

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Rocky Flats**

Site Summary Level: **Rocky Flats Environmental Technology Site**

Project **RF006 / SNM Consolidation Project**

Report Number: **GEN-01b**

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

HQ ID: **0335**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Purpose: The purpose of this project is to manage the intra-site transport of Special Nuclear Material (SNM) metals, oxides, and residues between facilities as necessary for interim storage in Building 371 to reduce Public, Environmental and Worker Safety Risks, excluding Pu Holdup in equipment, gloveboxes, and those ventilation ducts directly connected to the gloveboxes. Consolidation of these materials will also be accomplished through storage optimization in Building 371 to reduce the Site's operating cost until the materials can be shipped off-site through the Shipping Program. Additionally, support will be provided for annual status reporting of the FY1994 Plutonium Environmental Safety & Health (ES&H) Vulnerabilities and the FY1996 Highly Enriched Uranium (HEU) ES&H Vulnerabilities.

Scope: The SNM Consolidation Project will involve:

1. The identification, characterization, and transfer of SNM above Attractiveness Level "D", oxides, and residues not scheduled for processing, from their current storage locations in Buildings 707, 771 and 776/777 to interim storage in Building 371 to enable Buildings 707 and 776/777 to be deactivated.
2. The relocation of SNM within Building 371 to accommodate the transfer of those materials from the other buildings and to accommodate SNM processing within Building 371.
3. Infrastructure activities above the landlord functions that directly support the SNM Consolidation Program.
4. Pu and HEU ES&H Vulnerability annual status reporting to DOE.
5. The characterization, removal, stabilization and storage of SNM above Attractiveness Level "D".

Technical Approach: The relocation activities principally consist of moving the materials from location to location by standard operational procedures within nuclear safety, industrial safety and nuclear security constraints. The building operational functions are described in the cluster projects.

The SNM Management activities involve scheduling, prioritizing, and monitoring the processing activities and collecting and archiving process data.

Project Status in FY 2006:

This project will be completed.

Post-2006 Project Scope:

No activities are currently scheduled to occur after 2006 for this project.

Project End State

This project is complete when the last SNM above Attractiveness Level "D" no longer needs to be consolidated and can be managed by the appropriate SNM Processing project (I.e., PuSPS, Residues).

Dataset Name: **FY 1999 Planning Data**

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

Page 1 of 7

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Cost Baseline Comments:

Cost estimates are based on assumptions and data developed by the technical groups that have responsibility for managing the work. To the extent practical, all cost estimates are Activity-Based Costs (ABC) and tied directly to a defined and detailed work scope. The estimates are developed at the activity level and are further divided into line items. Line items represent individual resource contributions to activities and are the lowest level of input to the planning system. Once the cost estimate is developed, each activity is evaluated for cost, technical and schedule risk and the appropriate contingency is determined. Detailed estimates and the basis of estimates (BOEs) for the 2006 Closure Plan are available at the Site.

Safety & Health Hazards:

The principle hazards in the SNM Consolidation Project are radiological, criticality, chemical, and other standard industrial hazards commonly found in Pu buildings at RFETS. Most of these hazards will exist throughout the project and are related to SNM material movement, maintenance, surveillance, inspection, storage optimization, and some system upgrades. These hazards will be analyzed and categorized in accordance with the RFETS Safety and Health Program infrastructure policies, manuals, and procedures. Specific details on quantities and locations are described in the classified inventory and mapping plan maintained by SSOC.

Safety & Health Work Performance:

This project will be completed within the RFETS Safety and Health Program and within the controls and authorization basis documents defined above to ensure the safety and health of the worker, public and the environment. RFETS has implemented an integrated safety management system consisting of the following elements: Integrated Work Control Program (IWCP), radiological safety, criticality safety, emergency management, fire safety, industrial hygiene, nuclear safety, occupational medicine, occupational safety, safeguards and security, safety integration, performance oversight, and standards management. RFETS provides site wide infrastructure programs for each functional area to establish consistent safety standards and support for this project. Safety and health success results from the efficient and effective implementation of these programs. This project is responsible for ensuring that the necessary elements of the safety and health programs are incorporated into the specific project plans and implementing documents, and that an appropriate Readiness Determination and Safety Evaluation Screen (SES)/Unreviewed Safety Question Determination (USQD) have been performed.

PBS Comments:

The SNM Consolidation project provides the methodology, management, and resources for transferring Category I and II SNM and packaged residues to existing or new buildings that are more structurally sound. Interim intra-site transfers are also performed to enable more efficient stabilization operations and to accelerate mortgage reduction. SNM consolidation in each nuclear building is complete when all Category I and II SNM has been removed and the Material Access Area (MAA) eliminated. The project also conducts radiological surveys to determine if all Category I and II SNM has been removed from equipment and gloveboxes in each process area.

The removal of the remaining Category I and II material held up in the equipment and gloveboxes in the processing areas of the nuclear facilities is managed by this project with funding assigned to each individual cluster project (WBS 1.1.06.xx.02). This activity is a precursor to and overlaps deactivation and is delayed because of the site's funding constraints. Any remaining SNM hold-up is removed during deactivation.

Dataset Name: **FY 1999 Planning Data**

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

Page 2 of 7

Project Baseline Summary Report

Data Source: **EM CDB**

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Project Description Narratives

Baseline Validation Narrative:

Although the 2006 Closure Plan has not been officially validated, it has undergone a high level review by Rocky Flats Field Office (RFFO) and Headquarter personnel. Current independent validation efforts include the following: 1) RFFO has contracted an independent firm to perform a baseline confidence review of the 2006 Closure Plan by the end of FY99, and 2) the Office of Field Management (FM) has contracted a big-five accounting firm to validate the 2006 Closure Plan.

In addition to the 2006 Closure Plan validation efforts, results/recommendations from several previous baseline validation efforts were used in the development of the 2006 Closure Plan. These validations included: 1) The U.S. Army Corps of Engineers (USACE) performed a validation of the Rocky Flats Ten Year Plan in FY97/FY98, 2) Kaiser-Hill contracted Price Waterhouse Coopers, LLP to conduct an independent validation effort of the 2010 Closure Project Baseline that concluded in May of FY99, and 3) Kaiser-Hill engaged Arthur Andersen, LLP to conduct a schedule and cost risk review of the 2010 Closure Project Baseline.

General PBS Information

Project Validated?

Date Validated:

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	Y	N	N	Y	Y	N

Project Identification Information

DOE Project Manager: Jessie Roberson

DOE Project Manager Phone Number: 303-966-2263

DOE Project Manager Fax Number: 303-966-4775

DOE Project Manager e-mail address: ten.year.plan@rfets.gov

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

Planning Section

Dataset Name: **FY 1999 Planning Data**

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

Page 3 of 7

Project Baseline Summary Report

Data Source: **EM CDB**

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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)	8,276	0	8,276	2,356	2,356	2,801	2,801	2,001	879	41	45	47	49	57	0	
PBS Baseline (constant 1999 dollars)	8,232	0	8,232	2,356	2,356	2,801	2,801	2,001	856	39	42	43	44	50	0	
PBS EM Baseline (current year dollars)	8,276	0	8,276	2,356	2,356	2,801	2,801	2,001	879	41	45	47	49	57	0	
PBS EM Baseline (constant 1999 dollars)	8,232	0	8,232	2,356	2,356	2,801	2,801	2,001	856	39	42	43	44	50	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%

Dataset Name: **FY 1999 Planning Data**

Page 4 of 7

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

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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: 11/1/2013

Current Projected End Date of Project: 9/28/2005

Explanation of Project Completion Date Difference (if applicable):

Scope Deletion

Efficiencies

New Scope

Cost Growth

Science & Technology

Other

The scope of work and end state conditions for the 2006 Plan are similar to the current 2010 Baseline, with a four-year acceleration and a reduction in cost being the two most significant differences. The bottom-up estimate for the 2006 Plan is a \$1.65 billion improvement over the comparable activity-based bottoms-up detail estimate for 2010.

To close the Site four years earlier than the current 2010 Baseline requires a strategically different approach. The two key principles followed in preparing the 2006 Baseline were: 1) safely reducing the urgent risks first, and 2) performing work in a sequence that reduces or eliminates operations, maintenance and security costs (often referred to as - mortgage costs) as early as possible. Key to the 2006 Baseline approach is early closure of the secured Protected Area. Closing the Protected Area as soon as possible means that the high security and maintenance costs for this area can be redeployed to accelerate other closure activities. In addition, D&D and SNM risk reduction activities will be performed simultaneously rather than sequentially, supporting both the risk reduction and mortgage reduction principles. The D&D of non- and lower-contaminated facilities and most environmental remediation work will be deferred until later in the project to allow resources to be focused in the areas that result in the greatest reduction in risks and mortgage costs.

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	49,598	Actual 1997 Cost:	2,356	Actual 1998 Cost:	2,801
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	44,441	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			1,200
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	45,641				

Dataset Name: **FY 1999 Planning Data**

Page 5 of 7

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

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Project Reconciliation

Project Cost Changes

Cost Adjustments Reconciliation Narratives

Cost Change Due to Scope Deletions (-):

Cost Reductions Due to Efficiencies (-):

Cost Associated with New Scope (+):

7,380 Rebaselining due to acceleration. New scope dollar estimate is not of audit quality.

Cost Growth Associated with Scope Previously Reported (+):

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

Subtotal:

53,021

Additional Amount to Reconcile (+):

-49,946

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

3,075

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
FY98-T9 Close 3 Pu ES&H Vulnerabilities	RF-0162		9/30/1998	9/30/1998	9/30/1998		Y				
FY99-T5 Remove Solid Cat I & II SNM B776/777	RF-0254		9/30/1999		9/30/1999						
Complete PBD 006 - SNM Consolidation Project	RF-OTHE-06		9/28/2005		9/28/2005					Y	
PBD006 Project Start			10/1/1997								

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
FY98-T9 Close 3 Pu ES&H Vulnerabilities	RF-0162										Rocky Flats Clean-up Agreement (RFCAs) Milestones
FY99-T5 Remove Solid Cat I & II SNM B776/777	RF-0254	Y									Rocky Flats Clean-up Agreement (RFCAs) Milestones

Dataset Name: **FY 1999 Planning Data**

Page 6 of 7

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

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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 PBD 006 - SNM Consolidation Project	RF-OTHE-06				Y	Y					Kaiser Hill Internal (KHIs) Milestones
PBD006 Project Start				Y							PBD006 Project Start