

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-OIM-113 / Post-2006 Surveillance, Maintenance, and Monitoring**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0216**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

SUMMARY: The purpose of this surveillance and maintenance (S&M) PBS is to maintain INEL surplus contaminated facilities in a safe condition and meet the requirements found in CFR41-101.47.400 which prohibits abandonment of surplus facilities. This is accomplished by maintaining facility and site HEPA filtered off-gas systems, cleaning up and containing contamination 'creep', preventing and cleaning up inflow of environmental liquids, and maintenance of the equipment necessary to accomplish this task. Monitoring and maintaining instrumentation required by RCRA regulations is also required in several of the facilities.

PURPOSE: The purpose of this post-FY2006 (FY2007 to FY2050) surveillance and maintenance (S&M) PBS is to maintain surplus contaminated facilities in a safe condition and meet the requirements found in CFR41-101.47.400 which prohibits abandonment of surplus facilities. Surveillance and maintenance activities include the following: Maintaining these facilities in a condition that meets requirements for reduced risk to the public, site personnel, and the environment from release of radiological and hazardous materials. This is accomplished by maintaining facility and site HEPA filtered off-gas systems, cleaning up and containing contamination 'creep', preventing and cleaning up inflow of environmental liquids, and maintenance of the equipment necessary to accomplish this task. Monitoring and maintaining instrumentation required by RCRA regulations is also required in several of the facilities.

S&M is initiated immediately following facility shutdown and continues through D&D of the facility.

Justification for surveillance and maintenance of the facilities in this PBS: In the Pre-FY07 Surveillance and Maintenance PBS, ID-OIM-112, there are a significant percentage of contaminated surplus facilities which have RCRA permitted units associated with them. An assumption is made in developing this PBS that there will be a similar number of surplus facilities with RCRA units in the future. Surveillance and maintenance of these facilities is required to meet environmental laws and consent order requirements which will be followed and are not negotiable.

DEFINITION OF SCOPE: Post-deactivation surveillance and maintenance activities maintain these nuclear facilities in a safe condition awaiting decommissioning. Activities include, daily surveillance of transition and restoration facilities for leak detection and response; daily surveillance of the facilities for ventilation control; monthly surveillance of the facilities for operability of safety equipment necessary for routine occupancy; operational and maintenance response to any abnormalities; maintain surplus facilities per CFR41-101.47.400

From FY2007 through FY2050 there will be forty-four facilities undergoing deactivation which will require S&M.

Beyond FY2007 and extending over the next forty three years, the costs and schedule for the deactivation activities identified in this PBS are at a lower level of confidence. Each sub-project has its cost estimation based upon the level of complexity of the facility, the type of contamination (TRU, Mixed, Radioactive, Hazardous), the levels of contamination expected, the design of the facility, and if there is any fissile material expected. The list of facilities comes from the INEEL Surplus Facilities List, with assumptions made for facility end of life dates.

Following final dispositioning, some of the facilities will require some level of monitoring. This monitoring scope will be determined at closure in agreements reached with the regulators.

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 1 of 7

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-OIM-113 / Post-2006 Surveillance, Maintenance, and Monitoring**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0216**

Project Description Narratives

An assumption is made in this PBS that there will be a number of facilities which will have RCRA regulatory issues associated with them, thus falling in to the CAT. A driver category. Many of these facilities are expected to have significant quantities of radioactive and mixed waste with radiation fields above 100mR/hr.

TECHNICAL APPROACH: Perform surveillance and maintenance of the surplus facilities at the INEEL to maintain these facilities in a safe condition. Surveillance and maintenance activities include the following: maintaining these facilities in a condition that meets requirements for reduced risk to the public, site personnel, and the environment from release of radiological and hazardous materials is accomplished by maintaining facility and site HEPA filtered off-gas systems, cleaning up and containing contamination 'creep', preventing and cleaning up inflow of environmental liquids, and maintenance of the equipment necessary to accomplish this task.

Seeded data in the waste module was not provided by the PBS Manager. The data source is AVS, but validation is not possible because the data is entered by waste stream, not PBS.

Project Status in FY 2006:

Does not apply, this PBS does not start until FY2007.

Post-2006 Project Scope:

There are forty-four facilities identified for Post-Deactivation Surveillance and Maintenance covering a time period of FY07 thru FY 50. At that time the assumption is that the facilities in EM that support the cleanup of the INEEL will have been surplus and deactivated. As programs are phased out in the Reactor, High Level Waste, and the Nuclear Fuels Handling areas facilities will be added to the surplus facilities list, these facilities will be placed in the INEEL Deactivation Program, deactivated, and will require some level of post-closure monitoring.

Project End State

Project ID-OIM-113, surveillance and maintenance scope covers several sub-projects. The surveillance and maintenance project ends when each sub-project in deactivation, located in ID-OIM-111, is completed, final closure reached, and the monitoring requirements turned over to a landlord group which has yet to be identified.

Cost Baseline Comments:

The Baseline costs represented here do not include contingency for authorized work packages, but may contain contingency for planning packages. This contingency is removed upon development of detailed work packages. Escalation was applied in accordance with IDMS guidelines. The level of detail for this PBS for the activities from FY2001 through FY2006 has been verified. Beyond FY2007 and extending over the next forty three years, the costs and schedule for the deactivation activities identified in this PBS are at a lower level of confidence and are based upon the assumption that the facilities will have been stabilized, isolated, and cleaned to reduce both risk and cost. Each sub-project has its cost estimation based upon the level of complexity of the facility, the type of contamination (TRU, Mixed, Radioactive, Hazardous), the levels of contamination expected, the design of the facility, and if there is any fissile material expected. The list of facilities comes from the INEL Surplus Facilities List, with assumptions made for facility end of life dates.

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 2 of 7

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-OIM-113 / Post-2006 Surveillance, Maintenance, and Monitoring**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0216**

Project Description Narratives

Safety & Health Hazards:

The necessary S & H functions required to maintain safe and compliant operations for INEEL S&M Projects now and in the future are in place and operating properly. The primary hazards associated with the S&M of facilities in this PBS vary from site to site, but, may include, Am-241, C-14, Cl-36, Co-60, Cs-137, I-129, Nb-94, Np-237, Pu-239, Pu-240, Ra-226, SR-90, Tc-99, U-233, U-234, U-235, U-236, U-238, Carbon Tetrachloride, methylene chloride, lead, nitric and fluoride acids, and asbestos. During S&M activities there will also be a number of industrial safety and industrial hygiene related hazards to address such as slips, trips, and falls; lifting; working on elevated structures; moving equipment; mechanical equipment, hoisting and rigging, sharp objects, inhalation of dusts; temperature extremes; etc.

Hazard documentation developed includes, but is not limited to, project specific health and safety plans, detailed operating procedures, standard operating procedures, job safety analyses, job hazard analyses, etc. These documents will be developed during the early stages of each project and will determine the methods, procedures, and equipment used during project implementation to reduce hazards to workers and the environment.

Safety & Health Work Performance:

The resources necessary to accomplish the planned work safely and in compliance are identified through the Health and Safety Program requirements as well as the authorization basis discussed previously. Resources allocated at the site to ensure compliance with health and safety requirements, as well as safety on the job include: radcon, safety, industrial hygiene, occupational medical, fire, emergency management, safeguards and security, performance oversight, quality, the Voluntary Protection Program, etc. Safety and health resources are planned and allocated into the appropriate category by cost center through the work breakdown structure and they are loaded into each project for each fiscal year. Institutional support, such as medical facilities and personnel, security, fire protection, etc., are funded out of the financial systems indirect labor adder, and project-specific safety and health professional support (e.g., industrial safety engineer) is identified in specific control account plans where the support is required. The average cost per FTE, burdened, is approximately \$60/hour to \$65/hour for each of the safety professionals identified above. Presently there are no plans to conduct full DOE operational readiness reviews although all projects will undergo a complete evaluation of their readiness to proceed with field activities. Applicable projects will complete unreviewed safety question determinations. Personnel are trained in Stop Work Authority, emergency preparedness procedures, health and safety plans, work plans, integrated safety management, integrated work control, conduct of operations, and conduct of maintenance, etc. Safety, radcon, health, fire, environmental, and quality personnel conduct routine inspections to ensure personnel and the environment are protected. The frequency of these inspections is dependent on the status of each particular project but generally ranges between daily to every other week. During field work the level of ESH&Q support is identified in the individual approved work packages. There are currently no unfunded or under funded safety, health, environmental, or quality resource requirements associated with this PBS. Upon completion of remedial actions, and the initiation of institutional controls, the level of safety and health resources required will be reduced to a minimum.

Resource levels vary from fiscal year to fiscal year depending on the extent of sampling and/or remediation activities being performed.

PBS Comments:

The surveillance and maintenance program meets the requirements found in CFR41-101.47.400 which prohibits abandonment of surplus facilities. This project meets the obligation to maintain the facilities in a condition that prevents the general deterioration of structural integrity and system components, and providing post-closure monitoring, thereby reducing the risk of release of hazardous and/or radioactive materials which could harm

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 3 of 7

Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Idaho

Site Summary Level: Idaho National Engineering and Environmental Laboratory

Project ID-OIM-113 / Post-2006 Surveillance, Maintenance, and Monitoring

Report Number: GEN-01b

Print Date: 3/10/2000

HQ ID: 0216

Project Description Narratives

the public, site personnel, or the environment.

Baseline Validation Narrative:

The INEEL Environmental Management Integration Team performed a compliance and cost estimating review of all activities associated with this PBS. This PBS reflects the comments and recommendations associated with the review. The Remediation Program has, since 1991, promoted use of the bottoms up/ABC approach, in the development of planning estimates for Assessment and Remedial Design and Remedial Action projects. All INEEL Remediation Program cost estimates have been developed using sound technical and planning principles and are accompanied by basis of estimate documentation intended to demonstrate the rationale and specifics behind the estimates. Bottoms Up estimating or Activity Based Costing, wherein the work scope is portrayed down to the task level, is both desired and encouraged.

The basis of estimates include a well defined statement of work, performance measures, products required for completion, products delivered, key support activities, and known milestones, etc., for every level of the program work scope. For work scope with definable milestones and deliverables, the cost estimates are very detailed and more precise. For more subjective work scope, where it is difficult to identify a specific end-product or deliverable, detail is provided to the lowest level possible. In most cases, the clarity of the available scope and associated planning assumptions is a key consideration in determining the specific technique used to develop a particular cost estimate.

General PBS Information

Project Validated? Yes Date Validated: 2/13/1996

Has Headquarters reviewed and approved project? No

Date Project was Added: 12/1/1997

Baseline Submission Date:

FEDPLAN Project? Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	N	N	N	N	N	N	Y	Y

Project Identification Information

DOE Project Manager: D.J.Sanow

DOE Project Manager Phone Number: 208-526-1049

DOE Project Manager Fax Number: 208-526-9150

DOE Project Manager e-mail address: sanowdj@inel.gov

Is this a High Visibility Project (Y/N):

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

Page 4 of 7

Project Baseline Summary Report

Data Source: **EM CDB**

Report Number: **GEN-01b**

Operations/Field Office: **Idaho**

Print Date: **3/10/2000**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

HQ ID: **0216**

Project **ID-OIM-113 / Post-2006 Surveillance, Maintenance, and Monitoring**

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	
	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)	0	46,930	46,930						0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	0	26,881	26,881						0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	0	46,930	46,930						0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	0	26,881	26,881						0	0	0	0	0	0	0	0
PBS Baseline (current year dollars)	2,152	2,189	1,374	778	4,139	4,593	5,096	5,654	6,273	6,960	7,722	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	1,812	1,805	1,110	615	3,077	3,077	3,077	3,077	3,077	3,077	3,077	0	0	0	0	0
PBS EM Baseline (current year dollars)	2,152	2,189	1,374	778	4,139	4,593	5,096	5,654	6,273	6,960	7,722	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	1,812	1,805	1,110	615	3,077	3,077	3,077	3,077	3,077	3,077	3,077	0	0	0	0	0

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
			2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

Dataset Name: **FY 1999 Planning Data**

Page 5 of 7

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**
 Operations/Field Office: **Idaho**
 Site Summary Level: **Idaho National Engineering and Environmental Laboratory**
 Project **ID-OIM-113 / Post-2006 Surveillance, Maintenance, and Monitoring**

Report Number: **GEN-01b**
 Print Date: **3/10/2000**
 HQ ID: **0216**

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
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/1/2055
 Current Projected End Date of Project: 9/30/2055
 Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	52,259	Actual 1997 Cost:	Actual 1998 Cost:
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	52,259	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):	1,411
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	53,670		

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):	26,784	Deactivation activities (accelerated shutdowns) resulted in reduced S&M costs
Cost Associated with New Scope (+):		
Cost Growth Associated with Scope Previously Reported (+):		
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	26,886	
Additional Amount to Reconcile (+):	-5	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	26,881	

Project Baseline Summary Report

Data Source: **EM CDB**

Report Number: **GEN-01b**

Operations/Field Office: **Idaho**

Print Date: **3/10/2000**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

HQ ID: **0216**

Project **ID-OIM-113 / Post-2006 Surveillance, Maintenance, and Monitoring**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Project Start			10/1/2006								
Project Complete			9/30/2055								
Project Complete			9/30/2055								

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
Project Start				Y							
Project Complete					Y						
Project Complete										Y	