

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Richland**

Site Summary Level: **Richland Operations Office**

Project **RL-ST01 / PNNL WASTE MANAGEMENT**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0430**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Predecessor Project: None

PURPOSE:

The purpose of the Pacific Northwest National Laboratory (PNNL) Waste Management and Operational Compliance Program is to provide waste management services and compliant operations in support of science and technology development for the multi-program needs of the DOE Complex. Specifically, the following are major units of work performed under this PBS:

1. The DOE-EM research laboratory facilities assigned to PNNL needed for science and technology development are maintained in a minimum safe condition, and the required monitoring of these facilities is performed. This Base Operations activity covers the essential surveillance and maintenance (S&M) of facilities and essential building systems required for the safe containment of radioactive materials utilized at PNNL. The facilities are maintained in a manner that maximizes their availability to support science and technology development projects without interruption.
2. The waste management infrastructure required to manage the packaging and disposal of DOE's solid wastes that are currently generated at PNNL is included. Also included is support necessary to manage DOE's liquid and air effluents at PNNL to meet compliance and effluent discharge system operating requirements, and control risks from unregulated effluents.
3. Operational compliance services for PNNL are provided to meet regulatory requirements and operating permits associated with DOE's site-wide waste management program including environment, safety and health regulations. These infrastructure capabilities are funded by EM to ensure that PNNL is responsive to waste management regulations and to ensure the support of PNNL for the Hanford cleanup effort. This collaborative effort between contractors, in accordance with EM standards, ensures economies of scale are realized on site-wide issues and eliminates redundant and potentially conflicting approaches by various site contractors.
4. All legacy waste and contamination resulting from projects conducted within DOE facilities and ground contamination sites currently assigned to PNNL are to be identified, characterized, and ultimately remedied.

SCOPE:

The PNNL Waste Management Project scope includes the following:

FACILITY SURVEILLANCE & MAINTENANCE BASE OPERATIONS - Surveillance, maintenance, and monitoring of DOE-EM Labs assigned to PNNL are required to assure minimum safe conditions for carrying out science and technology development operations. The following S&M tasks are included within Base Operations to keep facilities in a "ready to serve" mode:

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- 325 Building (Category II) Surveillance and Maintenance and its essential building systems are required for the safe containment of radioactive materials. This activity also includes creating highest priority operational (one-line) drawings of essential 325 Building safety systems showing locations, flows, and operations of the essential utilities and service systems. These drawings are critical to conducting key surveillance and maintenance operations in the building and are required to ensure the safety of onsite workers and to ensure that critical safety systems are properly configured and marked.

- Miscellaneous 300 Area PNNL Lab Surveillance & Maintenance provides for Landlord activities for approximately 36 small or closed DOE laboratories in the 300 Area to maintain minimum safe conditions prior to transfer to EM-60 for decommissioning. The S&M is performed to prevent deterioration of the facilities creating unsafe conditions; and to control health, disease, or physical hazards such as animal or insect infestations, roof and floor failures, weather damage, etc. Radioactive and hazardous wastes that still exist in these facilities will be identified/characterized, collected and prepared for disposition on a priority basis to maintain safe shut down conditions. Additionally, the facilities are inspected for rodent intrusion, and fire barriers are maintained. There will be close coordination with the Hanford Transition Projects to assure facilities can be turned over to the deactivation contractor at the earliest possible time. In FY 2001, cost estimates needed for the sale, removal, deactivation, transfer or any other activity necessary to move forward with the transfer or disposal of the excess facilities will be completed.

WASTE OPERATIONS & MANAGEMENT - CURRENT GENERATION scope includes the following:

- Waste Management Operations includes all operational activities (acceptance, handling, storage, packaging, and shipment) needed for dispositioning PNNL's hazardous and radiological wastes. Disposal is included for hazardous wastes but not for radiological and mixed wastes. PNNL operations generate approximately 50,000 kgs of hazardous waste, 20,000 cubic feet of low level waste, 1500 cubic feet of mixed waste, and 300 cubic feet of TRU waste annually. Hazardous waste is shipped in quantities of approximately 800 fifty-five gallon sized containers annually. This is principally lab packed or "bulked" chemicals generated in R&D or maintenance activities. All types of hazardous waste are generated including acids, alcohols, aldehydes, carbonates, caustics, cyanides, esters, ethers, fluorides, hydrocarbons, ketones, nitrates, peroxides, PCBs, phenols, sulfides, explosives, flammables, combustibles, oxidizers, asbestos, reactives, carcinogens, and corrosives, including mixtures of the above as well as newly synthesized chemicals. Several thousand individual hazardous waste designations must be completed annually to properly identify the waste codes for the hazardous waste manifests, land disposal restrictions (LDR) notifications and the packaging, shipping, and disposal facilities requirements.

- Effluent Management includes facility effluent management planning, effluent pathway verification, effluent characterization and monitoring, effluent control, and laboratory response. Radioactive airborne emission monitoring is conducted to meet NESHAPS requirements and state regulations for monitoring, meet facility Operational Safety Requirements (OSRs), and to support environmental ALARA goals. Air chemical emissions are managed to comply with federal, state, and local air emission control regulations. Minimal liquid effluent monitoring and control activities are conducted to manage effluent discharges to ensure they can meet NPDES permit limits and City of Richland industrial waste water discharge permit conditions.

COMPLIANCE OVERSIGHT & SUPPORT - These infrastructure capabilities are required for compliance with regulations associated with DOE's site-wide waste management program:

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The Environmental Compliance Technical Support Services activities encompass:

- providing technical support services to identify, interpret, and implement federal and state RCRA (and CERCLA) requirements for hazardous waste
- reviewing and assisting in the preparation of NEPA documentation
- providing pollution prevention planning and progress reporting to comply with RCRA regulations (40 CFR 260, et seq.), the Pollution Prevention Act, and Washington Administrative Code (WAC) 173-307
- inspecting, assessing, and reporting the level of compliance of the tank system used to collect liquid radioactive mixed waste from DOE-EM hot cell operations in the 300 Area in accordance with federal and state dangerous Waste Regulations, 40 CFR 264.190 and WAC 173-303-640
- managing toxic substances permit applications and ensuring compliance with regulations
- providing the primary point of contact and milestone management for the Tri-Party Agreement Major Milestones M-92-12 through M-92-16 as they relate to Special Case Waste disposition from DOE facilities assigned to PNNL in the 300 Area.

Program Management of the PNNL Waste Management and Operational Compliance Program is also included which encompasses:

- Program Integration including general management and strategic business analysis functions for establishing priorities that ensure the DOE's Hanford Site mission is successfully achieved
- Program Planning, Reporting/Control including coordination and development of PNNL's EM-30 budget formulation submittals (Project Baseline Summaries, Units of Analyses, Program and Integrated Priority List items), and the preparation and execution of Multi-Year Work Plans including project controls, change management, time phased budget maintenance, and milestone administration, support to Hanford Site Integrated Schedule (HSIS) and Hanford Site Technical Baseline (HSTB), and EM-30 input to the DOE Progress Tracking System (PTS).

WASTE OPERATIONS & MANAGEMENT - LEGACY WASTE includes those essential services to identify and characterize waste legacies such as radioactive and hazardous, containerized, noncontainerized, facility holdup or structure, and ground contamination and to attain or maintain regulatory compliance for these orphaned wastes and contamination. Separate "Legacy Projects" are established, and an integrated, risk-based priority plan is developed for all activities required to care for and closeout each Legacy Project from surveillance and maintenance through transfer to another contractor or removal of wastes by PNNL. In addition, any legacies discovered to represent an unacceptable safety or compliance risk will be dispositioned immediately.

TECHNICAL APPROACH:

Some wastes are currently generated during normal laboratory operations and facility maintenance activities. In addition, legacy (orphaned) wastes remaining in buildings and in the soil also require disposition. These wastes are generally transferred to the Central Waste Complex for storage prior to treatment and/or disposal. Hazardous wastes are shipped to commercial TSD facilities for disposal.

Although there are no currently emerging technologies applicable to this activity, there is the potential to use a yet-to-be-developed technology for removal of sludge heels that remain in waste tanks. There are potential applications of such a technology for the legacy waste project in removing tank heels in the 325 Building hot cell and vault tanks.

Time proven treatment technologies such as neutralization are used in the Hazardous Waste Treatment Unit (HWTU) in accordance with permits which regulate the relatively small-scale operations. The 325 Building Hazardous Waste Treatment Units (HWTUs) receive, store and treat mixed and

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dangerous waste generated by PNNL programs. The 325 HWTUs consist of two units: the Shielded Analytical Laboratory (SAL) and the Hazardous Waste Treatment Unit (HWTU). The SAL is a hot cell facility that has a dual role as an analytical laboratory and a treatment, storage, and disposal facility (TSDF). The SAL performs tank treatment and bench scale treatment of high dose rate lab waste (2,000 rem/hr capability). The HWTU is a treatment and storage unit that contains fume hoods and gloveboxes for mixed waste treatment. The HWTU performs bench scale treatment of mixed and dangerous waste from various PNNL programs and also treats transuranic and transuranic-mixed waste by neutralization and stabilization.

The breakthrough goal for this project is to support DOE in the development and implementation of a Waste Generator Cost Recovery System which penalizes the proliferation of waste, provides incentives for waste minimization and reduces the dependency on the Hanford Site EM budget to pay for the management of newly generated waste.

Project Status in FY 2006:

The status of this activity in FY 2006 will be continuing the base PNNL operation activities for maintaining essential services, compliant EM laboratory facilities, and waste management operations at Hanford. Some of the existing legacy wastes and contamination posing unacceptable safety or compliance risks at DOE facilities assigned to PNNL will be dispositioned. At least 44 surplus facilities will have been transitioned or demolished over the previous ten year period.

Post-2006 Project Scope:

The status of this activity after FY 2006 will be continuing the base PNNL operation activities for maintaining essential services, compliant EM laboratory facilities, and waste management operations at Hanford. Remaining legacy wastes and contamination in DOE facilities and sites assigned to PNNL will be dispositioned.

Project End State

As DOE facilities currently assigned to PNNL come to the end of their useful life, they will be transitioned for stabilization, decontamination, and decommissioning. The transition of the 320, 325, 326, 329, and 331 Buildings to EM-60 by the end of FY 2030 will constitute the end point of this EM project. At this point, PNNL facilities will no longer require EM funding, and the end state -- full transition of PNNL from EM to the DOE Office of Science (SC) -- will be completed.

The Waste Management & Operational Compliance Program activities support the following Hanford Strategic Plan (HSP) endpoint targets for the South 600 Area geographical area:

ENVIRONMENTAL CONTAMINATION SOIL SITES

Goal: Contaminated soil sites will be treated to levels supportive of future use targets or regulator-specified levels for each geographic area as prescribed by CERCLA/RCRA decisions.

Final Endpoint Targets:

- Soil sites remediated consistent with ROD cleanup standards. Contaminated media will be consolidated and moved to the 200 Area for disposal.
- Final cleanup levels will be established within individual RODs or Permit Modifications.

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FACILITIES TRANSITION

Goal: Safe, stable, secure onsite storage will be provided for all nuclear materials pending decisions on final disposition or until beneficial offsite uses are identified. Facilities without identified future uses will be transitioned to low-cost, stable deactivated conditions (requiring minimal surveillance and maintenance) pending eventual D&D and removal or closure.

Final Endpoint Target: Maintain necessary infrastructure to support the Science and Technology Mission.

FACILITIES DISPOSITION

Goal: All facilities will be reused, removed or entombed. Surplus nuclear facilities will be decommissioned and decontaminated sufficiently to enable removal or closure through entombment.

Endpoint Targets:

- Reuse facilities for economic diversification where feasible.
- Remove non-essential, surplus buildings and facilities that don't have identified post-cleanup uses.

SOLID WASTE

Goal: Solid wastes will be dispositioned consistent with national policies for management of transuranic, low-level, low-level mixed, and hazardous wastes.

Performance Objectives:

- Retrieve, treat and dispose of legacy waste and newly generated waste on a schedule that supports TPA and national TRU program requirements in a safe and environmentally compliant manner.
- Effectively utilize Waste Management crosscutting services to maximize progress towards site-wide critical outcomes. Ensure pollution prevention goals are met for minimizing waste creation.

The following is an extraction from the DOE-RL/PNNL Operational Excellence critical outcome for the Science & Technology Mission section of the HSP that is also applicable to program activities:

2.0 Battelle will conduct our work and operate Laboratory facilities with distinction, fully supportive of and integrated with the Laboratory's science and technology mission and fully protective of workers, the public and the environment.

Supporting objectives:

- 2.1 Sustain and enhance operational excellence in safety and health, and environmental protection.
- 2.2 Increase mission capabilities through enhancement and effective use of Laboratory facilities and assets.

Cost Baseline Comments:

The cost estimate is based upon Activity-Based Cost Estimating (ABC). No contingency is included in the cost baseline. Complete documentation of the basis of estimate is available for review in Project Documentation Packages (PDPs) which have been developed for each of the program's subactivities.

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Part A of this PBS reflects the current approved budget baseline for the program as established in the FY 1999 Multi-Year Work Plan and changes approved through the change control process. Part B of this PBS reflects the funding profile of the program.

Safety & Health Hazards:

Some project work will be performed in the Radiochemical Processing Laboratory (RPL, i.e., the 325 Building), a Category II Nuclear Facility. The RPL is PNNL's only nuclear facility. The Authorization Basis for this facility is:

- "Safety Analysis Report for the Radiochemical Processing Laboratory," PNNL-SAR-RPL
- "Technical Safety Requirements for the Radiochemical Processing Laboratory," PNNL-TSR-RPL
- RL Safety Evaluation Report (SER) for the RPL SAR and TSRs.

Safety policies, programs, and procedures that provide controls for other PNNL non-nuclear facilities are defined and implemented through PNNL's Standards-Based Management System (SBMS).

Staff will be working at hazardous waste sites and some work requires excavation of soil. Some project work involves the use of pressurized or vacuum systems -- these systems may be employed during the process of disposing of contaminants. Certain project work involves the use, storage, or disposal of chemicals or other materials of concern including asbestos, corrosives, carcinogens, flammable liquids and solids, herbicides, pesticides, oils, PCBs, peroxide formers, pyrophorics, analytical reagents used in sampling and field analyses, poisons, toxics, and regulated metals (lead bricks, beryllium, zirconium stock, magnesium, etc.). The cleanup of legacy materials will involve working with a variety of materials. Typically the material that is worked with will have minimal levels of radioactivity, however, some radioactive fuel fragments will be packaged and shipped.

Other potential hazards include work in confined spaces, work at locations where there are limited means of emergency communications (remote locations), work in trenches or soil excavation, use of material handling equipment (e.g. cranes, hoists, forklifts), use of mechanical power transmission apparatus (e.g. belts, chains, gears, rollers, rotating shafts), and use of powered equipment (e.g. woodworking or metal working machinery, shears, punches, presses). Additional potential hazards include work that involves noise levels greater than 85 dBA (e.g., in mechanical rooms), non-ionizing radiation, use of cryogenics, staff exposure to fall hazards (e.g. ladders, elevated platforms, towers), and potential oxygen deficient atmospheres.

These hazards will persist throughout the life of this program.

Safety & Health Work Performance:

The principal directly-funded S&H resources necessary to accomplish this program's work safely are Radiation Control Technologists (RCTs). The average cost per FTE (burdened rate) is \$161K/year. No appreciable change in S&H resource requirements is anticipated for the life of the program. Job Safety Analyses are conducted as applicable.

All other S&H resources are provided through indirect or overhead funding sources.

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There are no unfunded or underfunded S&H resource requirements in this PBS.

PBS Comments:

The target level funding reflected in section B.1 is different than the baseline budget contained in this PBS, and reflects reductions in scope that would be taken from this project if needed enhanced performance targets are not realized for the site to meet the overall anticipated funding level. Specific impacts in FY 1999 and their consequence would be:

The impact of a \$2M funding reduction in FY 1999 would delay reducing the safety risks posed by radiological and hazardous materials (5m3 TRU Wastes, 13m3 MLLW, and 274m3 LLW) at sites in close proximity to the Columbia River and the City of Richland and consequently increase the risk of adverse public/media attention. The project would be delayed by one year which would require additional escalated costs for project management, waste storage, and surveillance and maintenance along with waste repackaging, validation, and shipping authorization rework. Conversely, investing \$2M in this project in FY 1999 would result in an estimated \$1.39M savings over the life of the project and would accelerate completion of the project by one year.

DOE Waste Management (EM) has been funding waste management operations for the DOE national laboratory system including Energy Research's (ER) Pacific Northwest National Laboratory. The waste management and operations activities reflected in this PBS are the infrastructure requirements needed to meet the on-going R&D activities of the Lab. PNNL and DOE-RL are involved in pilot studies with DOE-HQ that may possibly reverse EM's assignment to maintain waste management services at each DOE Site. If this agreement is reached at DOE-HQ the original funding provided to EM would be returned to the contributing programs and PNNL would then directly charge the cost of this infrastructure to all waste generators.

In addition, this PBS requests resources for identifying, characterizing, surveillance and maintenance, and disposal of EM's legacy wastes and contamination at DOE facilities and sites assigned to PNNL. This project has not received priority funding in past years and therefore substantial planning has not been completed to meet enforceable agreements (TPA Milestones M-92-12 and M-92-13). This scope of work identifies and quantifies all EM legacy waste issues associated with PNNL assigned sites and facilities at Hanford and establishes paths forward for non-containerized, containerized, and special case wastes in accordance with prevailing regulations and negotiated compliance agreements.

Baseline Validation Narrative:

Although no comprehensive validation was performed on all projects in the program, there were several independent assessments and reviews conducted as follows:

- Jason Associates Corporation assessment (10/31/97) of waste management activities in the program. No significant findings were identified.
- FY 1997 Pricing Review of FY 1999 EM Budget Request (9/25/97) conducted by ICF Kaiser - Overall objective was to provide assurance that overhead/indirect rates were applied in compliance with DOE and PNNL guidance. There were no findings or recommendations which would warrant adjustments to the current budget request.
- ABC Estimating Process Audit (9/10/97) conducted by ICF Kaiser to evaluate application of Activity-Based Cost Estimating methodology to the program's basis of estimate. There were no findings or recommendations. Auditors were complimentary and would hold up this program's BOE as a model for others.
- US Army Corps of Engineers independent assessment of program (11/19/96) to evaluate the quality of the scope of work, cost and schedule estimates, methodology, key assumptions, and supporting documentation. The audit team reported the estimate to be adequate and provided some recommendations that have been implemented.

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- Project Assistance Corporation independent assessment (5/21/96) to validate the program ABC estimating process and implementation. The team found the cost-estimating process to be satisfactory with several minor recommendations for enhancing the process.

General PBS Information

Project Validated?									Date Validated:								
Has Headquarters reviewed and approved project?									Yes								
Date Project was Added:	12/1/1997																
Baseline Submission Date:																	
FEDPLAN Project?	Yes																
Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other									
		Y				Y	Y	Y									

Project Identification Information

DOE Project Manager: Roger F. Christensen
DOE Project Manager Phone Number: 509-372-4900
DOE Project Manager Fax Number: 509-372-4037
DOE Project Manager e-mail address: Roger_F_Christensen@apimc01.rl.gov
Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (current year dollars)	179,175	455,868	635,043	12,359	11,804	16,935	16,279	15,989	17,208	19,053	18,593	19,216	19,607	19,718	20,497
PBS Baseline (constant 1999 dollars)	168,004	295,412	463,416	12,359	11,804	16,935	16,279	15,989	16,854	18,259	17,435	17,631	17,603	17,321	17,618

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Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS EM Baseline (current year dollars)	179,175	455,868	635,043	12,359	11,804	16,935	16,279	15,989	17,208	19,053	18,593	19,216	19,607	19,718	20,497	
PBS EM Baseline (constant 1999 dollars)	168,004	295,412	463,416	12,359	11,804	16,935	16,279	15,989	16,854	18,259	17,435	17,631	17,603	17,321	17,618	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	14,731	14,835	15,387	15,496	83,480	92,800	103,778	115,361	0	0	0	0				
PBS Baseline (constant 1999 dollars)	12,389	12,208	12,390	12,209	61,644	61,462	61,648	61,462	0	0	0	0				
PBS EM Baseline (current year dollars)	14,731	14,835	15,387	15,496	83,480	92,800	103,778	115,361	0	0	0	0				
PBS EM Baseline (constant 1999 dollars)	12,389	12,208	12,390	12,209	61,644	61,462	61,648	61,462	0	0	0	0				

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.10%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%			

Project Reconciliation

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Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/30/2046

Current Projected End Date of Project: 9/30/2030

Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	788,631	Actual 1997 Cost:	11,804	Actual 1998 Cost:	16,279
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	760,548	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			20,535
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	781,083				

Project Cost Changes

Cost Adjustments Reconciliation Narratives

Cost Change Due to Scope Deletions (-):

Cost Reductions Due to Efficiencies (-):

Cost Associated with New Scope (+):

Cost Growth Associated with Scope Previously Reported (+):

Cost Reductions Due to Science & Technology Efficiencies (-):

Subtotal: 781,083

Additional Amount to Reconcile (+): -346,961

Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): 434,122

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
COMPLETE REVIEW OF PERFORMANCE INDICATORS AND RECOMMEND CHANGES	RLST013901	8/20/1999	8/20/1999		8/20/1999						

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Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
UPGRADE OSR'S TO TSR'S	RLST013908	8/31/1999	8/31/1999		8/31/1999						
SNF Legacy Waste Disposition Complete	RLST014002	4/11/2001	4/11/2001								
Complete Essential ES&H Drawings	RLST013177	9/30/2001	9/30/2001								
HD-LLW & RH-TRU Legacy Waste Disposition Complete	RLST014003	4/10/2000	4/10/2000								
RPL Room 604 Glovebox Disposal	RLST014004	5/30/2000	5/30/2000								
RPL Bowling Ball Cask Waste Removal	RLST014103	9/30/2001	9/30/2001								
331 Septic Animal Waste Contaminated Liquid Removal	RLST014102	9/30/2001	9/30/2001								
Begin PNNL Waste Management Project	PBS-97-036		2/28/1997								
PBS Mission Completion	PBS-MC-036		9/30/2030								
PBS Project End	PBS-PE-036		9/30/2030								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
COMPLETE REVIEW OF PERFORMANCE INDICATORS AND RECOMMEND CHANGES	RLST013901										Pacific Northwest will evaluate the effectiveness of the established performance indicators and measures for the Surveillance and Maintenance Project and recommend changes, if necessary, to RL-STO.
UPGRADE OSR'S TO TSR'S	RLST013908										Update the 325 Building Operational Safety Requirements (OSRs) to Technical Safety Requirements (TSRs).
SNF Legacy Waste Disposition Complete	RLST014002										

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Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Complete Essential ES&H Drawings	RLST013177				Y						Completion of essential drawings for the 325 Building.
HD-LLW & RH-TRU Legacy Waste Disposition Complete	RLST014003										
RPL Room 604 Glovebox Disposal	RLST014004										
RPL Bowling Ball Cask Waste Removal	RLST014103										
331 Septic Animal Waste Contaminated Liquid Removal	RLST014102										
Begin PNNL Waste Management Project	PBS-97-036			Y							Administrative input to document the start of this PBS.
PBS Mission Completion	PBS-MC-036					Y					Administrative input to document the mission completion of this PBS.
PBS Project End	PBS-PE-036				Y						Administrative input to document the project end of this PBS.

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
Fac.														
Decom.- Assess.	NF	0.00	0.00	0.00										
Fac.														
Decom- Cleanup	NF	0.00	0.00	0.00										
Fac.														
Deact. During Per.	NF	13.00	3.00	16.00		1.00	1.00		11.00					

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Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
NM														
Stabilized - Pu Res.	Kg/B	0.80	0.66	1.46					0.10	0.10	0.10	0.10	0.10	0.10
NM														
Stabilized - Ur. Other	Kg/B	10,080.40	51.29	10,131.69					4,010.05	3,010.05	2,010.05	1,010.05	10.05	10.05
NM														
Stabilized - Other NM	HU	6.05	404.33	410.38					1.50	0.65	0.65	0.65	0.65	0.65
NM														
MDR Onsite - Ur Other	Kg/B	3,106.45	67.27	3,173.72					1,034.10	10.05	1,012.05	1,010.05	10.05	10.05
NM														
MDR - Other NM	Ncont	32.70	4.55	37.25					12.20	6.25	5.65	4.65	2.05	0.65
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	
Fac.														
Decom.- Assess.	NF													
Fac.														
Decom- Cleanup	NF													
Fac.														
Deact. During Per.	NF		1.00											2.00
NM														
Stabilized - Pu Res.	Kg/B	0.10	0.10	0.10	0.10	0.56								

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Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035
NM													
Stabilized - Ur. Other	Kg/B	10.05	10.05	10.05	10.05	41.24							
NM													
Stabilized - Other	HU	0.65	0.65	0.65	0.65	403.68							
NM													
MDR Onsite - Ur Other	Kg/B	10.05	10.05	10.05	10.05	57.22							
NM													
MDR - Other NM	Ncont	0.65	0.65	0.60	0.60	3.95							
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total			
Fac.													
Decom.- Assess.	NF								1.00	1.00			
Fac.													
Decom- Cleanup	NF								1.00	1.00			
Fac.													
Deact. During Per.	NF			1.00					11.00	16.00			
NM													
Stabilized - Pu Res.	Kg/B									1.36			
NM													
Stabilized - Ur. Other	Kg/B									6,121.64			
NM													
Stabilized - Other	HU									408.88			

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Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total				
NM														
MDR Onsite - Ur Other	Kg/B									2,139.62				
NM														
MDR - Other NM	Ncont									25.05				
Release Sites														
Site Code	RSF ID	Change Flag	Description	Class/Subclass Name	Planned Assess. Year	Forecast Assess. Year	Actual Assess. Date	Planned Comp. Year	Forecast Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
HASI	7163	R	2718-E-WS-1, 2718 French Drain	/										
HASI	7164	R	300 VTS, 300 Area Vitrification Test Site, In-Situ Vitrification (ISV) Test Site	/										
HASI	7165	R	305-B SF, 305-B Storage Facility	/										
HASI	7166	R	300-19, 324 Sodium Removal Pilot Plant, 324 Building Sodium Removal Pilot Plant	/										
HASI	7167	R	325 WTF, 325 Waste Treatment Facility	/										
HASI	7168	R	331 LSLDF, 331 LSL Drain Field, 331 Life Sciences Laboratory Drainfield	/										
HASI	7169	R	331 LSLT1, 331 LSL Trench 1, 331 Life Sciences Laboratory Trench #1	/										
HASI	7170	R	331 LSLT2, 331 LSL Trench 2, 331 Life Sciences Laboratory Trench #2	/										
HASI	7171	R	331-C HWSA, 331-C Hazardous Waste Storage Area, 331-C Low Level Radioactive Storage Area	/										
HASI	7172	R	350 HWSA, 350 Building Hazardous Waste Storage Area, 350-D Hazardous Waste Staging Area	/										

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Release Sites

Site Code	RSF ID	Change Flag	Description	Class/Subclass Name	Planned Assess. Year	Forecast Assess. Year	Actual Assess. Date	Planned Comp. Year	Forecast Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
HASI	7173	R	622-R ST, 622-R Septic Tank, 622-R Atmospheric Physics Laboratory Septic Tank	/										
HASI	7174	R	BTTF, Biological Treatment Test Facilities	/										
HASI	7175	R	PCTTF, Physical and Chemical Treatment Test Facilities	/										
HASI	7176	R	TTTF, Thermal Treatment Test Facilities	/										
HASI	7177	R	UPR-300-10, Contamination Under 325 Bldg., UN-300-10	/										
HASI	7178	R	UPR-300-12, UN-300-12	/										
HASI	7179	R	UPR-300-43, 300 Area Solvent Refined Coal Spill, UN-300-43	/										
HASI	7180	R	UPR-300-48, 325 Building Basement Topsy Pit	/										
HASI	7181	R	300-12, 325 Laboratory Diesel Fuel Tank	/										
HASI	7182	R	300-13, 350 Building Release To Sanitary Sewer System	/										
HASI	7183	R	300-14, 331 Building Animal Waste Tanks Pit	/										
HASI	7184	R	600-63, 300-N Lysimeter Area, Recharge Study Site, Hanford Grout Lysimeter Facility, Special Waste-Form Lysimeter, Buried Waste Test Facility	/										
HASI	7185	R	300-29, 305-B Berm, Source Location of UPR-600-11 Soil	/										
HASI	7186	R	300-24, Soil Contamination at the 314 Metal Extrusion Building	/										
HASI	7187	R	300-33, 306W Metal Fabrication Development Building Releases	/										

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Release Sites

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HASI	7188	R	300-17, 331 Building Trench, 331-D Ditch, Outfall A	/										
HASI	7189	R	332 SF, 332 Storage Facility, 332 Hazardous Waste Storage Area, 332 Interim Holding Facility	/										
HASI	7190	R	200-W-16, 292-T Underground Tanks	/										
HASI	7191	R	300-58, 305B Steam Condensate Injection Well, Miscellaneous Stream #449	/										
HASI	7192	R	300-62, 303C Building - Steam Condensate, Miscellaneous Stream #495	/										
HASI	7193	R	300-65, 303J Building - Steam Condensate Mud Leg (Part of 300 Main Supply), Miscellaneous Stream #266	/										
HASI	7194	R	300-66, 303J Building HVAC Condensate, Miscellaneous Stream #267	/										
HASI	7195	R	300-63, 305B Building Stormwater Runoff, Miscellaneous Stream #458	/										
HASI	7196	R	300-76, 306W Building Steam Condensate, Miscellaneous Stream #418	/										
HASI	7197	R	300-80, 314 Building Stormwater Runoff and Steam Condensate, Miscellaneous Stream #268	/										
HASI	7198	R	300-85, 323 Building Steam Valve Pit, Miscellaneous Stream #453	/										
HASI	7199	R	300-88, 320 Building Irrigation Line Effluent, Miscellaneous Stream #626	/										
HASI	7200	R	300-89, 320 Building Irrigation Line Effluent, Miscellaneous Stream #627	/										

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Release Sites

Site Code	RSF ID	Change Flag	Description	Class/Subclass Name	Planned Assess. Year	Forecast Assess. Year	Actual Assess. Date	Planned Comp. Year	Forecast Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
HASI	7201	R	300-90, 320 Building Irrigation Line Effluent, / Miscellaneous Stream #628											
HASI	7202	R	300-91, 320 Building, Miscellaneous Stream / #350											
HASI	7203	R	300-96, 325 Building Steam Condensate, / Miscellaneous Stream #707											
HASI	7204	R	300-97, 325 Building Stormwater Runoff and / Fire System Testing Water, Miscellaneous Stream #706											
HASI	7205	R	300-98, 325 Building South Stairwell Drain, / Miscellaneous Stream #264, 300-229											
HASI	7206	R	300-99, 325 Building Nitrogen Tank / Blowdown Miscellaneous Stream #265, Injection Well #399-3											
HASI	7207	R	300-100, 325 Building Stormwater Runoff, / Miscellaneous Stream #408											
HASI	7208	R	300-101, 326 Building Stormwater Runoff / and Steam Condensate, Miscellaneous Stream #409											
HASI	7209	R	300-103, 329 Building Stormwater Runoff, / Miscellaneous Stream #422											
HASI	7210	R	300-104, 329 Building Stormwater Runoff, / Miscellaneous Stream #546											
HASI	7211	R	300-105, 331 Building Steam Condensate, / Miscellaneous Stream #513, Pit U1											
HASI	7212	R	300-106, 331 Building Steam Condensate, / Miscellaneous Stream #574											
HASI	7213	R	300-107, 331 Building Stormwater Runoff, / Miscellaneous Stream #447, Injection Well											

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Site Code	RSF ID	Change Flag	Description	Class/Subclass Name	Planned Assess. Year	Forecast Assess. Year	Actual Assess. Date	Planned Comp. Year	Forecast Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
			#32											
HASI	7214	R	300-108, 331 Building Stormwater Runoff, Miscellaneous Stream #448, Injection Well #37	/										
HASI	7215	R	300-111, 337 Building Stormwater Runoff, Miscellaneous Stream #516	/										
HASI	7216	R	300-163, 3708 Building Steam Condensate, Miscellaneous Stream #423	/										
HASI	7217	R	300-184, 3718A Building Stormwater Runoff, Miscellaneous Stream #270	/										
HASI	7218	R	300-186, 3730 Building Steam Condensate, Miscellaneous Stream #383	/										
HASI	7219	R	300-187, 3730 Building Steam Condensate, Miscellaneous Stream #421	/										
HASI	7220	R	300-188, 3730 Building Steam Condensate, Miscellaneous Stream #420	/										
HASI	7221	R	300-189, 3731 Building Steam Condensate, Miscellaneous Stream #269	/										
HASI	7222	R	300-190, 3731 Building Stormwater Runoff, Miscellaneous Stream #517	/										
HASI	7223	R	300-191, 3731 Building Stormwater Runoff, Miscellaneous Stream #518	/										
HASI	7224	R	300-196, 3745 Building Steam Condensate, Miscellaneous Stream #399	/										
HASI	7225	R	300-197, 3745 Building Steam Condensate, Miscellaneous Stream #398, Injection Well #5	/										
HASI	7226	R	300-198, 3745 Building Steam Condensate, Miscellaneous Stream #397, Injection Well #1	/										

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Release Sites

Site Code	RSF ID	Change Flag	Description	Class/Subclass Name	Planned Assess. Year	Forecast Assess. Year	Actual Assess. Date	Planned Comp. Year	Forecast Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
HASI	7227	R	300-199, 3745B Building Steam Condensate, Miscellaneous Stream #380	/										
HASI	7228	R	300-200, 3745B Building Steam Condensate, Miscellaneous Stream #379	/										
HASI	7229	R	300-201, 3762 Building Steam Condensate, Miscellaneous Stream #491, Injection Well #42	/										
HASI	7230	R	300-203, 377 Building Steam Condensate, Miscellaneous Stream #446, Injection Well #36	/										
HASI	7231	R	300-212, MO010 Building Steam Condensate Sump, Miscellaneous Stream #400	/										
HASI	7232	R	300-218, 314 Building, Engineering Development Laboratory	/										

Facility Decommissioning

Site Code	RSF ID	Change Flag	Description	Class/Subclass	Hazard	Plan. Assess. Year	Fore. Assess. Year	Actual Assess. Date	Plan. Deac. Year	Fore. Deac. Year	Actual Deac. Date	Plan. Comp. Year	Fore. Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
HASI	2976		3767	\					1997		6/30/1997	1998						

Facility Deactivation

Site Code	RSF ID	Change Flag	Description	Class/Subclass	Hazard	Plan. Assess. Year	Fore. Assess. Year	Actual Assess. Date	Plan. Deac. Year	Fore. Deac. Year	Actual Deac. Date	Plan. Comp. Year	Fore. Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
HASI	2976		3767	\					1997		6/30/1997	1998						