

# Pacific Northwest National Laboratory Environmental Management Performance Report

**August 2001**

**PREPARED FOR THE U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE  
OFFICE OF ENVIRONMENTAL MANAGEMENT**

---

**Pacific Northwest National Laboratory  
Operated for the U.S. Department of Energy  
by Battelle Memorial Institute**



## Table of Contents

INTRODUCTION .....	1
EXECUTIVE SUMMARY .....	2
SAFETY OVERVIEW.....	2
COST/SCHEDULE PERFORMANCE STOPLIGHT .....	3
PROJECT PERFORMANCE SUMMARY .....	4
MISSION .....	4
ACTIVITY SUMMARY.....	4
PERFORMANCE DATA AND ANALYSIS .....	5
BASELINE PERFORMANCE OUTCOMES, OBJECTIVES, AND MEASURES...	6

This document provides the Department of Energy Richland Operations Office (DOE-RL) with a report of the Pacific Northwest National Laboratory (PNNL) performance by Battelle Memorial Institute and its subcontractors.

In Section A, the Executive Summary, text and graphics report the safety metrics status for all PNNL activities. Senior management's overall performance assessment of all Environmental Management activities conducted at PNNL is presented in a stoplight chart.

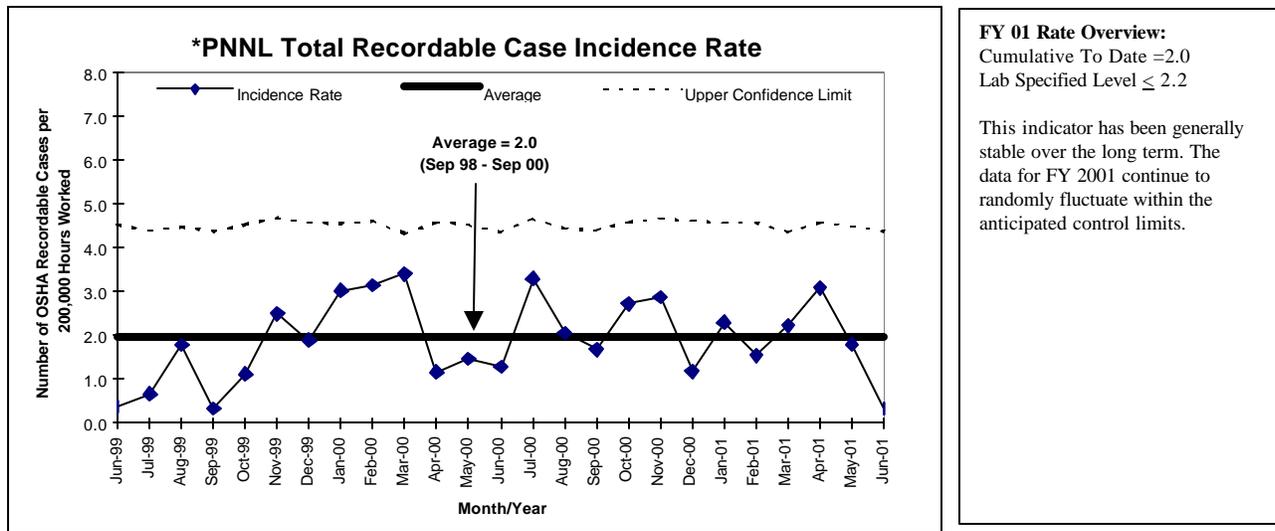
Section B, Project Performance Summary, provides a brief summary of the month's performance for the PNNL lead activity, PNNL Waste Management (PBS RL-ST01). More detailed information can be found within PNNL-7911-117a, PNNL's Project Status Report for June 2001. Summary analyses pertaining to PNNL's support to other Project Baseline Summaries (PBSs) are addressed in the contractor's report having lead responsibility for that scope.

Unless otherwise noted, information in this report is current as of June 24, 2001.

This section provides an executive-level summary of performance information and is intended to bring to management’s attention that information considered to be most noteworthy. The section begins with overview of safety, a summary of FY 2001 performance, followed by a stoplight chart on overall performance.

## Safety Overview

The focus of this section is on documenting trends in work-related injury and illness rates. These are the same performance indicators as appear in the FY 2001 Battelle Performance Evaluation and Fee Agreement, which is part of the Pacific Northwest National Laboratory Operations Contract. The monthly rates for Recordable and Lost Workday cases are presented graphically in this section and are monitored for statistically significant changes. Current efforts to improve performance are being made through the continued implementation of the Integrated Safety Management System (ISMS), and the development and implementation of the Voluntary Protection Program (VPP). PNNL received the formal acknowledgement of VPP Gold Star Flag Status on June 25, 2001, and will receive the flag and certificate formally July 25, 2001. The program status is reviewed annually. The workers commitment to safety and health excellence has been demonstrated in that PNNL has established a very strong safety and health culture, wherein both managers and workers share a common belief that all employees are responsible and accountable for safety and health in the workplace.

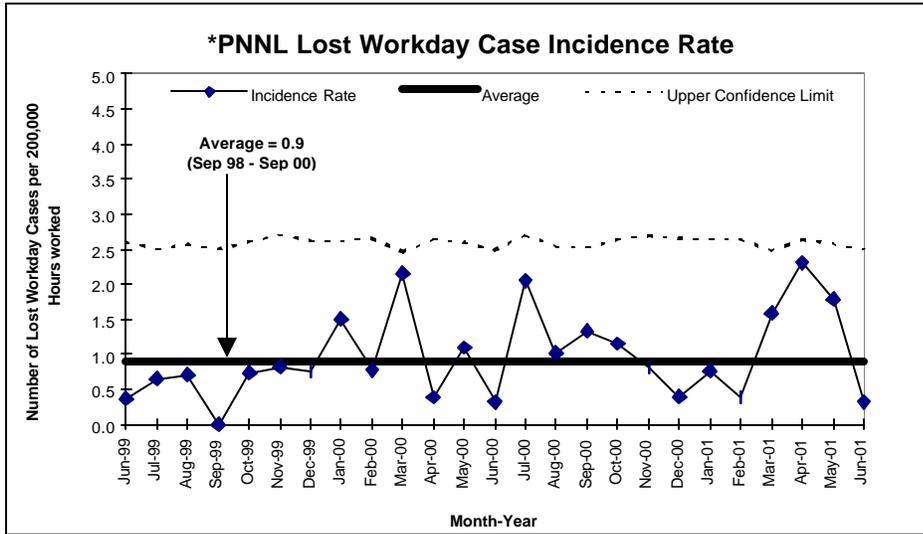


Green

\*Includes all Pacific Northwest National Laboratory Operations.

Green: Satisfactory	Yellow: Significant improvement required	Red: Unsatisfactory
---------------------	--	---------------------

**PNNL Environmental Management Performance Report – August 2001**  
**Section A - Executive Summary**



**FY 01Rate Overview:**  
 Cumulative To Date = 1.1  
 Lab Specified Level  $\leq$  1.1

This indicator has been generally stable over the long term. The data for FY 2001 continue to randomly fluctuate within the anticipated control limits.

Green

\*Includes all Pacific Northwest National Laboratory Operations.

Green: Satisfactory                      Yellow: Significant improvement required                      Red: Unsatisfactory

This section provides cost and schedule performance, any significant issues, and upcoming baseline change requests, if any, for the period covered, and quarterly status on baseline performance outcomes, objectives, and measures.. In FY 2001, Battelle Memorial Institute has lead responsibility over PBS RL-ST01, PNNL Waste Management WBS 1.7.1.

## Mission

WBS 1.7.1 provides PNNL with waste management services and compliant operations in support of science and technology development for the multiprogramming needs of the U.S. Department of Energy (DOE) Complex. These services include:

- essential surveillance and maintenance of DOE laboratory facilities assigned to PNNL for safe containment of radioactive and hazardous materials
- infrastructure required to manage wastes and effluents currently generated at the PNNL
- operational compliance services to meet regulatory requirements and operating permits including environment, safety, and health regulations
- management of legacy wastes and contamination remaining from past PNNL research operations.

## Activity Summary

The following summarizes the activities associated with PNNL Waste Management services and operations conducted during June 2001.

- Scheduled Radiochemical Processing Laboratory (RPL) radiological surveys and nuclear control inspections were performed. Eight facilities and sites were scheduled for inspection. Staff members completed inspections for 331-B, 331 Kennels, 314, 314-B, 3708, 303-C, 306-W Powder Lab, and 3745. No issues of significance were noted. Removal of sanitary and fire water lines from the shutdown facilities in the 300 Area have now been completed at 303-J, 3731-A, 3745, 3745-B, 331-A, 331-B, 331-B Kennel, 3762, and 3708.
- Scheduled routine waste management activities were performed during the period. All air and water samples required during the month of June were collected, and confirmed that all routine effluent discharges from Pacific Northwest operations reported to date are below historical release levels and compliant with existing state and federal permits.
- One-hundred-thirty-nine National Environmental Protection Act (NEPA) reviews were completed on experimental projects within the Laboratory to ensure that the associated project scope will not have potential to create environmental risks.
- Fuel batching allotments on special case waste (SCW) fragments continue to be evaluated so packaging configurations can be determined. Disposition of SCW is scheduled to be completed this fiscal year. All legacy waste associated with the High-Dose Waste Disposal Task has been loaded into the 11 shipping drums. Six of the drums shipped in June, the first-ever shipment using the specially designed drums. This shipment satisfied a portion of TPA Milestone M-92-16.

## Performance Data and Analysis

As of June 24, 2001 the cumulative costs are \$9.2M with a positive cost variance of \$0.38M and a cumulative schedule variance of negative \$1.1M. The cost and schedule variances are within the 10 % reporting threshold.

<b>Cost Performance (\$M):</b>			
	<b>BCWP</b>	<b>ACWP</b>	<b>Variance</b>
<b>PNNL Waste Management</b>	\$9.6	\$9.2	\$0.38

<b>Schedule Performance (\$M):</b>			
	<b>BCWP</b>	<b>BCWS</b>	<b>Variance</b>
<b>PNNL Waste Management</b>	\$9.6	\$10.7	(\$1.1)

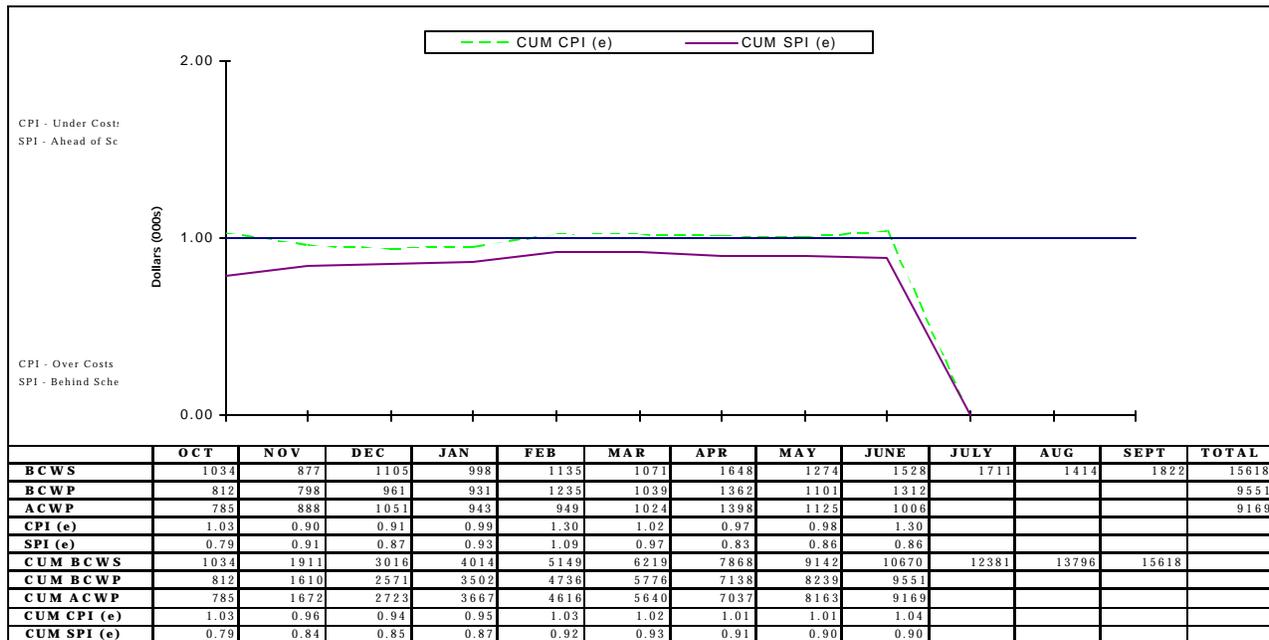
### FY 2001 Cost/Schedule Performance - All Fund Types Cumulative to Date Status - (\$000)

WBS	PBS	BCWS	BCWP	ACWP	CV	%	SV	%
1.7.1	RL-ST01	\$10,670	\$9,551	\$9,168*	\$382	4	(\$1,118)	-10
<b>Total</b>		<b>\$10,670</b>	<b>\$9,551</b>	<b>\$9,168*</b>	<b>\$382</b>	<b>4</b>	<b>(\$1,118)</b>	<b>-10</b>

\*Numbers reflect PNNL system; per DISCAS actuals, including \$ expended by Fluor for S&M of 242B/BL, are \$9284.8.

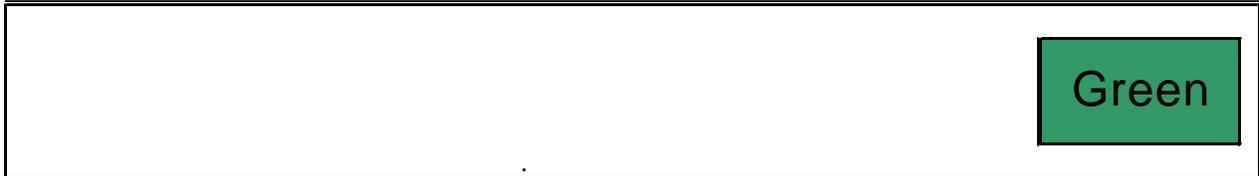
PNNL has \$1,573.0K carryover, is expecting \$14,076.0K B/A in FY 2001 for a total of \$15,649.0K. Current new B/A authorization is \$12,366.9K

**Cum CPI / Cum SPI**  
 FY 2001 Cum to Date Status



## Cost/Schedule Performance Stoplight

The following rating reflects overall cost and schedule performance for activities conducted by PNNL. The cumulative costs are \$9.2M with a positive cost variance of \$0.38M and a cumulative schedule variance of negative \$1.1M. The cost and schedule variances are within the 10 % reporting threshold. *(Narrative not required when rating is green.)*



Green: Satisfactory      Yellow: Significant improvement required      Red: Unsatisfactory

## Baseline Performance Outcomes, Objectives, and Measures

The baseline performance outcomes, objectives, and measures for PNNL Waste Management address “what are we doing.” These measures are tied directly to the baseline and are maintained within baseline documentation. The information in the following table reflects the status against the measures through the third quarter of FY 2001.

<b>RL Objective</b>	<b>RL Multi-Year Performance Measure</b>	<b>Performance Measure</b>	<b>Proposed FY 2001 EM Commitmen t: Y/N</b>	<b>TPA # CMM#</b>	<b>FY 2001</b>
<b>RL Outcome: Put DOE assets to work for the future</b>					
Operational Excellence	Operate in a manner conducive to excellence and quality	Conduct routine operational activities to comply with statutory and regulatory requirements, specifically number of non- compliances (NOVs) related to environmental permit requirements	No		<2
	Status:	There were no Notice of Violations issued to PNNL during the third quarter of FY-2001.			
Operational Excellence	Operate in a manner conducive to excellence and quality	Maintain fiscal year end cost and schedule variances within established thresholds	No		+/- 10%
	Status:	The WMOC Program cost variance for the third quarter is \$382K ( 4%) and is well within established thresholds. The schedule variance is -\$1.118K ( -10%) and is within established thresholds.			
Safety	Protect workers, the public and the environment	Initiate appropriate response to any unsafe condition identified during surveillance and self assessments of EM facilities assigned to PNNL within x days of discovery (as shown to the right)	No		1
	Status:	To date surveillances have not identified any unsafe conditions in shutdown facilities. Only minor maintenance items have been noted and they have been appropriately addressed with service requests.  No unsafe conditions have been discovered in RPL that have resulted in an appropriate response initiation greater than one day. Any unsafe condition discovered in RPL is addressed immediately.			
Safety	Protect workers, the public and the environment	Quantity of HAZ waste (MT) shipped for storage or disposal	No		81,000
	Status:	During the third quarters of FY 2001, 4,314 Kgs of non-radioactive hazardous wastes were shipped. A total of 19,167 Kgs have been shipped for offsite treatment and disposal this fiscal year. This is in line with expected generation rates for FY 2001.			

**PNNL Environmental Management Performance Report – August 2001**  
**Section B - Project Performance Summary**

Safety	Protect workers, the public and the environment	Quantity of LLMW (m <sup>3</sup> ) shipped for storage or disposal	No		22
	Status:	During the third quarter of FY 2001, .37 cubic meters of LLMW (Mixed Waste) were shipped for a total of 3.3 cubic meters for the fiscal year.			
Safety	Protect workers, the public and the environment	Quantity of LLW (m <sup>3</sup> ) shipped for storage or disposal	No		150
	Status:	During the third quarter of FY 2001, 4.15 cubic meters of LLW (Low Level Waste) were shipped for a total of 23.3 cubic meters for the fiscal year.			
Safety	Protect workers, the public and the environment	Quantity of TRU waste (m <sup>3</sup> ) shipped for storage or disposal	No		6
	Status:	During the third quarter of FY 2001, 1.68 cubic meters of TRU (Transuranic waste) was shipped for a total of 4.8 cubic meters for the fiscal year.			
Safety	Protect workers, the public and the environment	Radiochemical Processing Lab (RPL) Authorization Basis maintained current per scheduled milestone	No	RLST013104	7/31/01
	Status:	Currently no safety issues exist in the RPL. As issues are identified, they are immediately addressed and mitigated.			

**RL Outcome: Restore the river corridor for multiple uses**

Disposition Surplus Buildings	Number of buildings dispositioned	Dispose remaining PNNL legacy waste by completing x% (shown to the right) of the Legacy Waste Project lifecycle baseline	No		7%
	Status:	Progress continues on the items in the baseline including significant progress on Special Case Waste. The first shipment of SCW has been completed. All of the Uranium fuel stored at 2718-E has been removed. Several drums of LLW have also been shipped. Glovebox remediation is continuing. A recent effort was completed to identify a streamlined means of accelerating backlog workoff, and this has been very successful to date.			
Disposition Surplus Buildings	Number of buildings dispositioned	Number of excess buildings/facilities transferred or torn down	No		2
	Status:	A MOA was drafted, reviewed, and approved by RL for the transfer of 24 facilities to Fluor. Transfer of these facilities is anticipated by the end of this fiscal year.			
Disposition Surplus Buildings	Number of buildings dispositioned	Percentage completion of annually scheduled legacy waste and contamination milestones	No		>95%
	Status:	No milestones are due until later in the year.			
Disposition Surplus Buildings	Number of buildings dispositioned	Support timely completion of TPA M-92-14: Complete disposition of ~ 6 kgs of PNNL SNF legacy waste by x date (9/30/2001)	No	RLST014103 M-92-14	
	Status:	The completion of the design documents, SARP, was completed, procurement of the drums is 99% complete. Gathering the necessary information for disposition of the material is underway.			
Disposition Surplus Buildings	Number of buildings dispositioned	Support timely completion of TPA M-92-14:	No	RLST014003	6/30/01

***PNNL Environmental Management Performance Report – August 2001***  
***Section B - Project Performance Summary***

Buildings	disposed	Complete disposition of legacy HD-LLW and RH-TRU waste from PNNL Radiochemical Processing Laboratory hot cells by x date (shown at the right)	M-92-14	
	Status:	The completion of the design documents, SARP, was completed, procurement of the drums is complete, the material is packaged, and the majority of the work scope associated with the shipment authorization of the material is completed.		
Reduce risks to the Columbia River from ground water contamination	Number of soil sites addressed	Number of Waste Identification Data System Sites assigned to PNNL dispositioned (rejected, transferred or closed)	No	0
	Status:	The 200-W-16 WIDS site was exchanged for the 323 Tanks WIDS site. This exchange brings a better operational alignment that will enable more efficient management of the sites. Accelerated remediation of the 323 site was initiated and should be completed in August. Three new WIDS sites are assigned to PNNL, one is being proposed for rejection under TPA-MP-14, one will be evaluated at a later date under TPA-MP-14, and the remaining will be evaluated using a process established in the associated Record of Decision.		
Reduce risks to the Columbia River from ground water contamination	Number of soil sites addressed	Percentage of Waste Identification Data System sites characterized and associated surveillance/maintenance established	No	100%
	Status:	All waste sites have basic characterization data, and identified S&M is being accomplished.		