- **DOE Secretarial:**  
None identified at this time.

- **DOE EM Performance Agreement:**  
None identified at this time.

- **Tri-Party Agreement Milestones:**

Milestone	Description	Due Date	(F)/(A) Date
M-93-12	Issue 105-DR Disposition Competitive Procurement Package for Ascertaining the Most Effective and Efficient Approach to FEIS ROD Selected Alternative Implementation (...)	2/28/02	*TBD

Green

\*This milestone will be included in the overall *Tri-Party Agreement* Milestone M-13, 15, 16, 20, and 93 negotiation process to begin in early October.

- **DNFSB Commitment:**  
None identified at this time.

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**PERFORMANCE OBJECTIVES: D&D**

PI	Task	Status
<b>233-S</b>	<ul style="list-style-type: none"> <li>• 8 vessels by 6/30/02</li>   <li>• 7 additional vessels by 6/30/02 <b>(Stretch)</b></li> </ul> <p>CV &lt;5.0%; SV &lt;7.5% for PBS ER-06</p>	<p>Critical path activity on schedule. NDA issue is impacting cost. Currently being reviewed by RL, BHI, and FH.</p> <p>BCP-21023 approved. Stretch activities in progress and on schedule.</p> <p>(*Detail in Section 6C)</p>
<b>ISS</b>	<ul style="list-style-type: none"> <li>• D Reactor Major Tasks by 9/30/01</li> <li>• DR Reactor Major Tasks by 9/30/01</li> <li>• F Reactor Major Tasks by 9/30/01*</li> <li>• H Reactor Major Tasks by 9/30/01</li> </ul> <p>*F Reactor major tasks were revised from "by 9/30/01" to "11/30/01" per BCP 21187. Task has been removed from BHI's FY01 PIs.</p> <p>CV &lt;5.0%; SV &lt;7.5% for PBS ER-06</p>	<p>Critical path activities on schedule; received authorization funding in December. F Reactor basin fill removal activities have been replanned to accommodate removal of fill in two 15" lifts vs. one 30" lift. Scheduled completion date is now 11/30/01. BCP 21187, with associated PI change justification, was submitted to DOE on June 15. Performance Evaluation Plan was modified on 9/5/01 by RL.</p>

**Green**

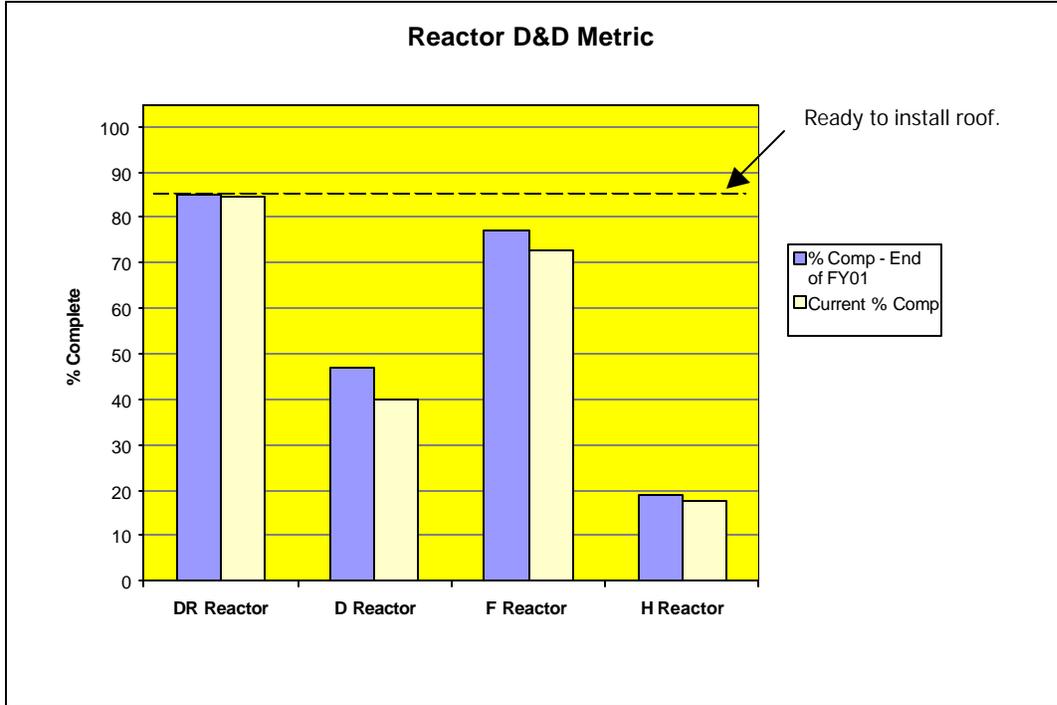
# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT

## ENVIRONMENTAL RESTORATION

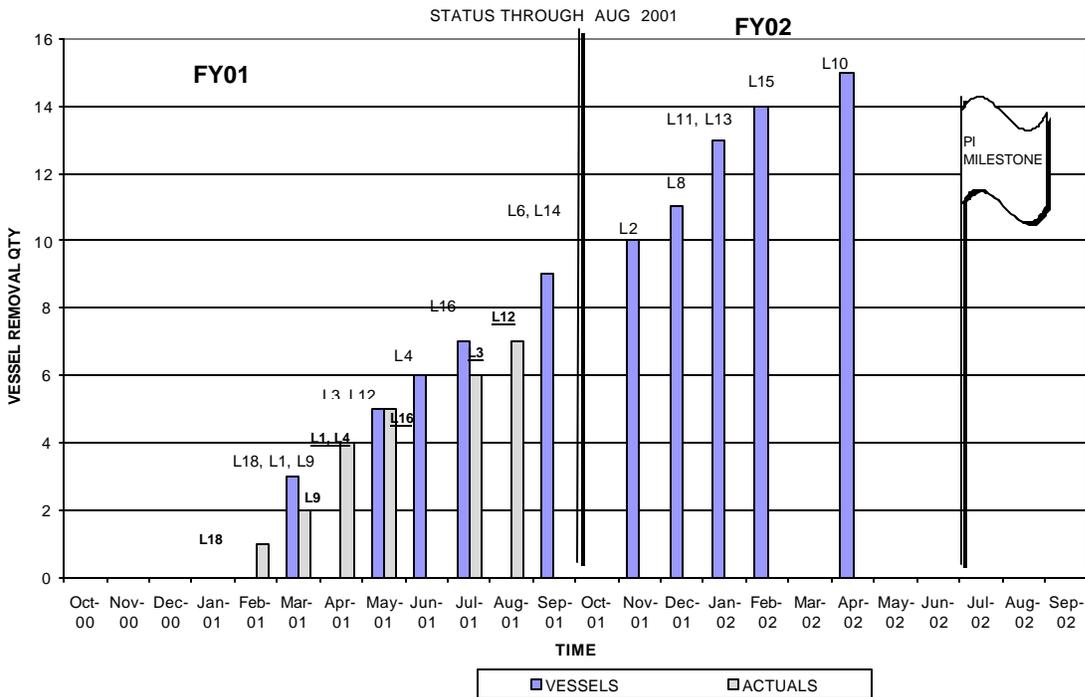
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PERFORMANCE MEASURES/METRICS: D&D

Green



### VESSEL REMOVAL SCHEDULE



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**STRETCH AND SUPERSTRETCH GOALS: D&D**

FY01 D&D "Stretch" Goals	Approved BCPs (K)
Remove 7 Additional Vessels by 6/30/02 for a total of 15 Vessels (Stretch Only) (BCP 21023 approved 11/00)	\$1,072.0K
<b>S/Total D&amp;D Stretch Goals:</b>	<b>\$1,072.0K</b>

**Green**

FY01 D&D "Superstretch" Goals	Approved BCPs (K)
*Continue F Reactor Interim Safe Storage	\$1372.4K
<b>S/Total D&amp;D Superstretch Goals:</b>	<b>\$1372.4K</b>

**Green**

\*Carried over from FY00. Completed – Notice of Completion submitted on 5/3/01 and approved on 7/12/01.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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## PROJECT STATUS (COST/SCHEDULE): D&D

- Schedule:

Decommissioning Projects	BCWS	BCWP	Variance
	\$K	\$K	\$K
ER06 ISS and Other D&D Projects	11,114	11,012	(102)
ER06 233-S	5,670	5,476	(194)
<b>TOTAL D&amp;D</b>	<b>16,784</b>	<b>16,488</b>	<b>(296)</b>

Green

### PBS-ER06 – Decontamination and Decommissioning

Schedule Variance = **(\$296K); (1.8%)** [Last Month: (\$324K); (2.1%)]

**Cause:** Start of ISS demolition activities at D Reactor was delayed due to equipment and resource availability.

**Resolution:** Appropriate equipment and resources have been assigned to complete above grade demolition by the end of September.

**Cause:** F Reactor FSB demolition and loadout is behind schedule due to the inability of equipment to dig out transfer pit, and the Brokk excavator being inoperable 40% of the time for repair.

**Resolution:** Recovery is dependent on implementing a revised schedule and quantity of fuel elements encountered; overtime will be worked.

**Cause:** Process Hood vessel removal at the 233-S facility is behind schedule due to difficulty in removing neutron monitors, stringent procedures slowed TRU waste shipments, NDA labor support was not available, and late start of concrete drilling for ventilation modification. However, because of acceleration to meet stretch PI objectives, the project is approximately twelve months ahead of original three-year baseline schedule.

**Resolution:** Schedule continues to improve; selective overtime will continue to be used to recover the schedule; continue to look for better ways to accomplish work safely.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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## PROJECT STATUS (COST/SCHEDULE) continued: D&D

• Cost:

Decommissioning Projects	FY01 EAC	BCWP	ACWP	Variance
		\$K	\$K	\$K
ER06 ISS and Other D&D Projects	13,833	11,012	10,851	161
ER06 233-S	7,158	5,476	6,075	(599)
<b>TOTAL D&amp;D</b>	<b>20,991</b>	<b>16,488</b>	<b>16,926</b>	<b>(438)</b>

Green

**PBS-ER06 – Decontamination and Decommissioning**

Cost Variance = **(\$438K); (2.7%)** [Last Month: (\$332K); (2.2%)]

**Cause:** Overrun at the F Reactor FSB due to resolving work package issues while work was on hold; procedural changes resulting in loss in efficiency in removing material from the FSB; and equipment breakdown, weather conditions, and cleaning out hotspots; overrun from a charging practice adjustment; offsetting cost underruns at D, DR, and H ISS projects due to less effort required than planned.

**Resolution:** Additional costs have been trended and are reflected in the EAC.

**Cause:** Overrun at the 233-S Facility due to PFP calculation error and additional cost resulting from using Canberra for NDA; purchase of Standard Waste Boxes (SWB) and additional tools needed for process hood pipe and vessel removal.

**Resolution:** Overrun has been partially reflected in the EAC.

## REGULATORY ISSUES: D&D

**D and H Reactor Impacts of Tri-Party Agreement 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:** This milestone will be included in the overall *Tri-Party Agreement* Milestone M-13, 15, 16, 20, and 93 negotiation process to begin in early October.

## EXTERNAL ISSUES (i.e. HAB, Congress, etc.): D&D

None identified at this time.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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## DOE-RL & HQ ISSUES/REQUESTS (not covered elsewhere): D&D

**233-S Process Hood:** 232 items of nondestructive assay (NDA) information previously provided by Fluor Hanford (FH) Plutonium Finishing Plant (PFP) in final data reports are invalid because of calibration errors that occurred in May 1999.

Yellow

**Status:** BHI has received reanalyzed NDA data that confirms that no authorization basis limits were exceeded. BHI has also developed a plan and received approval to exhume and reanalyze the worst case container at ERDF.

## INTEGRATION ACTIVITIES: D&D

**Other Hanford Site Work:** The estimate for the 331-B building demolition workscope in the 300 Area was completed and transmitted to Pacific Northwest National Laboratory (PNNL). This demolition work is tentatively scheduled to be performed in FY02.

Green

Beryllium-assigned worker training will be conducted in September for workers involved with the removal of the high-efficiency particulate air (HEPA) filter and ductwork on the 303-K building roof (Fluor Hanford [FH] building located in the 300 Area).

# Program Management and Support (PM&S)

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**SECTION B – RESTORING THE RIVER CORRIDOR**

**Data as of month-end August (unless otherwise noted).  
Key data as of September 27, 2001.**

**Program Management & Support (PM&S)**

**ACCOMPLISHMENTS: PM&S**

**COMPLIANCE, QUALITY, SAFETY, AND HEALTH:**

**Safety and Health:** The ERC RadCon organization received acceptance for all 11 abstracts submitted for the Health Physics Society mid-year meeting to be held in February 2002.

In order to monitor heat stress conditions of ERC personnel, Safety and Health personnel arranged for on-line infrared tympanic membrane thermometer capability for ERC work sites. The thermometer detects the infrared heat given off by the tympanic membrane (eardrum) and displays it as an equivalent oral temperature. This provides an accurate indicator of internal body (core) temperature and is used to monitor an individual's stress from heat.

**PROGRAM AND PROJECT SUPPORT:**

**Procurement and Property Management:** The ERC continues to meet or exceed socio-economic contracting goals for FY01. The FY01 socio-economic contractual goals versus actual percentages (through August) are as follows:

Total	Small Business	Goal: 50.0%	Actual: 51.8%
	Small Disadvantaged Business	Goal: 6.5%	Actual: 19.0%
	Women-Owned Business	Goal: 3.5%	Actual: 5.8%

**External Affairs:** Support was provided to RL, regulators, and the Hanford Advisory Board (HAB) to incorporate final comments into the *Tri-Party Agreement Community Relations Plan*. The plan was distributed to the information repositories on August 27 for public review and comment.

Hanford Site tours were coordinated for congressional staff and the DOE Assistant Secretary for Environmental Management (EM). An ER Project briefing was also held for the visitors.

**PLANNING AND CONTROLS:**

Individual ER Project Detailed Work Plan (DWP) management reviews were held on August 28-29. Participants included ERC, RL, HQ personnel, regulators, and stakeholders.

FY01 third quarter performance and milestone data, that had been downloaded into the HQ Integrated Planning, Accountability, and Budgeting System (IPABS) reporting system, were analyzed for accuracy. Support was also provided to RL for the IPABS August update, and for the HQ EM liability audit.

Preliminary revisions were initiated for the BHI baseline change control procedure. Revisions are required due to the draft RL change control process currently being implemented.

**SAFETY/ISMS/CONDUCT OF OPERATIONS: PM&S**

See Executive Summary.

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<b>BREAKTHROUGHS/OPPORTUNITIES FOR IMPROVMENT:</b> PM&S
None identified at this time.
<b>LONG-TERM (6 MONTHS PLUS) IMPORTANT ITEMS:</b> PM&S
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 80%;"> <p><b>Six Sigma:</b></p> <ul style="list-style-type: none"> <li>Implementation of Six Sigma program across the ERC.</li> <li>Phase II process improvements continue for the <u>ERC Waste Management PIP</u> (PIP#1) which was completed in April.</li> <li>Implementation of the control plan for the <u>ERC Procedures Development PIP</u> (PIP #2), which was completed in June, is nearing completion.</li> <li>The <u>Radiation Control Instrumentation PIP</u> (PIP#3) is in the "Control Phase" and is about 95% complete.</li> <li>The <u>Contaminated Concrete Demolition PIP</u> (PIP #4) is in the "Measure Phase" and is about 10% complete.</li> <li>BHI leads the effort on the <u>NV/ RL Waste Management PIP</u>. The "Nevada Test Site/Hanford Site Virtual Waste Acceptance Process" report is in the final review cycle. This deliverable is on schedule for completion by the end of September.</li> </ul> </div> <div style="width: 15%; text-align: center; border: 3px double black; padding: 5px;"> <p>Green</p> </div> </div>
<b>MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS):</b> PM&S
<ul style="list-style-type: none"> <li><b>DOE Secretarial:</b> None identified at this time.</li> </ul>
<ul style="list-style-type: none"> <li><b>DOE EM Performance Agreement:</b> None identified at this time.</li> </ul>
<ul style="list-style-type: none"> <li><b>Tri-Party Agreement Milestones:</b> None identified at this time.</li> </ul>
<ul style="list-style-type: none"> <li><b>DNFSB Commitment:</b> None identified at this time.</li> </ul>

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**PERFORMANCE OBJECTIVES: PM&S**

**Comprehensive Measures**

Comprehensive Measure	Task	Status
<b>Safety</b>	<ul style="list-style-type: none"> <li>The Contractor shall protect worker safety and health, public safety and health, and the environment.</li> </ul>	Reference the Safety Section of the Cross-Cutting package.
<b>Operational Excellence</b>	<ul style="list-style-type: none"> <li>Migrate systems to facilitate PBS restructuring in FY02</li> <li>Rebaseline completed per Baseline Updating Guidance (BUG)</li> <li>Integrate technology into Projects</li> <li>Achieve pollution prevention/waste minimization</li> </ul>	Rebaseline activities completed on 1/10/01. All other activities on schedule for completion as planned, however DWP preparation activities are being compressed due to delayed receipt of formal planning guidance.
<b>Effective Leadership</b>	<ul style="list-style-type: none"> <li>Management Effectiveness</li> <li>Customer Satisfaction</li> <li>Effective Financial Management</li> <li>Cost/Price Analysis</li> </ul>	There were no formal significant non-compliance and/or deficiencies identified by DOE or other regulatory entities this month. Two issues were self-disclosed by BHI.

**Green**

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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## PERFORMANCE MEASURES/METRICS: PM&S

ERC identified five technologies to be deployed during FY01. Through August, nine technologies have been deployed.

Technology Deployment	PBS	(F)/(A) Date
Remote Retrieval System (Brokk <sup>TM</sup> 330N with appropriate attachments)	RL-ER06	6/01 (A)
3D Visual and Gamma Imaging System (Gamma Cam)	RL-ER06	2/01 (A)
In Situ Object Counting System (ISOCS)	RL-ER06	2/01 (A)
Polyshield SS-100 Fixative	RL-ER01	12/00 (A)
Surveillance and Measurement Model 935	RL-ER01	5/01 (A)
Ultrasonic Liquid Level Detection	RL-ER06	2/01 (A)
Guzzler Vacuum Truck	RL-ER03	2/01 (A)
Laser-Assisted Ranging and Data System	RL-ER06	3/01 (A)
Compact Remote Console	RL-ER06	6/01 (A)

Green

## STRETCH AND SUPERSTRETCH GOALS: PM&S

None identified at this time.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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## PROJECT STATUS (COST/SCHEDULE): PM&S

• **Schedule:**

Program Management & Support	BCWS	BCWP	Variance
	\$K	\$K	\$K
ER10 ERC Program Management & Support	27,542	26,885	(657)
ER10 RL Program Management & Support	5,189	3,873	(1,316)
<b>TOTAL PM&amp;S</b>	<b>32,731</b>	<b>30,758</b>	<b>(1,973)</b>

Green

**PBS-ER10 – Program Management and Support**

Schedule Variance = **(\$1973K); (6.0%)** [Last Month: (\$1505K); (5.1%)]

**Cause:** ERC performance fee scheduled earlier than booked.

**Resolution:** Temporary delay resulting from accounting practice.

**Cause:** Late billing to RL on site-wide assessments.

**Resolution:** RL is discussing billing/timing with other site contractors/government agencies.

• **Cost:**

Program Management & Support	FY01 EAC	BCWP	ACWP	Variance
		\$K	\$K	\$K
ER10 ERC Program Management & Support	30,063	26,885	25,708	1,177
ER10 RL Program Management & Support	5,611	3,873	3,873	0
<b>TOTAL PM&amp;S</b>	<b>35,674</b>	<b>30,758</b>	<b>29,581</b>	<b>1,177</b>

Green

**PBS-ER10 – Program Management and Support**

Cost Variance = **\$1177K; 3.8%** [Last Month: \$1085K; 3.8%]

**Cause:** Records and Document Control, Procurement, Design Engineering, and Sample and Data Management support needs were less than anticipated.

**Resolution:** Underrun has been trended and is reflected in the EAC.

## REGULATORY ISSUES: PM&S

None identified at this time.

## EXTERNAL ISSUES (i.e. HAB, Congress, etc.): PM&S

None identified at this time.

## DOE-RL & HQ ISSUES/REQUESTS (not covered elsewhere): PM&S

None identified at this time.

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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## INTEGRATION ACTIVITIES: PM&S

**Safety and Health:** A presentation was made to RL on the systematic approach used to develop the Bechtel Hanford, Inc. (BHI) Integrated Environment, Safety, and Health Management System (ISMS) metrics. RL requested that BHI provide a similar presentation to other Hanford Site contractors.

Green

**Technology Applications:** ERC Technology Applications personnel drafted the FY02 technology needs package. The package consisted of science needs statements, technology needs statements, and technology insertion points. A meeting was held with RL and other Hanford Site contractor representatives to plan a Technology Needs Workshop.

# Environmental Management Performance Report

October 2001

## Section C - Central Plateau Information

- Groundwater/Vadose Zone Integration Project
- Surveillance/Maintenance & Transition Projects



Air Rotary Rig at 241-U Tank Farm



202-S REDOX Silo Roof Removal



Crib Drilling at 200-TW-2

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

Data as of month-end August (unless otherwise noted).  
Key data as of September 27.



**Department of Energy**  
Richland Operations Office



**Bechtel Hanford, Inc.**  
Environmental Restoration Contractor

E0110024.2

**Groundwater/Vadose Zone  
Integration Project  
(GW/VZ)**

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**SECTION C – TRANSITIONING THE CENTRAL PLATEAU**

**Data as of month-end August (unless otherwise noted).  
Key data as of September 27, 2001.**

**Groundwater/Vadose Zone Integration Project(GW/VZ):**

**ACCOMPLISHMENTS: GW/VZ**

**GW/VZ INTEGRATION PROJECT:**

**Data Configuration:** The Integration Project's first module of the virtual library was deployed on August 24. The virtual library is a Web-based application that provides data important for Hanford Site characterization and contaminant transport modeling. The virtual library was designed to support specific work processes at Hanford, such as generation of remedial investigation reports. It also provides simple analytical tools, such as trend charts and statistical reports. In addition to enhancing accessibility of database information, it will result in significant savings to Hanford technical staff preparing technical documents.

**System Assessment Capability (SAC):** Calculations were completed for the initial risk assessment using the SAC Rev. 0. These calculations provide the results to be interpreted for the initial assessment due the end of September.

**GROUNDWATER MANAGEMENT:**

**Resource Conservation and Recovery Act of 1976 (RCRA) Well Installation:** During August, drilling was completed for four calendar year 2001 (CY01) RCRA wells. Permanent sampling pumps were installed in three wells adjacent to the BX-BY waste management area (WMA). These four wells were installed in support of the Office of River Protection (ORP).

**Remediation:** The 90% design package was issued for *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* five-year review system upgrades at the 100-HR-3 and 100-KR-4 groundwater operable units. The 100% design package was issued for the 200-UP-1 groundwater operable unit well tie-in.

**In Situ Redox Manipulation (ISRM) Project:** Through August, 19 of 28 fiscal year 2001 (FY01) well injections were completed for ISRM barrier emplacements.

**Well Decommissioning:** During August, decommissioning of all 90 wells planned for FY01 was completed. Completion of some of these wells also marked the completion of cleanup activities of the first section of the Columbia River corridor, which consists of a 14-square-mile section known as Phase 1A.

**Tritium Investigation:** Borehole drilling was initiated on August 16 in support of the 618-11 Burial Ground tritium investigation.

**Long-Term Groundwater Monitoring:** Detailed hydrologic characterization tests were completed at a well located east of the WMA TX-TY tank farm area. Test results will provide information pertaining to groundwater and contaminant transport in this area.

**Summary of Five Pump and Treat Systems:** All five groundwater pump and treat systems operated above the planned 90% availability levels in August. Since system inception, these systems have processed over 5 billion liters of groundwater, removing approximately 5,722 kilograms of carbon tetrachloride, 257 kilograms of chromium, and 1.07 curies of strontium. Approximately 1 billion liters of groundwater have been processed in FY01, removing approximately 1,141 kilograms of carbon tetrachloride, 64 kilograms of chromium, and 0.18 curies of strontium.

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<b>ACCOMPLISHMENTS continued:</b> GW/VZ
<p><b>200-ZP-2 Vapor Extraction System:</b> Approximately 148.5 million liters of vapor were processed through the 200-ZP-2 soil vapor extraction system during August, removing 123.7 kilograms of carbon tetrachloride. Approximately 2 billion liters have been processed in FY01, with 512 kilograms of carbon tetrachloride removed.</p> <p><b>200 AREA ASSESSMENT:</b></p> <p><b>200-TW-1/200-TW-2 Scavenged Waste/Tank Farm Operable Units:</b> Drilling, sampling, geophysical logging, and decommissioning of the 216-B-38 borehole operations were completed during August.</p>
<b>SAFETY/ISMS/CONDUCT OF OPERATIONS:</b> GW/VZ
See Executive Summary.
<b>BREAKTHROUGHS/OPPORTUNITIES FOR IMPROVEMENT:</b> GW/VZ
None identified at this time.
<b>LONG-TERM (6 MONTHS PLUS) IMPORTANT ITEMS:</b> GW/VZ
None identified at this time.
<b>MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS):</b> GW/VZ
<ul style="list-style-type: none"> <li>• <b>DOE Secretarial:</b> None identified at this time.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>DOE EM Performance Agreement:</b> None identified at this time.</li> </ul>

# ENVIRONMENTAL MANAGEMENT PERFORMANCE REPORT ENVIRONMENTAL RESTORATION

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## MAJOR COMMITMENTS (FISCAL YEAR PLUS 6 MONTHS) continued: GW/VZ

- Tri-Party Agreement Milestones:**

Milestone	Description	Due Date	(F)/(A) Date
M-13-00K	Submit One 200 NPL RI/FS (RFI/CMS) Work Plan	12/31/00	12/21/00 (A)
M-13-25	Submit Uranium Rich Process Waste Group (200-PW-2) Work Plan	12/31/00	12/21/00 (A)
M-24-46	Install Three Additional Wells at SST WMA S-SX	12/31/00	12/27/00 (A)
M-24-47	Install Four Additional Wells at SST WMA T	12/31/00	12/27/00 (A)
M-24-48	Install Three Additional Wells at SST WMA TX-TY	12/31/00	12/27/00 (A)
M-24-00L	Install RCRA Groundwater Monitoring Wells at the Rate of up to 50 in Calendar Year 2000 if Required	12/31/00	12/27/00 (A)
M-16-27A	Complete 100-HR-3 Phase I, ISRM Barrier Emplacement	12/31/00	11/01/00 (A)
M-24-49	Install Three Additional Wells at SST WMA S-SX	4/30/01	3/30/01 (A)
M-24-50	Install Two Additional Well at SST WMA TX-TY	4/30/01	4/02/01 (A)
M-15-41A	Complete 200-TW-1 OU Field Work through Drilling and Sample Collection	10/31/01	07/20/01 (A)
M-15-42A	Complete 200-TW-2 OU Field Work through Drilling and Sample Collection	10/31/01	09/28/01 (F)
M-13-26	Submit Plutonium/Organic-Rich (200-PW-1) Work Plan	12/31/01	12/20/01 (F)
M-13-00L	Submit Three 200 NPL RI/FS (RFC/CMS) Work Plans	12/31/01	12/31/01 (F)*
M-16-27B	Complete 100-HR-3 Phase II, ISRM Barrier Emplacement (Planning, Well Installation, and Barrier Emplacement)	12/31/01	12/31/01 (F)
M-24-51	Install Three Additional Wells at SST WMA B-BX-BY	12/31/01	9/19/01 (A)
M-24-52	Install Three Additional Wells at SST WMA U	12/31/01	9/30/01 (F)
M-24-53	Install Two Additional Wells at SST WMA TX-TY	12/31/01	11/02/01 (F)
M-24-54	Install One Additional Well at SST WMA T	12/31/01	10/11/01 (F)
M-24-55	Install Two Additional Wells at SST WMA S-SX	12/31/01	11/15/01 (F)
M-24-00M	Install RCRA Groundwater Monitoring Wells at Rate of up to 50 in Calendar Year 2001 if Required	12/31/01	11/15/01 (F)

Green

Yellow

Green

\*RL plans to submit a path forward strategy in early October to the regulators addressing negotiation process for *Tri-Party Agreement* Milestones M-13, 15, 16, 20, and 93 for the 100, 200, and 300 Areas. Target date for reaching tentative agreement is December 31, 2001.

- DNFSB Commitment:**

None identified at this time.

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**PERFORMANCE OBJECTIVES: GW/VZ**

PI	Task	Status
<b>GW – ISRM Barrier</b>	<ul style="list-style-type: none"> <li>Drill 24 wells and inject sodium dithionite by 9/30/01</li> </ul> <p>CV &lt;5.0%; SV &lt;7.5% for BHI portion of ER-08</p>	<p>32 wells were installed in FY01 (28 barrier emplacement wells and 4 compliance monitoring wells). Sodium dithionite has been injected into 19 wells of 28 barrier emplacement wells. (In mid-September 25 wells had been injected. The PI is for 24 wells and has been achieved.) Our objective is to complete three more well injections by the end of FY01.</p>
<b>GW – 618-11 Tritium Plume</b>	<ul style="list-style-type: none"> <li>Drill wells to establish 20,000 pCi/L contour, collect Groundwater samples by 9/30/01 (<b>Stretch</b>)</li> </ul> <p>CV &lt;5.0%; SV &lt;7.5% for BHI portion of ER-08</p>	<p>Four wells have been identified with a fifth in question. On schedule to complete by 9/30/01.</p> <p>(*Detail in Section 6C)</p>

**Green**

**PERFORMANCE MEASURES/METRICS: GW/VZ**

None identified at this time.

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**STRETCH AND SUPERSTRETCH GOALS: GW/VZ**

FY01 GW/VZ "Stretch" Goals	Approved BCPs (K)
Tritium Plume at 618-11 Burial Ground – Collect GW Samples by 9/30/01 (BCP 21090 approved 1/01)	\$595.4K
<b>S/Total GW – Vadose Zone Stretch Goals:</b>	<b>\$595.4K</b>

Green

FY01 GW/VZ "Superstretch" Goals	Approved BCPs (K)
*Complete Remediation of 60 Square Miles of Hanford Site: (1) River Corridor Well Decommissioning (90 wells)	\$1581.3K
<b>S/Total GW – Vadose Zone Superstretch Goals:</b>	<b>\$1581.3K</b>

Green

\*Carried over from FY00. Work complete; Notice of Completion submitted on 9/5/01.

**PROJECT STATUS (COST/SCHEDULE): GW/VZ**

- **Schedule:**

GW/VZ Integration Project	BCWS	BCWP	Variance
	\$K	\$K	\$K
ER02 200 Area Remedial Actions	3,837	3,470	(367)
ER08 Groundwater Management	28,039	25,630	(2,409)
VZ01 Groundwater/Vadose Zone	10,362	9,257	(1,105)
<b>TOTAL Groundwater</b>	<b>42,238</b>	<b>38,357</b>	<b>(3,881)</b>

Green

**PBS-ER02 – 200 Area Remedial Action (Assessment)**

Schedule Variance = **(\$367K); (9.6%)** [Last Month: (\$661K); (20.6%)]

**Cause:** Delay in TW-2 start of drive casing installation and borehole drilling; difficulties in coordinating the many cross-project field activities slowing progress; offsetting early completion of TW-1 borehole drilling.

**Resolution:** Subcontract has been awarded and drilling activities began June 22; schedule supports completion of drilling activities by the end of September. Field closeout and demobilization will carry over to FY02.

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**PROJECT STATUS (COST/SCHEDULE) continued:** GW/VZ

**PBS-ER08 – Groundwater Management**

Schedule Variance = **(\$2409K); (8.6%)** [Last Month: (\$2161K); (8.6%)]

**Cause:** RCRA well drilling delayed due to radiation contaminated soil discovery with waste shipments being placed on hold to pursue regulator recommended approach; and relocation of three wells causing use of an additional drill rig to expedite work.

**Resolution:** Aggressive schedule in place; some schedule recovery identified; three drill rigs being used rather than two; waste disposal will carry over to FY02.

**Cause:** ISRM injections are behind schedule due to very low well extraction rates along the western portion of the Phase II barrier.

**Resolution:** Low flow well pumps and stand alone discharge equipment have been procured to expedite injections and extractions. Injections expected to be completed in FY01; four extractions identified for carryover.

**Cause:** 200-ZP-1 PFP drilling activities are behind schedule due to 618-11 Burial Ground drilling taking priority over limited resources; Granular Activated Carbon (GAC) regeneration shipment delayed due to increased analysis and designation priorities.

**Resolution:** PFP well drilling activities and GAC shipment have been identified for carryover.

**Cause:** Tritium investigation is behind schedule due to complexities in the Sampling and Analysis Plan (SAP) that required additional effort to resolve.

**Resolution:** The SAP was signed on June 22 and drilling began in August; a work-around schedule has been implemented to meet the September 30 PI milestone.

**Cause:** Groundwater Monitoring Network Design awaiting regulator decision on Low Level Burial Grounds (LLBG) and RCRA boundary; revision of A-29 Ditch Plan on hold pending Ecology letter and subsequent B Pond proposal review. Hydrologic testing had been delayed pending regulator approval of the test plan.

**Resolution:** Agreement was reached by RL and FH on the WMA boundaries for the LLBG; Ecology resolution is ongoing; scope will be carried over to FY02; hydrologic testing fieldwork continues and schedule is being recovered, but completion of the final report will carryover to FY02.

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**PROJECT STATUS (COST/SCHEDULE) continued:** GW/VZ

**PBS-VZ01 – Groundwater/Vadose Zone**

Schedule Variance = **(\$1105K); (10.7%)** [Last Month: (\$1182K); (12.2%)]

**Cause:** System Assessment Capability (SAC) shakedown runs for historical matching took longer than anticipated, delaying the start of the model runs, preparation of the assessment report, and peer review of history matching results.

**Resolution:** Several software and data problems have been identified, and are being addressed. Delay will not impact completion of work scheduled this fiscal year.

**Cause:** The Soil Inventory Science and Technology (S&T) Task study did not start as scheduled due to key PNNL staff on medical leave.

**Resolution:** A plan has been developed to recover a portion of the schedule and additional resources have been on task during August and September; partial carryover has been identified.

**Cause:** S&T experimental work on B-BX-BY tank farm samples delayed due to unanticipated low uranium concentrations and ORP stand down.

**Resolution:** A plan has been implemented to recover a portion of the schedule, but partial carryover has been identified.

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## PROJECT STATUS (COST/SCHEDULE) continued: GW/VZ

• Cost:

GW/VZ Integration Project	FY01 EAC	BCWP	ACWP	Variance
		\$K	\$K	\$K
ER02 200 Area Remedial Actions	3,852	3,470	2,727	743
ER08 Groundwater Management	30,158	25,630	24,397	1,233
VZ01 Groundwater/Vadose Zone	10,301	9,257	8,684	573
<b>TOTAL Groundwater</b>	<b>44,311</b>	<b>38,357</b>	<b>35,808</b>	<b>2,549</b>

Green

**PBS-ER02 – 200 Area Remedial Action(Assessment)**

Cost Variance = **\$743K; 21.4%** [Last Month: \$441K; 17.3%]

**Cause:** The 200-TW-2 drilling subcontract costs were less than planned; less effort was required for the drive casings at the B-38 trench.

**Resolution:** Underrun has been reflected in the EAC.

**PBS-ER08 – Groundwater Management**

Cost Variance = **\$1233K; 4.8%** [Last Month: \$822K; 3.6%]

**Cause:** Sample analysis underruns due to efficiencies in planning well trips and analyses; savings in well decommissioning subcontract costs; and other Hanford contractors' costs being less than planned.

**Resolution:** Underrun has been trended and reflected in the EAC.

**Cause:** ISRM well installation and barrier emplacement costs have been less than planned due to efficiencies in well drilling subcontract costs and chemical purchases.

**Resolution:** Underrun has been trended and reflected in the EAC.

**PBS-VZ01 – Groundwater/Vadose Zone**

Cost Variance = **\$573K; 6.2%** [Last Month: \$652K; 7.7%]

**Cause:** Characterization of Systems (COS) Phase I Features, Events, and Processes (FEP) review required fewer resources than planned; offsetting overrun in SAC historical matching from system enhancements; S&T underrun due to a credit from FY00 accrual reversal.

**Resolution:** Underrun will be trended and reflected in the EAC. Work on individual technical element history matching is complete and no additional variances are anticipated. Runtime reductions have been implemented and the project continues to seek ways to streamline the overall history matching and initial assessment runs.

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## REGULATORY ISSUES: GW/VZ

**Tri-Party Agreement M-13-00x and M-20-xx Milestones:** *Tri-Party Agreement* Milestone M-13-00L requires the submittal of three 200 National Priorities List (NPL) Remedial Investigation/Feasibility Study (RI/FS) work plans by December 31, 2001. One work plan is in process (200-PW-1). *Tri-Party Agreement* Milestones M-13-00X require submittal of 3-4 work plans per year, such that the RI/FS's for the past practices waste sites will be completed by December 31, 2005. *Tri-Party Agreement* Milestones M-20-XX require the completion of RCRA closure plans by February 28, 2004.

Yellow

**Status:** RL plans to submit a path forward strategy in early October to the regulators addressing negotiation process for *Tri-Party Agreement* Milestones M-13, 15, 16, 20, and 93 for the 100, 200, and 300 Areas. Target date for reaching tentative agreement is December 31, 2001.

## 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

None identified at this time.

# **Surveillance/Maintenance and Transition Projects (SM&T)**

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**SECTION C – TRANSITIONING THE CENTRAL PLATEAU**

Data as of month-end August (unless otherwise noted).  
Key data as of September 27, 2001.

**Surveillance/Maintenance & Transition Projects (SM&T):**

**ACCOMPLISHMENTS: SM&T**

**Surveillance and Maintenance (S&M):** S&M activities that were performed in August to ensure inactive facility integrity and safety included the following:

- Completed roof repairs at the REDOX facility. The REDOX silo roofs were removed and replaced with a foamed roof system.
- Completed internal review of the REDOX and U Plant safety analysis requirements.
- Completed passive vent closures at U Plant and 224-U facility.
- Completed and issued the annual 224-B facility safety analysis report (SAR) update.
- Completed the unresolved safety question (USQ) evaluation and report for disposition of suspect transuranic (TRU) waste at the 212-N facility.
- Completed all 200 Area asbestos abatement activities planned for FY01. Final waste shipments will occur in FY02.
- Completed annual herbicide application to vegetation at N-Springs.
- Completed analysis and water disposition for 300 Area fire water samples.
- Supported nine B Reactor tours that included HQ/regulator management and congressional staff.

**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.
- **Tri-Party Agreement Milestones:**  
None identified at this time.
- **DNFSB Commitment:**  
None identified at this time.

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<b>PERFORMANCE OBJECTIVES: SM&amp;T</b>				
None identified at this time.				
<b>PERFORMANCE MEASURES/METRICS: SM&amp;T</b>				
None planned in FY01.				
<b>STRETCH AND SUPERSTRETCH GOALS: SM&amp;T</b>				
None identified at this time.				
<b>PROJECT STATUS (COST/SCHEDULE): SM&amp;T</b>				
<ul style="list-style-type: none"> <li>• <b>Schedule:</b></li> </ul>				
	<b>BCWS</b>	<b>BCWP</b>	<b>Variance</b>	<div style="border: 3px double black; padding: 5px; display: inline-block;">Green</div>
<b>Surveillance/Maintenance &amp; Transition Project</b>	<b>\$K</b>	<b>\$K</b>	<b>\$K</b>	
ER05 Surveillance & Maintenance	12,754	12,581	(173)	
ER07 Long-Term Surveillance & Maintenance	47	44	(3)	
<b>TOTAL SM&amp;T</b>	<b>12,801</b>	<b>12,625</b>	<b>(176)</b>	
<p><b>PBS-ER05 – Surveillance and Maintenance</b>            Schedule Variance = <b>(\$173K); (1.4%)</b> [Last Month: (\$192K); (1.6%)]</p> <p><b>Cause:</b> RCRA interim stabilization delayed due to resources being utilized to install a road in support of Bechtel National, Inc. (BNI) core drilling efforts in the 200 Area.</p> <p><b>Resolution:</b> Full schedule recovery is expected.</p>				
<p><b>PBS-ER07 – Long-Term Surveillance and Maintenance (BCWS \$59K for FY01)</b>            Schedule Variance = N/A</p>				

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## PROJECT STATUS (COST/SCHEDULE) continued: SM&T

• Cost:

Surveillance/Maintenance & Transition Project	FY01 EAC	BCWPS	ACWP	Variance
		\$K	\$K	\$K
ER05 Surveillance & Maintenance	12,719	12,581	11,557	1,024
ER07 Long-Term Surveillance & Maintenance	35	44	22	22
<b>TOTAL SM&amp;T</b>	<b>12,754</b>	<b>12,625</b>	<b>11,579</b>	<b>1,046</b>

Green

**PBS-ER05 – Surveillance and Maintenance**

Cost Variance = **\$1024K; 8.1%** [Last Month: \$946K; 8.2%]

**Cause:** Underruns in 200 Area S&M work on passive vent sealing, waste disposition, roof inspections, and herbicide application subcontract costs; underruns are offset by hexone tank sampling cost overruns from additional engineering, additional job hazard analysis, and higher mobilization costs.

**Resolution:** Underrun/overrun have been trended and are reflected in the EAC.

**PBS-ER07 – Long-Term Surveillance and Maintenance (BCWS \$59K for FY01)**

Cost Variance = N/A

### REGULATORY ISSUES: SM&T

None identified at this time.

### EXTERNAL ISSUES (i.e. HAB, Congress, etc.): SM&T

None identified at this time.

### DOE-RL & HQ ISSUES/REQUESTS (not covered elsewhere): SM&T

None identified at this time.

### INTEGRATION ACTIVITIES: SM&T

None identified at this time.