

# Pacific Northwest National Laboratory Environmental Management Performance Report

**May 2001**

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

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

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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.

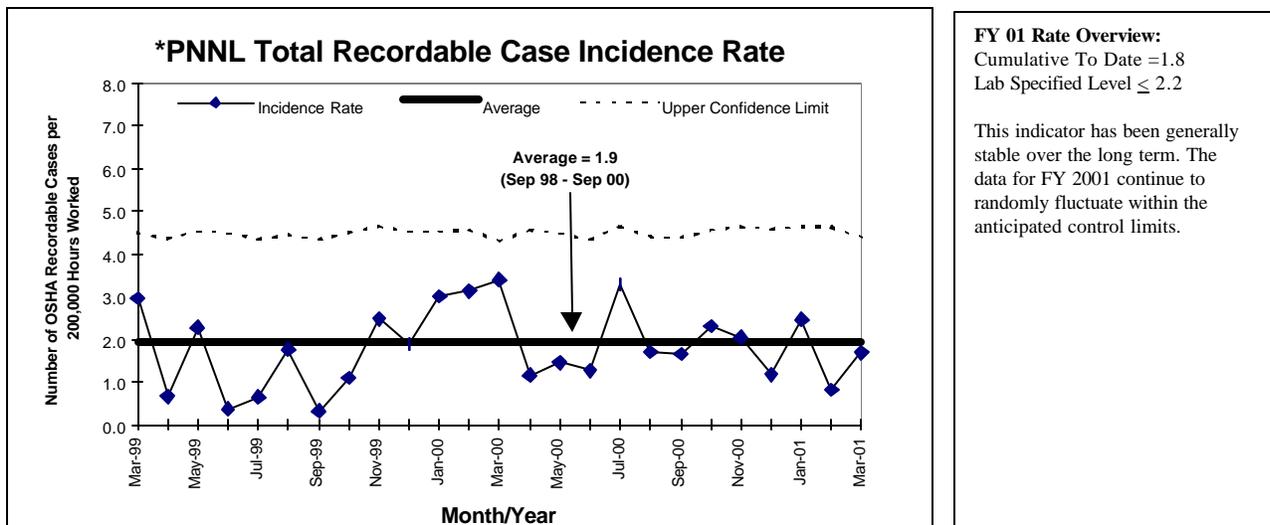
Section B, Project Performance Summary, provides a brief summary of the month's performance for the PNNL lead activity, PNNL Waste Management (PBS RL-ST01). More detailed information can be found within PNNL-7911-114a, PNNL's Project Status Report for March 2001. Summary analyses pertaining to PNNL's 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 March 25, 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.

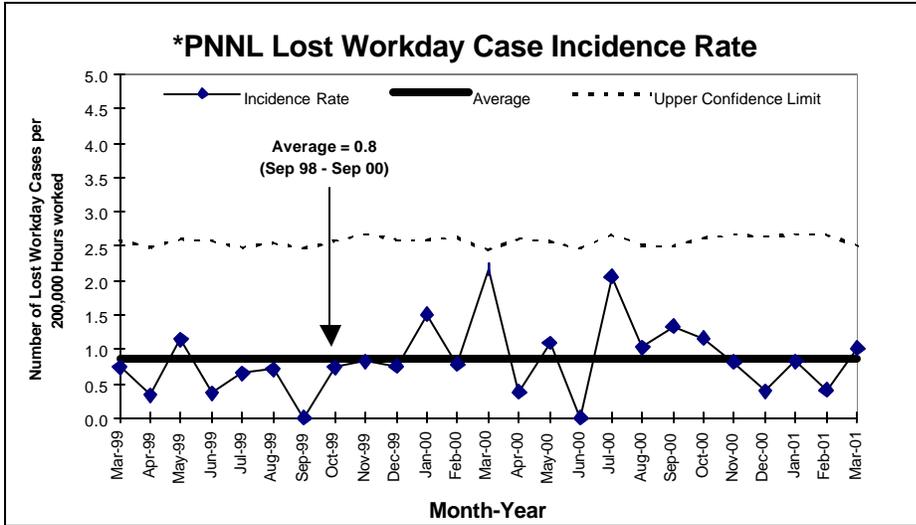
## Safety Overview

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).



Green

\*Includes all Pacific Northwest National Laboratory Operations.



**FY 01Rate Overview:**  
 Cumulative To Date = 0.8  
 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.

## Cost/Schedule Performance Stoplight

The following rating reflects overall cost and schedule performance for activities conducted by PNNL.  
 (Narrative not required when rating is green.)

Green

- 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 multiprogram needs of the U.S. Department of Energy (DOE) complex. These services include:

- essential surveillance and maintenance of DOE laboratory facilities assigned to PNNL for safe containment of radioactive and hazardous materials
- infrastructure required to manage wastes and effluents currently generated at 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 activities associated with PNNL Waste Management services and operations conducted during March 2001 are summarized below.

- Scheduled Radiochemical Processing Laboratory (RPL) radiological surveys and nuclear control inspections were performed. Inspections were completed for all excess facilities scheduled, which included 314, 314-B, 3708, 303-C, 306-W Powder Lab, and 3745. No issues of significance were noted. Cleanup of the interior floors was done at several facilities. The March shipment of the remaining 16 uranium fuel drums from 2718-E, was delayed because of a later-than-anticipated date for the receipt of steel pallets at Portsmouth, Ohio. Coordination of activities to transfer a majority of the shutdown facilities as a “block” transfer continued. A Memorandum of Agreement (MOA) transferring the shutdown facilities has been approved by all contractors and has been sent to DOE-RL. Removal of sanitary and fire water lines from the shutdown facilities in the 300 Area was initiated and will continue into May.
- Low-level waste pickups are delayed in order to finalize “new characterization worksheets” that will enable compaction. All air and water samples required during the month of March 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 eighty-six National Environmental Protection Act (NEPA) reviews were completed on experimental projects within the PNNL to ensure that the associated project scope will not have potential to create environmental risks.
- Preparations were completed and the bag-out process for the liquids and remaining solids from the catalyzed electrochemical plutonium oxide dissolution (CEPOD) equipment was initiated. The

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**Section B - Project Performance Summary**

required documentation was completed, and transfer of accountable material from the Shielded Facility Operations material balance area to the Waste Management material balance area was initiated.

## Performance Data and Analysis

As of March 25, 2001 the cumulative costs are \$5.7 million with a positive cost variance of \$0.1M and a cumulative schedule variance of negative \$0.4M. 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>	\$5.8	\$5.7	\$0.1
<b>Schedule Performance (\$M):</b>			
	<b>BCWP</b>	<b>BCWS</b>	<b>Variance</b>
<b>PNNL Waste Management</b>	\$5.8	\$6.2	(\$0.4)

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

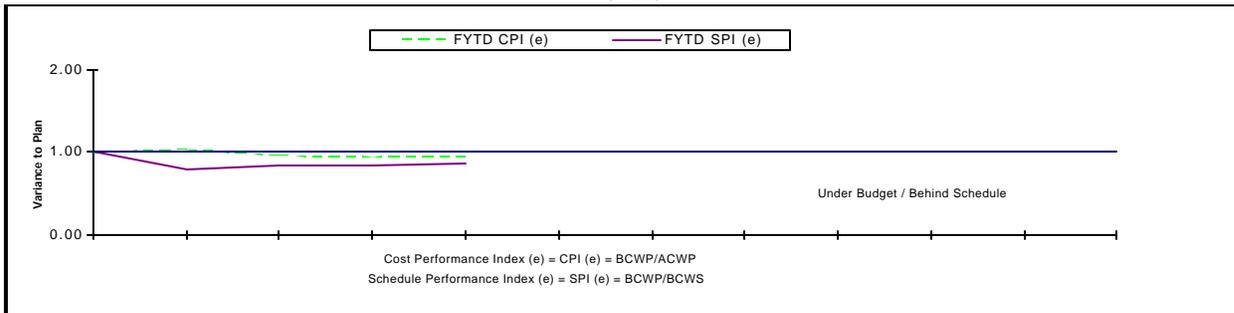
WBS	PBS	BCWS	BCWP	ACWP	CV	%	SV	%
1.7.1	RL-ST01	\$6,219	\$5,785	\$5,650*	\$135	2	(\$435)	-7
<b>Total</b>		\$6,219	\$5,785	\$5,650*	\$135	2	(\$435)	-7

Numbers reflect PNNL system; per DISCAS actuals, including \$ expended by Fluor for S&M of 242B/BL, are \$5788.3K.

PNNL has \$1,351.1K carryover, is expecting \$14,076K B/A in FY 2001 for a total of \$15,427.1K. Current new B/A authorization is \$9,774.9K.

#### Cost / Schedule Performance Indices

FY 2001 Cum to Date Status  
 (\$000s)



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	TOTAL
<b>Monthly BCWS</b>	1034	877	1105	998	1135	1071	1607	1233	1364	1718	1420	1829	15390
<b>Monthly BCWP</b>	812	798	961	931	1235	1039							5776
<b>Monthly ACWP</b>	785	888	1061	943	949	1024							5649
<b>Monthly CPI (e)</b>	1.03	0.90	0.91	0.99	1.30	1.02							
<b>Monthly SPI (e)</b>	0.79	0.91	0.87	0.93	1.09	0.97							
<b>FYTD BCWS</b>	1034	1911	3016	4014	5149	6219	7826	9059	10423	12141	13561	15390	
<b>FYTD BCWP</b>	812	1610	2571	3502	4736	5776							
<b>FYTD ACWP</b>	785	1672	2733	3676	4625	5649							
<b>FYTD CPI (e)</b>	1.03	0.96	0.94	0.95	1.02	1.02							
<b>FYTD SPI (e)</b>	0.84	0.84	0.85	0.87	0.92	0.93							

## 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 second quarter of FY 2001.

RL Objective	RL Multi-Year Performance Measure	Performance Measure	Proposed FY 2001 EM Commitment: Y/N	TPA # CMM#	FY 2001
<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 second 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 Waste Management and Operational Compliance (WMOOC) Program cost variance for the second quarter is \$135K (2%) and is well within established thresholds. The schedule variance is -\$435K (-7%) and is within established thresholds.			
Safety	Protect workers, the public and the environment	Initiate appropriate response to any unsafe condition identified during surveillance and maintenance 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 the Radiochemical Processing Laboratory (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 first and second quarters of FY 2001, 14,853 kgs of non-radioactive hazardous wastes were shipped for offsite treatment and			

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<b>RL Objective</b>	<b>RL Multi-Year Performance Measure</b>	<b>Performance Measure</b>	<b>Proposed FY 2001 EM Commitment: Y/N</b>	<b>TPA # CMM#</b>	<b>FY 2001</b>
Safety	Protect workers, the public and the environment	disposal. This is in line with expected generation rates for FY 2001. Quantity of LLMW (m <sup>3</sup> ) shipped for storage or disposal	No		22
	Status:	During the second quarter of FY 2001, 2.51 cubic meters of LLMW (low-level mixed waste) were shipped for a total of 2.926 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 second quarter of FY 2001, 12.081 cubic meters of LLW (low-level waste) were shipped for a total of 19.153 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 second quarter of FY 2001, 3.12 cubic meters of TRU (transuranic waste) were shipped for a total of 3.12 cubic meters for the fiscal year.			
Safety	Protect workers, the public and the environment	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, disposition of 1.5 metric tons of uranium, and glovebox remediation. A recent effort was completed to identify a streamlined means of accelerating backlog work off, which will be implemented starting in January 2001. Total earned value this quarter is 2%.			
Disposition Surplus Buildings	Number of buildings dispositioned	Number of excess buildings/facilities transferred or torn down	No		2
	Status:	An MOA was drafted, reviewed, and started in the final approval process for the transfer of 24 facilities to the contractors who are specialists in the next stages of facility final disposition. Transfer of these facilities is anticipated 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 9/30/2001	No	RLST014103 M-92-14	

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<b>RL Objective</b>	<b>RL Multi-Year Performance Measure</b>	<b>Performance Measure</b>	<b>Proposed FY 2001 EM Commitment: Y/N</b>	<b>TPA # CMM#</b>	<b>FY 2001</b>
Status:		The completion of the design documents, Safety Analysis Report for Packaging (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: Complete disposition of legacy HD-LLW and RH-TRU waste from PNNL Radiochemical Processing Laboratory hot cells by x date (shown at the right)	No	RLST014003 M-92-14	6/30/01
Status:		The design documents, SARP, was complete, the 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 complete.			
Reduce risks to the Columbia River from ground water contamination	Number of soil sites addressed	Number of Waste Identification Data System (WIDS) 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, which will enable more efficient management of the sites. 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 surveillance and maintenance are being accomplished.			