

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

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

Project **ID-ER-107 / Pit 9 Remediation**

Report Number: **GEN-01b**

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

HQ ID: **0170**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

SUMMARY:

The original purpose and scope of the Pit 9 Remediation Project was to remediate Pit 9 and to provide data and information in support of future remediation projects at the Radioactive Waste Management Complex (RWMC). Due to numerous contractual failings, the subcontractor chosen to perform the remediation was terminated for default on June 1, 1998. The current purpose and scope under this PBS is to: 1) preserve DOE's and LMITCO's legal and contractual rights through litigation, 2) provide the corporate memory and technical expertise necessary for successful litigation, and 3) manage the inactive Pit 9 construction site until the disposition of the facilities is determined.

PURPOSE:

During the cold war period, transuranic contaminated and hazardous wastes from the Rocky Flats Plant were buried in Pit 9 and numerous other pits and trenches in the Subsurface Disposal Area (SDA) of the RWMC at the INEEL. INEEL low level radioactive and hazardous wastes were also buried in Pit 9. Pit 9 is one of 20 pits where radioactive and chemical wastes are buried, a legacy of weapons production during the cold war. The SDA is approximately 600 feet above the Snake River Plain Aquifer and there are concerns of the waste migrating and causing both soil and ground water contamination.

Pursuant to the provisions of the Comprehensive Environmental response, Compensation and Liability Act (42 U.S.C. § 9620) (CERCLA) (as amended), together with other applicable environmental laws, regulations, and executive orders, in December 1991, the DOE entered into a tri-party agreement, the Federal Facility Agreement and Consent Order (FFA/CO), with the Environmental Protection Agency (EPA) and the State of Idaho Department of Health and Welfare (IDHW) ("the Agencies").

Following appropriate procedures, the Agencies and the DOE entered into a Record of Decision (ROD) which determined that Pit 9 would be remediated as a CERCLA Interim Action. The stated purpose of the Interim Action was to remove and stabilize certain radioactive and hazardous wastes buried in the pit and to obtain data to assist in the determination of the proper course of action for remediating other portions of the SDA which are addressed in INEEL PBS No. ID-ER-106. It was intended to use private sector technologies to excavate, characterize, treat as necessary, stabilize, and dispose or store up to 250,000 cubic feet of transuranic contaminated and hazardous wastes and soil from Pit 9.

After competitive negotiations were conducted in accordance with EG&G Idaho procurement guidelines, and effective August 26, 1994, EG&G Idaho, Inc. (LMITCO's predecessor) entered Subcontract No. C91-133136 with Lockheed Martin Advanced Environmental Systems, Inc. (LMAES) for the performance of the Pit 9 Comprehensive Demonstration Project. The subcontract required LMAES to design, purchase, install, and operate a facility at the INEEL to remediate the entire Pit 9 contents (as defined in the Subcontract) and to decontaminate, decommission, and remove the facility from the INEEL. Furthermore, on July 12, 1994, Lockheed Martin Corporation (LMC) entered an agreement guaranteeing the performance of LMAES under the subcontract.

Dataset Name: **FY 1999 Planning Data**

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

Page 1 of 9

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

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

Project **ID-ER-107 / Pit 9 Remediation**

Report Number: **GEN-01b**

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

HQ ID: **0170**

Project Description Narratives

Because of a number of contractual failings on the part of LMAES, LMITCO terminated LMAES' subcontract for default on June 1, 1998. On the same day, LMC and LMAES filed suit against The United States of America in the Court of Federal Claims in Washington, D.C. (Case No. 98-468-C). The LMC/LMAES suit seeks, among other things, judicial intervention to force The United States of America to change the subcontract Termination for Default to a subcontract Termination for Convenience.

The Standard Terms and Conditions of Subcontract No. C91-133136 specified that any dispute of claim relating to this subcontract would be resolved in the in The United States District Court for the District of Idaho. Acting pursuant to this requirement, on August 11, 1998, LMITCO filed suit against LMC/LMAES in The United States District Court for the District of Idaho (Case No. CIV98-0316-E-BLW). The suit seeks, among other things, that the Court uphold the subcontract Termination for Default and enforce the contractual requirement that LMAES return to LMITCO the \$54 million they received in progress payments. On November 16, 1998, LMC/LMAES responded to LMITCO's suit and countersued LMITCO plus filed a third-party complaint against EG&G Idaho, Inc. Since November 1996, LMITCO has retained the services of Oles Morrison Rinker & Baker, a Seattle based legal firm, for advice related to the subcontract.

Due to the termination and the resulting lawsuits, the scope funded under this PBS changed dramatically during FY98. The current purpose is to:

- * Preserve DOE's and LMITCO's legal and contractual rights during litigation
- * Provide the corporate memory and technical expertise necessary for successful litigation
- * Manage the inactive Pit 9 construction site until the disposition of LMAES' facilities is determined

DEFINITION OF SCOPE:

The original scope of the Pit 9 Remediation Project was to remediate Pit 9. The Project was tasked with overseeing all subcontractor activities to ensure that DOE's interests were protected and that all applicable ESH&Q requirements were met.

The current scope under this PBS is to:

- * Manage the scope of retained legal counsel
- * Assist in all phases of preparation for discovery
- * Upon request, provide legal counsel with technical expertise, project knowledge, and project memory
- * Assist retained counsel in the review and preparation of all legal documents
- * Pursue thoughtful and independent methods of supporting LMITCO's claims and disproving invalid claims against DOE and LMITCO.
- * Manage and maintain the inactive Pit 9 construction site through routine inspections, deficiency correction, waste management activities, and housekeeping.

TECHNICAL APPROACH:

The original technical approach to the remediation of Pit 9 was to build a movable retrieval facility that would slide over the pit on parallel rails. Under negative pressure and within the confinement of the retrieval facility, remotely operated cranes, shears, digging tools and brushes, conveying belts, and boxes would remove the pit contents. The waste and soil were to be removed from the pit, placed into airtight boxes, and moved to the treatment

Dataset Name: **FY 1999 Planning Data**

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

Page 2 of 9

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

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

Project **ID-ER-107 / Pit 9 Remediation**

Report Number: **GEN-01b**

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

HQ ID: **0170**

Project Description Narratives

facility for radioassay. Waste and soil that assayed below the 10 nCi/g TRU treatment threshold was to be returned to the pit, while material above this level was to be treated. The project was designed to chemically and thermally treat qualified wastes and soils. All production activities were performed remotely and in a manner protective of worker safety, the public, and the environment.

Currently, through management and consultation with retained counsel, the project team funded under this PBS will defend and pursue the interests of DOE and LMITCO during all litigation. The project will pursue legal recourse to enforce the subcontract Termination for Default, to recover \$54 million in subcontract progress payments from LMAES/LMC, and to protect the interests of DOE and LMITCO. The PBS Manager did not provide seeded data in the waste module. 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:

OU 7-10 Pit 9 Project: Litigation against LMC/LMAES will be successful and the interests of DOE and LMITCO will be protected.

Post-2006 Project Scope:

All current project objectives will be obtained before FY 2006.

Project End State

All monies and judgements will have been collected from LMC/LMAES and LMAES personal property, structures, and fixtures will have been removed by LMAES.

Cost Baseline Comments:

The Baseline Costs represented here are escalated in accordance with prescribed guidelines. The INEEL Environmental Restoration (ER) Program has, since 1991, promoted the use of the bottoms up/Activity Based Costing (ABC) approach in the development of planning estimates in its Assessment and Remedial Design and Remedial Action projects. All INEEL ER cost estimates have been developed using sound technical and planning principles and are accompanied by bases of estimate documentation intended to demonstrate the rationale and specifics behind the estimates. Bottoms up estimating or ABC, wherein the work scope is portrayed down to the task level, is both desired and encouraged but not always practical. The basis of estimates includes 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. Planning rates used to develop these estimates were the latest contractor approved rates by the M&O contractor as of February 1996.

The current cost baseline assumes the following:

- * Unresolved contractual issue will be resolved in litigation.
- * Control of Pit 9 will be returned to RWMC when LMAES' demobilization is complete.
- * LMAES will remove all construction waste and hazardous material from the site before September 30, 1998.
- * There are no areas of radioactive contamination on the construction site.

Dataset Name: **FY 1999 Planning Data**

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

Page 3 of 9

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

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

Project **ID-ER-107 / Pit 9 Remediation**

Report Number: **GEN-01b**

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

HQ ID: **0170**

Project Description Narratives

* The LMAES construction site will be separated from Pit 9 by a fence and it will be managed as an inactive construction site rather than an active remediation site.

* Site tours will occur an average of once a month.

This PBS is budgeted to correct minor deficiencies noted in safety inspections (e.g. weed control and snow removal); however, the correction of major deficiencies (e.g. facility/equipment modifications or upgrades) are beyond the scope of this work package and are not included in the budget assumptions.

Safety & Health Hazards:

The Pit 9 construction site is being managed as "inactive." The controlling safety document is LMAES' Construction Site Interim Management Plan - PLN415, Rev. 0, June 29, 1998.

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. 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. 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. The average burdened cost per FTE is approximately \$60/hour to \$65/hour for each of the safety professionals identified above. This project will conduct a full operational readiness review. Applicable projects will complete unreviewed safety question determinations. Personnel are trained in Stop Work authority, emergency preparedness procedures, health and safety plans, work plans, 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 same level of ESH&Q support is required throughout the project. At this time, the level of support required of the safety professionals will be reduced significantly and will only be performed during maintenance and monitoring activities. There are currently no unfunded or under funded safety, health, environmental, or quality resource requirements associated with this PBS. Resource levels vary from fiscal year to fiscal year, depending on the extent of sampling and/or remediation activities being performed.

PBS Comments:

The Pit 9 project is required to remediate the Pit 9 contents, demonstrate the ability to retrieve and treat radioactive and hazardous contaminants from above the Snake River Plain Aquifer. Pit 9 is a CERCLA Interim Action per the INEEL Federal Facility Agreement and Consent Order (FFA/CO). It is a highly visible project with the State of Idaho, EPA Region X, and other stakeholders. There are fines and penalties for nonperformance of this project. Information from the Pit 9 project is required to support future decisions relative to remediation of the other pits and trenches in the SDA of the RWMC in INEEL PBS No. ID-ER-106. A firm fixed price subcontract has been signed to perform the Pit 9 remediation at the requested funding levels. The costs for storage and monitoring of the final waste product are included in INEEL PBS No. ID-WM-103.

Dataset Name: **FY 1999 Planning Data**

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

Page 4 of 9

Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Idaho

Site Summary Level: Idaho National Engineering and Environmental Laboratory

Project ID-ER-107 / Pit 9 Remediation

Report Number: GEN-01b

Print Date: 3/10/2000

HQ ID: 0170

Project Description Narratives

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
	Y	Y	N	Y	N	Y	Y	Y

Project Identification Information

DOE Project Manager: F. Schwartz

DOE Project Manager Phone Number: 208-526-6390

DOE Project Manager Fax Number: 208-526-0598

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

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

Planning Section

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

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: **0170**

Project **ID-ER-107 / Pit 9 Remediation**

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)	-78,250	0	-78,250	58,697	7,714	-150,080	-42,150	5,935	4,703	2,495	0	0	0	0	0	
PBS Baseline (constant 1999 dollars)	-78,490	0	-78,490	58,697	7,714	-150,080	-42,150	5,935	4,579	2,379	0	0	0	0	0	
PBS EM Baseline (current year dollars)	-78,250	0	-78,250	58,697	7,714	-150,080	-42,150	5,935	4,703	2,495	0	0	0	0	0	
PBS EM Baseline (constant 1999 dollars)	-78,490	0	-78,490	58,697	7,714	-150,080	-42,150	5,935	4,579	2,379	0	0	0	0	0	
	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	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%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

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: **0170**

Project **ID-ER-107 / Pit 9 Remediation**

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: 9/30/2001

Current Projected End Date of Project: 2/28/2001

Explanation of Project Completion Date Difference (if applicable):

Revised to match baseline

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	133,957	Actual 1997 Cost:	7,714	Actual 1998 Cost:	-42,150
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	168,393	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			4,547
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	172,940				

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):	160,047	Project scope has migrated from remediation to litigation
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:	12,893	
Additional Amount to Reconcile (+):	0	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	12,893	

Dataset Name: **FY 1999 Planning Data**

Page 7 of 9

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

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: **0170**

Project **ID-ER-107 / Pit 9 Remediation**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Draft RI/FS ROD Sent by DOE-ID to EPA/IDHW	MUEPXXX1		12/31/1992			12/31/1992					
Project Start			10/1/1996								
Project Complete			2/28/2001								

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
Draft RI/FS ROD Sent by DOE-ID to EPA/IDHW	MUEPXXX1										
Project Start				Y							
Project Complete					Y						

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
RS														
Assess.	NR	0.00	0.00	0.00	1.00									
RS														
Cleanup	NR	0.00	0.00	0.00										
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	Planned 2036 - 2040
RS														
Assess.	NR													

Dataset Name: **FY 1999 Planning Data**

Page 8 of 9

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

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: **0170**

Project **ID-ER-107 / Pit 9 Remediation**

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
RS													
Cleanup	NR												
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2065	Planned 2066 - 2070	Exceptions	Lifecycle Total			
RS													
Assess.	NR										1.00		
RS													
Cleanup	NR								1.00	1.00			

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
INEL	0392		RWMC-04 \ PIT 9 PROCESS DEMONSTRATION [RWMC-04]	Waste/Landfills	1993	1993	12/31/1992				1991	N		Y