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: **0117**

Project **ID-OIM-110-N / Pre-FY 2007 Surplus Facility Deactivation Project - Non Defense**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Inactive test or experimental reactor facilities at the INEEL pose a long term risk to site workers and the environment resulting in substantial S&M cost. The Deactivation Program will reduce these hazards. This PBS has scope for removing stored nuclear fuel from wet basins and placing it into dry storage at MTR and PBF reactors. In FY98 work under this PBF completed removal of fuel from the ARMF/CFRMF reactor pools.

This sub-project is driven by Risk Reduction, Mortgage Reduction and Compliance Agreements for consolidation of nuclear fuels (See SNF PBS ID-SNF-01,-02,-03,-04,-05,-06 for reference to the Court Order and Agreements).

PURPOSE:

The purpose of this PBS is to reduce the cost and risk associated with surplus non-defense facilities at TRA and PBF which contain nuclear fuel. Deactivation activities include removal of the nuclear fuel stored in the pools at these sites. Deactivation occurs either directly following facility shutdown, or may occur sometime later when funding becomes available. The relationship to other PBS activities is: prior to and during fuel removal deactivation the facility will need surveillance and maintenance (S&M), PBS-ID-OIM-112N. Following completion of the scope in this PBS, these facilities will be turned over to the next phase of Deactivation with that scope of work found in PBS-ID-OIM-110, and S&M, PBS-ID-OIM-112. The facilities will, upon completion of the fuel removal, become defense facilities.

This PBS defines the deactivation activities for the time period from FY1998 through FY2002. The deactivation of surplus non-defense contaminated facilities which fall in this period include reactor buildings at PBF and TRA. These facilities were used for reactor testing and fuel storage. These facility contain large quantities of fissile, hazardous material, and mixed waste in the processing equipment, storage pools, and process cells. The nuclear fuel removal from the pools into dry storage is required to meet settlement agreements, environmental laws, and consent order requirements which will be followed and are not negotiable. Several of these facilities contain RCRA permitted units which must be monitored and maintained to meet Federal Laws.
Justification for deactivation of the facilities in this PBS: - PBF canal, and MTR canal - This sub-project is driven by Risk Reduction, Mortgage Reduction and Compliance Agreements for consolidation of nuclear fuels (See SNF PBS ID-SNF-01,-02,-03,-04,-05,-06 for reference to the Court Order and Agreements).

TECHNICAL APPROCH:

Standard project techniques are applied to each of the sub-projects within this PBS. Initial project evaluation using systems analysis is used to develop an initial concept and a proposed end-point for the activity. Conceptual and Final design process leads to deactivation. Cost estimates are obtained at each stage of design to adjust schedule and budget needs. Cost and schedule are tracked using variance analysis techniques.

· PBF - The fuel element removal design and safety documentation calls for removing the fuel elements from the storage canal, place the elements in a transfer cask and transport them to the ICPP.

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Project Description Narratives

· MTR - Fuel characterization using underwater remote cameras has started. Further design and rework of the safety documentation will be required because of advanced deterioration of the fuel elements. Following fuel removal the canal will be washed down and an air tight cap placed on top.

Current or planned remediation activities are NOT dependent upon EM-50 science or technology development initiatives. However, development of these sciences or technologies could potentially result in schedule and/or cost savings.

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:

This project will be complete at the end of FY2002. The nuclear fuel will have been removed from the following non-defense facilities by the end of FY2002: PBF canal and reactor buildings, ARMF/CFRMF canal and reactor building (FY98), and the MTR Fuel Storage Canal.

Post-2006 Project Scope:

None.

Project End State

The non-defense nuclear fuel storage pools associated with the MTR reactor at the TRA Area and the PBF reactor will have been emptied and the fuel transported to dry storage at INTEC. The nuclear fuel removal from the storage pools into dry storage will meet settlement agreements, environmental laws, and consent order requirements.

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 cost estimate is based upon Activity-Based Cost Estimating. There are no costs assigned to the waste generated as the waste transportation and disposal costs at the INEEL are covered under a separate PBS, and the assumption is that this will continue through the life of the project.

Safety & Health Hazards:

The scope of work associated with this PBS deals with managing, handling, and transporting highly enriched nuclear fuels.

Safety & Health Work Performance:

The work associated with this PBS will be performed in conformance with the requirements found in the approved safety analysis documents used to evaluate the hazards and risks associated with this project.

PBS Comments:

Baseline Validation Narrative:

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Project Description Narratives

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:

Baseline Submission Date:

FEDPLAN Project? Yes

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

Planning Section

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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 Baseline (current year dollars)	5,327	0	5,327					2,421	784	214	1,908	0	0	0	0
PBS Baseline (constant 1999 dollars)	5,170	0	5,170					2,421	763	204	1,782	0	0	0	0
PBS EM Baseline (current year dollars)	5,327	0	5,327					2,421	784	214	1,908	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	5,170	0	5,170					2,421	763	204	1,782	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%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

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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:

Current Projected End Date of Project: 9/30/2006

Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):		**Actual 1997 Cost:**	**Actual 1998 Cost:**
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	0	**Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):**	0
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	0		

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):	5,170	New PBS to identify Non Defense work scope
Cost Growth Associated with Scope Previously Reported (+):		
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	5,170	
Additional Amount to Reconcile (+):	0	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	**5,170**	

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Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Complete Fuel Removal from MTR	ID-OIM-110N-2		9/30/2000		9/30/2001						
Complete Fuel Removal from PBF	ID-OIM-110N-1		9/30/2001		9/30/2002						
Project Start			10/1/1996								
Project Complete			9/30/2006								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critial Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Complete Fuel Removal from MTR	ID-OIM-110N-2										
Complete Fuel Removal from PBF	ID-OIM-110N-1										
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	Planne 200
Fac.														
Deact. During Per.	NF	2.00	0.00	2.00							1.00			1.0

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.													
Deact. During Per.	NF	1.00											

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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
Fac.										
Deact. During Per.	NF									2.00

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
INEL	3133		PBF 620 PBF Reactor Building	\					2004							N		N
INEL	3134		TRA 603 Material Test Reactor (MTR)	\					2001							N		N