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United States Government **Department of Energy**

nemorandum

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DATE:

REPLY TO
ATTN OF: (Signed 10/20/97)EM-70 (D. Hosaflook 202-586-8754)

SUBJECT: Draft 2006 Plan Guidance

TO: Distribution

The attached 2006 Plan Guidance Addendum is a follow-up to the Office of Environmental Management's (EM's) September 19th Draft 2006 Plan Guidance. With these changes, the guidance is now complete. Our expectation is that this guidance will be a major step toward implementation of the Integrated, Planning, Accountability, and Budgeting System (IPABS), and will result in the development of a highly credible and successful Draft 2006 Plan.

It is vitally important to the success of the EM cleanup mission that the Draft 2006 Plan receive broad-based support and endorsement by Congress and the public. The Discussion Draft received much criticism, with Congress making the following statements in the House Appropriations Bill:

> "The Committee is extremely discouraged by the Department's failure to issue a supportable Ten-Year Plan for completing cleanup of the Environmental Management sites. The Committee views the repeated delays by the Department to provide a Ten-Year Plan as symptomatic of broad, cultural problems that require aggressive, institutional changes.
>
> ... Therefore, the Committee directs the Department to produce and deliver to Congress a Ten-Year Plan along with their Fiscal Year 1999 Budget. The Ten-Year Plan must provide at a minimum for each site, projects that contain a defined scope of work and end state, interim milestones, and validated costs and schedules, including identifying what scope will be completed through fiscal year 2006 and after fiscal year 2006."

In addition, EM has received comments on the Discussion Draft from Tribal Nations, regulators, states, and other stakeholders. The guidance has been modified to reflect these comments and concerns, and, where applicable, the guidance addresses these comments specifically. One comment that is of particular focus in the new guidance is that of data quality. The Secretary of Energy's Office, the Environmental Management Advisory Board (EMAB), and the National Governor's Association (NGA), among others, highlighted the importance of improving data quality and data completeness.

The Draft 2006 Plan needs to demonstrate that EM: (1) has developed a clear, accelerated path forward for closure of all EM sites (i.e., a "critical closure path"); (2) has an integrated disposition plan for all waste or materials (or a path forward for determining disposition); (3) has an integrated cost, scope, and schedule baseline that is well founded and technically defensible;

(4) has well-defined enhanced performance targets against which progress can be measured; and (5) is actively pursuing a range of business strategies to further reduce life-cycle cleanup costs.

As shown in Section 1.2 of the guidance; the schedule for the development of the Draft 2006 Plan is on a fairly fast pace. Headquarters is committed to working with the Field, stakeholders, and Tribal Nations in an iterative fashion so that there is consistency between the Site and National Draft 2006 Plans and to ensure that the views of stakeholders and Tribal Nations are fully and accurately represented. Operations/Field Office Data Summaries (ODSs), Site Summary Levels (SSLs), Project Baseline Summaries (PBSs), and disposition maps (with waste inventory data) are due to Headquarters by November 26, 1997. By December 5, 1997, your entire Site Draft 2006 Plan is due to Headquarters.

As part of the continuing 2006 Plan dialogue between Headquarters, the Field, stakeholders, and Tribal Nations, submittals will be discussed and data can be changed until December 18, 1997, at which time the EM corporate database will close. The December 18, 1997, data is to be used by the Field and at Headquarters to finalize the National and Site Draft 2006 Plans.

The FY 2000 budget formulation process will also be initiated with this data submission. It is our intent to update only the FY 2000 Integrated Priority List (with programmatic drivers) and budget narratives in a March 1998, limited update to the data. (A broader update could be required if the Office of Management and Budget (OMB) passback is significantly different from the planning targets provided in this guidance.)

The site workouts held to date (i.e., Richland, Savannah River, Carlsbad, and Idaho) have highlighted the need to minimize data requirements and the frequency of updates to reduce associated costs. Our intention is to limit the frequency of major data requests to once a year. This update is currently scheduled to occur each fall, which will enable us to finalize the OMB budget submission, collect cost and quantity actuals for the prior year, establish current year management commitments, initiate formulation activities for the next budget formulation year, update the 2006 Plan, conduct national analyses, prepare National reports and respond to inquiries from EMAB, NGA, Congress, other stakeholders, and Tribal Nations . This once-per-year data request format is an opportunity to free resources to accelerate work during the remainder of the year.

A summary of the key elements of the new guidance include the following:

- Several top-level project management tools have been added to this version of the 2006 Guidance in response to Congressional and other stakeholder concerns regarding the need for DOE to demonstrate a coherent, systematic, and integrated approach to clean-up across the complex. We believe these project management tools will also help address stakeholder concerns relative to providing a mechanism for early, meaningful public involvement. In addition to addressing stakeholder concerns, we also expect that these management tools will significantly enhance the overall effectiveness of IPABS as a corporate management system.

- Disposition Maps. These maps provide top-level conceptual approaches for how each waste type will be managed from storage through treatment and disposal, including annual shipments off-site. Where agreement between shippers and receivers have not been reached, the Disposition Maps will use the designation "TBD" with accompanying information on the path forward, including stakeholder involvement, provided in an attachment to the Site Plans.

- Critical Closure Path. This diagram shows for each site -- given current funding, compliance, and performance conditions -- the specific project activities, sequence, and schedule that control the earliest date to closure of EM activities at the site. Delay in a critical closure path activity will delay the closure of the site; similarly, acceleration of the site closure date can occur only if the acceleration occurs with critical closure path activities. The critical closure path is directly derived from the current baseline.

- Programmatic Risk Management Plans. For all critical path projects and other key projects and site activities, we have asked sites to provide an assessment of programmatic risk to -- cost, scope, and schedule -- from uncertainties in technology, work scope definition, and inter-site dependency. Programmatic risks are designated by site project managers from Low (1) to High (5). For high Programmatic Risks (4,5), sites are expected to develop Programmatic Risk Management Plans that describe the programmatic risk and provide a resolution path and schedule, including contingencies and alternate back-up approaches, as appropriate. Sites are expected to provide programmatic risk information from current time out to project completion for critical path and other key project activities.

- This submittal will require only one set of PBSs. PBSs should reflect the current baseline at the site. Additional supporting documentation should be available at the site to support the information provided in the PBS. Site baselines should show/reflect/include only known enhanced performance.

- Each Operations/Field Office will be measured against enhanced performance targets identified in the guidance. Enhanced performance will be tracked uniformly across sites and is the key to life-cycle cost reductions.

- It is expected the site goal will be to achieve the scope included in the baseline within the funding targets provided. If your current baseline exceeds your allocation of the $5.75 billion funding target, it should be the site goal to achieve the closure objectives within the funding constraints through the implementation of enhanced performance.

- Each Operations/Field Office will be required to submit, as part of their ODSs, a life-cycle cost and site closure analysis associated with a $5.75B case with all enhanced performance targets. In no year can the funding requirements for the case with full enhanced performance exceed the funding constraints provided in the guidance.

- For this update, EM will collect budget authority (BA) data for FY 1997 to FY 2000 at the SSL according to the same budget and reporting (B&R) code structure (by category and subcategory) that was used for the August 1, 1997, Limited Update. EM is evaluating the B&R codes as they currently stand to see if any streamlining opportunities are available. In addition to BA by B&R code at the SSL, EM will collect BA data at the PBS level by appropriations account only.

- Pollution Prevention is an area where we expect to reduce overall reporting requirements for the Operations/Field Offices. Specifically, we believe that data currently requested in the PBSs can replace, in its entirety, data now requested by a separate EM information call on waste reduction and other aspects of pollution prevention.

Questions or concerns regarding this guidance should be directed to Gene Schmitt at (202)586-8754 or your staff may call Dave Pepson at (202)586-1596. Copies of the final guidance, with all of the changes incorporated, will be available both electronically and in hard copy. Please call Dennis Hosaflook at (202)586-7685 if you need a copy.

Alvin L. Alm
Assistant Secretary for
Environmental Management

Attachment

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Manager, Chicago Operations Office
Manager, Idaho Operations Office
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2006 PLAN UPDATE

Status of Environmental Management's 2006 Plan Vision and Status of Implementation

The purpose of this update is to describe the current status of the Office of Environmental Management's (EM's) 2006 Plan and to announce the availability of the Draft 2006 Plan guidance issued under Assistant Secretary Al Alm's signature on October 20, 1997.

ENVIRONMENTAL MANAGEMENT'S 2006 PLAN VISION

In July 1996, to reconcile the pressing need to reduce spending in the short term while reducing both economic and environmental liabilities in the long term, Assistant Secretary Alm articulated a vision for the EM program of completing as much cleanup as possible by 2006. The 2006 Plan vision is designed to accelerate the cleanup of EM sites, thereby reducing the overall life-cycle costs of the EM program while maintaining EM's commitment to be in full compliance with all applicable environmental and legal requirements. When developing the 2006 Plan vision (originally the Ten-Year Plan vision), EM recognized that, at the major sites, numerous activities would continue beyond 2006. In fact, at the Hanford Site in Washington, the Idaho National Engineering and Environmental Laboratory, and the Savannah River Site in South Carolina, approximately half the costs will be incurred after 2006 for treatment and disposal of high-level and transuranic waste. Although those activities will not be completed by 2006, one of the primary goals of the 2006 Plan is to reduce the outyear mortgage costs of such activities.

Even after completing cleanup, EM will maintain a presence at most sites to ensure that the reduction in risk to human health and the environment is maintained. Such "long-term stewardship" will include passive or active institutional controls and, often, treatment of groundwater over a long period of time. The extent of long-term stewardship required at a site will reflect the end state developed in consultation among the Department of Energy (DOE) and other representatives of the Administration, Congress, Tribal Nations, states, regulators, and other stakeholders.

STAKEHOLDER INVOLVEMENT

Implementing the 2006 Plan vision poses challenges that will require input and cooperation from Tribal Nations, states, regulators, and other stakeholders in order to develop a highly credible and successful 2006 Plan. If EM, Tribal Nations, states, regulators, and other stakeholders can continue to work together toward developing the future of the EM program, by means of an ongoing process of meaningful public involvement, the program will be better able to preserve its momentum by retaining support, both in Congress and among the public. Assistant

Secretary Alm is strongly committed to providing Tribal Nations, states, regulators, and other stakeholders with ample opportunities to provide meaningful input into future 2006 Plan activities.

PROGRESS TO DATE

Site draft plans were first prepared in July 1996. In response to a wide range of stakeholder input on the July plans, including the need that EM provide more time and a more disciplined process for public participation in the 2006 planning process, the *Accelerating Cleanup: Focus on 2006* Discussion Drafts (hereafter referred to as Discussion Drafts) were developed. On June 12, 1997, the Discussion Drafts were released to Congress and the public for a 90-day comment period.

The National Discussion Draft, which was based on the review and analysis of eleven Site Discussion Drafts, indicated that it would take significant effort to cleanup most sites by 2006, but that the goal was feasible if the program could become more efficient. Assistant Secretary Alm challenged EM sites to undertake a number of productivity improvements that would allow the program to achieve its goals. The productivity improvements would allow the program to achieve full compliance and to complete 12 percent more work by 2006 within the same budget.

The National and Site Discussion Drafts were distributed to interested parties to elicit their comments on the goals and strategies of the 2006 Plan and to provide input on how those strategies should be implemented. In particular, EM wished to obtain the viewpoints of Tribal Nations, states, regulators, and other stakeholders on strategic approaches for accomplishing compliance and completion goals and whether the Discussion Drafts articulated the appropriate management strategies to accomplish those goals.

Comments received on the National Discussion Draft were used in helping to formulate the recently issued guidance to be used by sites in developing their Draft 2006 Plan. Specifically, based on comments received, several management tools have been added in response to stakeholder concerns regarding the need for EM to demonstrate a coherent, systematic, and integrated approach to cleanup across the complex.

- To ensure that Draft 2006 Plans are based upon defensible data, each Operations/Field Office is required to provide baselines that have significant supporting documentation and have been validated or have a proposed schedule for validation. Validation and formal change control will enhance EM's understanding and knowledge of each project and lead to improved data quality.

- To develop better quality waste integration data, each Operations/Field Office is to provide a site disposition map and detailed waste inflows/outflows summary tables. In addition, sites will be required to discuss waste disposition plans with the expected receiving site(s) to ensure consistency in shipping/receiving volumes.

- In response to the concern over the enhanced performance estimates in the Discussion Draft, EM has designed quantitative data collection methods to

demonstrate enhanced performance cost savings over time. Enhanced performance will be measured and tracked systematically and uniformly across sites and is the key to life-cycle cost reductions.

- Each Operations/Field Office is to prepare a detailed critical closure path chart that outlines the schedule of high-level activities, events, and/or decisions that must occur on schedule to achieve the site's projected closure date.

To steer the implementation of the 2006 Plan vision, EM has begun the process of transitioning to a more streamlined, focused management system--the Integrated Planning, Accountability, and Budgeting System (IPABS). The IPABS integrates planning, budgeting, and execution activities across the EM program.

The Draft 2006 Plan guidance is integral to the implementation of IPABS and will result in the development of a highly credible and successful Draft 2006 Plan. It is EM's intention, through issuance of the Draft 2006 Plan , to demonstrate that the program: (1) has developed a clear, accelerated path forward for closure of all EM sites (i.e., a critical closure path); (2) has an integrated cost, scope, and schedule baseline that is well founded and technically defensible; (3) has well-defined enhanced performance targets against which progress can be measured; and (4) is actively pursuing a range of business strategies to further reduce life-cycle cleanup costs.

NEXT STEPS

Key milestones currently scheduled which will lead to the issuance of the Initial 2006 Plan are:

November/December 1997

Issuance of a Comment Disposition document indicating how comments received on the National Discussion Draft will be addressed in the National Draft 2006 Plan.

February 1998

Issuance of National and Site Draft 2006 Plans to Congress and the public.

March/April 1998

Comment period (45-days) ends on the Draft 2006 Plans.

Late June 1998

Issuance of National and Site Initial 2006 Plans to Congress and the public.

HOW TO OBTAIN A COPY OF THE DRAFT 2006 PLAN GUIDANCE

The guidance can be obtained by contacting the Center for Environmental Management Information at 1-800-7EM-DATA or by contacting a local DOE site representative. The 2006 Plan World Wide Web home page will also be updated to include the latest guidance package; the Internet address is http://www.em.doe.gov/acc2006.

Addendum with Substantive Changes to Draft Version 4.0 of the 2006 Plan Guidance
(dated September 19, 1997)

Section or Attachment	Reference	Change Description
General	NA	The Guidance previously included several incorrect cross-references to attachments and section numbers. These references have been corrected. Other typographical errors have been corrected and editorial comments have been incorporated.
Section 3.0 National Planning Assumptions	First Bullet: Funding Constraints	The budget allocation table for the $5.75 billion funding scenario has been revised. The new table, included in the National Planning Assumptions section, provides revised BA targets for each Operations/Field Office through FY 2006. The revised Guidance also includes FY 1999 budget allocation tables for the $5.0 billion, $5.5 billion, and $6.0 billion funding scenarios, required for the IPL.
Section 3.0 National Planning Assumptions; and Attachment E SSL	Last Bullet: Site Completion S.7	For purposes of reporting "Completion Dates," the Guidance provides a modified definition of "completion." With respect to groundwater contamination, EM now assumes a site is "complete" when: • Groundwater contamination has been contained, ~~and~~ **or** long-term treatment or monitoring is in place.
Section 4.0 Budget; and Attachment E SSL	S.11	BA by B&R code will be collected at the Site Summary Level. The B&R code structure will remain the same as it was for the August 1, 1997, Limited Update to the PBSs, except that data will be collected at the Site Summary Level. EM is evaluating potential streamlining opportunities in the current B&R code structure and will provide updates to the Field if necessary. (BA by Appropriations Account will still be collected in the PBS.)
Section 9.0 Business Strategies	9.3 9.5.2 9.5.4 and 9.6.2	This section was updated to reflect the fact that ALL waste and materials metrics, with the exception of FY 1997 actuals, will be developed from the Consolidated PBS Quantity tables. Guidance on developing disposition maps and the Consolidated PBS Quantity Tables has been improved (see also Attachment G below). Guidance on Shipping/Receiving Transfer Data has been revised for shipping sites that have not yet determined a receiving site (i.e., "TBD"s). The revised Guidance provides additional discussion on approval of the Final WIPP Supplemental EIS for Disposal Operations, as it relates to the WM PEIS and the National Transportation Program.
Section 14.0 Action Plans	14.0	Guidance on Programmatic Risk Action Plans was updated to mention that each Action Plan should only generally be one or two pages long.

Addendum with Substantive Changes to Draft Version 4.0 of the 2006 Plan Guidance
(dated September 19, 1997)

Section or Attachment	Reference	Change Description
Attachment A Site Plan Outline	Section III	A Science and Technology Overview has been added to Section III of the Site Plan Outline.
	Appendix	The Site Plan Outline now includes an Appendix for providing an outline of the site's Technology Deployment Management Plan. Guidance on the preparation of this outline and development of the Management Plan is still provided in Attachment M.
Attachment B	PBS List	The revised and approved project structure is now provided in Attachment B.
Attachment D PBS	A.2.3	Guidance on the Technical Approach Narrative in the PBS has been revised to include, where possible, identification of associated STCG Needs and opportunities for the deployment of emerging technologies.
	A.4	Category VII. Special Case Waste has been eliminated as a Performance Metric from Table A.4.
	A.4	1998 and 1999 waste/material metric data will not be collected in Table A.4 of the PBS. Rather, these data will be derived from the Consolidated PBS Quantity Tables that are tied to the disposition maps.
	A.5	A table is provided for entering performance metrics data for release sites and facility decommissioning. Data from this table will automatically feed the Table A.4. This is one of the first steps toward integrating programmatic databases into IPABS. For example, release sites and facility data will no longer be collected in the EM-40 Core Database.
Attachment E SSL	S.2	The request for site narratives was revised to include an update for March 15, 1998. The November 26, 1997, narrative will discuss Plan objectives (closure date, high visibility project life-cycle cost, end dates, and metrics). The narrative will be updated in March to include the number of projects at the site, a description of how the projects are managed, the number of high visibility projects a the site and a description of each, a discussion of how the metrics are derived from the PBSs, and a discussion of accomplishments and issues by each reported B&R code.
	S.10	Guidance no longer requests 1997 Actual Costs in the SSL. Actual cost for FY 1997 will be collected in the PBS.
	S.13	Guidance includes minor revisions to the definitions for programmatic risk categories 3, 4, and 5. Guidance on Critical Closure Path and Critical Events has been revised to include identification of associated STCG Needs. The "Other" column has been deleted as a Programmatic Risk Category from Table S.13.

Addendum with Substantive Changes to Draft Version 4.0 of the 2006 Plan Guidance
(dated September 19, 1997)

Section or Attachment	Reference	Change Description
Attachment G		Instructions for completing disposition maps and consolidated quantity tables have been substantially revised. The disposition maps will be used to generate the Consolidated PBS Quantity Tables, from which performance metrics will be derived. Guidance on the disposition maps has been revised to include identification of associated STCG Needs.
Attachment H		Attachment was updated to include both a valid list of B&R codes and a template that demonstrates how the EM budget will be presented using the data provided in the PBSs and the SSLs.
Attachment N		Guidance was updated to state that it is not anticipated that Action Plans will be longer than one or two pages.

2006 Plan Guidance

October 20, 1997

Update Version 5.0

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Table of Contents

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1.0 Overview

1.1 Introduction: Objectives and Goals

Headquarters (HQ) has developed the 2006 Plan Guidance package to assist the Field in implementing the Draft National 2006 Plan vision. This guidance provides the framework for preparing Draft Site 2006 Plans and updating the data provided in support of the June 1997, Discussion Draft. An important priority of this guidance is to address Congressional, stakeholder, Tribal Nation, and regulator comments on the Discussion Draft. The data submitted in response to this guidance will be used to develop the Draft National 2006 Plan and the FY 2000 budget and to implement the Integrated Planning, Accountability, and Budgeting System (IPABS).

The Draft National 2006 Plan will build upon the Discussion Draft and its supporting data. The Draft National 2006 Plan development process will focus on improving the quality of the data submitted on February 28, 1997, and on ensuring that assumptions are adequately supported. The House Appropriations Bill stated that the Discussion Draft was "at best a high-level document that can be used to initiate discussions with stakeholders" and that the "document cannot be supported by the details, that it is not based on budget quality data, and that after a year of planning, the Department is only at the initial planning stages." The Draft 2006 Plan data update will go a long way toward resolving these concerns through an organized and thorough data collection and analysis process.

The Office of Environmental Management (EM) has developed specific objectives that, when implemented as part of the 2006 planning process, will address Congressional, regulator, stakeholder, and Tribal Nation concerns:

- To ensure that the Draft National 2006 Plan is based upon defensible data, EM has improved the guidance for baseline development. This document provides the Field with guidance on developing a credible baseline. Further, the Field is required to validate baselines and to report certain baseline changes to Headquarters.

- The Discussion Draft data submitted on February 28, 1997, contained large data discrepancies particularly with respect to waste shipping and receiving data. This issue has been of great concern to the National Governors Association (NGA) and other affected stakeholders and Tribal Nations. For this update, shipping sites are required to secure prior agreement from receiving sites for all waste that they plan to send. This requirement will ensure that waste volumes reported in the Draft National 2006 Plan will be consistent between the shipping and respective receiving sites.

- EM will follow up on enhanced performance estimates made in the Discussion Draft with data collection designed to demonstrate enhanced performance cost savings over time. Enhanced performance will be measured and tracked systematically and uniformly across sites.

This guidance provides detailed instructions for completing Project Baseline Summaries (PBSs), Site Summary Levels (SSLs), Operations/Field Office Data Summaries (ODSs), and Draft Site 2006 Plans.

If you have any questions regarding this guidance, contact Dave Pepson at (202)586-1596.

1.2 Schedule

The IPABS development process requires the Field to provide major updates to PBS data only once per year (currently scheduled for every November) in accordance with guidance transmitted to the Field under Assistant Secretary Alm's signature on October 20, 1997. This update will include budget information for the formulation year, a revised FY 1999 integrated priority list, revisions to planning/baseline information as required, Management Commitment information, and actuals (cost and quantity for FY 1997). Some additional data (i.e., the FY 2000 integrated priority list and compliance drivers, revised site narratives, and revised PBS budget narratives) will need to be provided in March. March deliverables will be based upon updated budget targets used to support budget formulation as required by the Office of Management and Budget (OMB). At all points in the IPABS development process, the Field should work with stakeholders and Tribal Nations to develop the data for their PBSs. The following schedule, based upon acceptability from OMB, stakeholders, and Tribal Nations on the proposed metric ranges, is projected as the annual IPABS process. Please note that this is a proposed schedule and dates are subject to change.

<table>
<tr><th>DATE</th><th>2006 PLAN</th><th>BUDGET</th><th>PERFORMANCE EVALUATION</th><th>STAKEHOLDERS</th></tr>
<tr><td>September 9, 1997</td><td>Comment period for Discussion Draft ends</td><td></td><td></td><td>Initial development</td></tr>
<tr><td>September 9 - November 26, 1997</td><td colspan="4">Sites initiate stakeholder involvement to develop a full set of PBSs</td></tr>
<tr><td rowspan="2">September 30, 1997</td><td colspan="2">Changes to PBS project structure approved</td><td></td><td rowspan="6">Initial development</td></tr>
<tr><td></td><td>FY 1999 budget submitted to OMB in phases</td><td></td></tr>
<tr><td>October 3, 1997</td><td></td><td>Crosswalk approved for approved project structure changes</td><td></td></tr>
<tr><td>October 20, 1997</td><td colspan="2">Final Draft 2006 Plan/FY 2000 PBS Update Guidance released</td><td></td></tr>
<tr><td>October/ November 1997</td><td></td><td>FY 1998 Appropriations are available by Site</td><td></td></tr>
<tr><td>November/ December 1997</td><td>Release of Comment Disposition Document</td><td></td><td></td></tr>
</table>

DATE	2006 PLAN	BUDGET	PERFORMANCE EVALUATION	STAKEHOLDERS
November 26, 1997	Full PBS data submittal due to Headquarters. This will be used to cleanup FY 1999 data and to report FY 1997 cost and quantity actuals. Draft Site 2006 Plan narrative due to Headquarters.		Establish Management Commitments for FY 1998 based on data provided in the PBSs	Sites continue their discussions through the data refinement period
	Begin to develop Draft National 2006 Plan	FY 2000 budget formulation process begins at Headquarters		
Late November 1997		FY 1999 OMB budget decisions passed back to the Department		
December 1997	Freeze Corporate EM database		Year-End QMR based on actuals submitted on PBSs	
Late December 1997		Mid-course correction information sent to Field with updated budget targets		Feedback to stakeholders and Tribal Nations
February 1998	Submit Draft National 2006 Plan to Congress and the public	Submit FY 1999 Congressional budget	1st Quarter QMR	
March 1998	45-day comment period ends on Draft National 2006 Plan			
March 15, 1998		Submit FY 2000 budget data (IPL, narratives)		Ongoing stakeholder involvement
May 1998			2nd Quarter QMR	Ongoing stakeholder involvement

DATE	2006 PLAN	BUDGET	PERFORMANCE EVALUATION	STAKEHOLDERS
Late May 1998		EM management decisions regarding FY 2000 formulation		Ongoing stakeholder involvement
Early June 1998		IRB submitted to DOE Controller		
Late June 1998	Initial Draft National 2006 Plan released			
August 1998			3rd Quarter QMR	
August 7, 1998		Departmental deliberations on FY 2000 budget completed		
August 31, 1998	FY 2001 PBS update guidance issued			
September 1, 1998		FY 2000 budget submitted to OMB		
November 1998			Year-End QMR	
November 13, 1998	Full PBS submission, which will be used to cleanup FY 2000 data, formulate FY 2001 budget, develop Rev 1 Draft National 2006 Plan, and report FY 1998 cost and quantity actuals		Establish Management Commitments for FY 1999	
November 25, 1998		FY 2000 OMB budget decisions passed back to the Department		
February 1999	Rev 1 Draft National 2006 Plan to Congress	Submit FY 2000 Congressional budget	1st Quarter QMR	

1.3 IPABS: The Integrated Accountability, Planning, and Budgeting System

EM is currently developing the Integrated Planning, Accountability, and Budgeting System (IPABS), a business management process that will be used within EM for planning, budgeting, performance measurement, and related functions. EM is also developing an information system that will support the IPABS business management process. One of the primary goals of IPABS is to restructure and streamline formerly independent pieces of the EM program's current management structure into one cohesive system.

The project-based IPABS will integrally link the planning, accountability, and budgeting functions so that yearly budgets reflect the annual planned project cost and performance metrics. IPABS places a heavy emphasis on sites providing a clearly defined path forward for the management of waste/nuclear material/contaminated media using disposition maps. Equally important to EM is the development of sound, integrated baselines that define the cost, scope, and schedule for all activities described in the disposition maps. Other project management tools include critical path closure diagrams (i.e., diagrams that identify schedule that, given current funding, performance, and compliance conditions, constitute the earliest projected closure data for the site) and the use of Programmatic Risk Management Plans (i.e., management plans designed to mitigate risk in current activities and consider alternatives so as to minimize cost over-runs or schedule disruptions for high programmatic risk activities).

The Project Baseline Summary (PBS) describes the major management characteristics of an individual project. The PBS functions as the primary source of project information and is the main working document for budget formulation. The PBS is also used to collect, record, and track project performance information.

IPABS implementation began with the February 28, 1997, PBS submittal. With each update, including the Limited Update of August 1, 1997, to support FY 1999 budget formulation, the evolution of IPABS continues. Currently, IPABS is a Microsoft Access relational database updated with spreadsheets. The IPABS system, when finalized, will be fully integrated and directly updatable. The transition to full implementation of the IPABS will occur over the next 12-18 months during the finalization of the initial Draft National 2006 Plan. Some systems, such as the Activity Data Sheet (ADS) system as it is used for budget formulation, have already been phased out as a part of the IPABS effort. Others, such as the Progress Tracking System (PTS), will remain in place until the IPABS can effectively replace them.

Some program-specific data requirements have been included in this data collection effort and will be eliminated elsewhere. Other program-specific data needs will still be updated through existing systems. However, these updates will be completed only once a year (this fall) and must be consistent with 2006 Plan data provided in response to this guidance. All EM data requirements are undergoing a thorough review for additional streamlining and integration under the direction of EM's Chief Information Officer (CIO). Next year's data call will reflect the results of this thorough data requirements review.

It is important to note that although the transition will occur as expeditiously as possible, several important areas will not be integrated at this time. Specifically, FY 1997 and FY 1998 budget execution will occur using the ADS and the PTS.

2.0 Field Deliverables

2.1 Site Plans

Each Operations/Field Office is required to prepare a Draft Site 2006 Plan in accordance with the Site Plan outline in Attachment A. The following Site Plans must be prepared:

- Albuquerque Operations Office (including UMTRA and Grand Junction Office)
- Carlsbad Area Office
- Chicago Operations Office
- Idaho Operations Office
- Nevada Operations Office
- Oakland Operations Office
- Oak Ridge Reservation, Paducah, Portsmouth, Weldon Spring
- Ohio Field Office
- Richland Operations Office
- Rocky Flats Field Office
- Savannah River Operations Office

All information in the Site Plan must be consistent with data provided in the Project Baseline Summaries (PBSs), Site Summary Level (SSL), Operations/Field Office Data Summary (ODS), and Consolidated PBS Quantity Table.

Operations/Field Offices that consist of multiple sites may submit multiple Site Plans. Any proposed modifications to the above list should be approved by Gene Schmitt. Site Plans are due to Headquarters on December 5, 1997.

2.2 PBSs, SSLs, ODSs, and the Consolidated PBS Quantity Table

Four levels of information will serve as the major method for submission of data to Headquarters:

1. Project Baseline Summary (PBS) - one for each approved Draft 2006 Plan project (see Attachment B for a complete list of approved Draft 2006 Plan projects);

2. Operations/Field Office Data Summary (ODS) - one for each Operations/Field Office (see Attachment C for a complete list of Operations/Field Offices);

3. Site Summary Level (SSL) - one for each site identified at the site summary level (see Attachment C for a complete list of sites at the site summary level); and

4. Consolidated PBS Quantity Table - one for each geographic site.

Although the PBS is the primary source of data, site and Operations/Field Office level spreadsheets are used to capture data that is most efficiently collected at these levels. All of the information is sometimes generically called "PBS" in this guidance. Detailed instructions for completing these spreadsheets are found in Attachments D, E, F, and G.

The PBS will collect the following types of data:

- Header Information (general description, project manager)
- Project Narratives (including purpose, technical scope, end state, and actual/planned accomplishments for the fiscal years 1997, 1998, 1999, 2000.)
- Baseline Costs (in current year dollars)
- Portion of the baseline cost for storage, assessment, cleanup, and S&M (in current year dollars)
- Schedule Information (focus on key milestones)
- Metrics **including FY 1997 actuals**
- Validation Status (indication of whether or not project has been validated and validation methodology)
- Project Assumptions
- BA by Appropriations Account for FY 1997 - FY 2000
- Risk
- Safety and Health (narratives and budget)
- Enhanced Performance
- Mortgage Reduction Potential

The SSL is subdivided into three (3) parts, and will collect the following types of data:

Part A of the SSL (to be completed for each geographic site)

- General Site Level Narrative (to be used for budget development)
- End State Stewardship Narratives
- Assumptions (description of assumptions that affect site completion)
- Site Completion Dates
- End State/Land Use (description, stewardship, metrics)

Part B of the SSL

- Life-cycle Baseline Costs (by category and subcategory from FY 1997 to FY 2070)
- Budget Authority by B&R code for FY 1997 through FY 2000
- Indirect Safety and Health

Part C of the SSL

- Critical Closure Path and Critical Events (key activities that MUST be performed as scheduled to achieve site closure date)

The ODS is subdivided into three (3) parts and will collect the following types of data:

Part A of the ODS

- Full compliance case budget
- Operations/Field Office life-cycle cost information (at $5.75 billion with full enhanced performance)
- Support Costs (in current year dollars)
- Employment/Workforce Levels (number of FTEs)
- Contracting Profile
- Safety and Health Metric Targets

Part B of the ODS

- Integrated Priority List Data
- Integrated Priority List Narratives

Part C of the ODS

- Innovative Technology Deployment
- Science and Technology Needs
- Innovative Technology Cost Savings
- Science and Technology Development Narrative

The Consolidated PBS Quantity Table will collect the following types of data:

- Inventory of waste and materials; quantity of contaminated media
- New waste generation rates
- Waste and material disposition (treatment and disposal)

Many stakeholders and Tribal Nations have expressed concern regarding the disposition and inter-site transfer of waste and materials. The disposition maps requested in this guidance will facilitate the development of integrated disposition plans, and will allow the Department to more effectively respond to specific stakeholder and Tribal Nation concerns.

The Field will receive the spreadsheet templates from Headquarters. To the extent possible, the templates will be seeded. The information submitted on the spreadsheets will be loaded into the IPABS database and used as the major source of baseline and budget information for planning, budgeting, and performance measurement purposes. Also, this information is sufficient for high-level national analysis and for use in preparation of the EM Draft National 2006 Plan.

In essence, the data in the PBS for FY 1998 represents a commitment between the Field and Headquarters. This commitment requires that project managers assume responsibility for data contained within the PBS. Therefore, the Field will be required to submit two signatures associated with each PBS - one from the DOE Project Manager and a second from the contractor Project Manager. **In order to submit the signatures, the "Header" page of each PBS must be printed, signed, and submitted with the Site Plan on December 5, 1997.**

Headquarters is committed to pursuing the multi-year funding necessary to support a project as part of the EM Draft National 2006 Plan. If the necessary funding is obtained from Congress, the Field will commit to accomplish the project (i.e., project scope with performance targets), in accordance with the project schedule, for the identified resources.

The approved Draft 2006 Plan project structure for each Operations/Field Office, which will serve as the basis for PBSs, is provided in Attachment B.

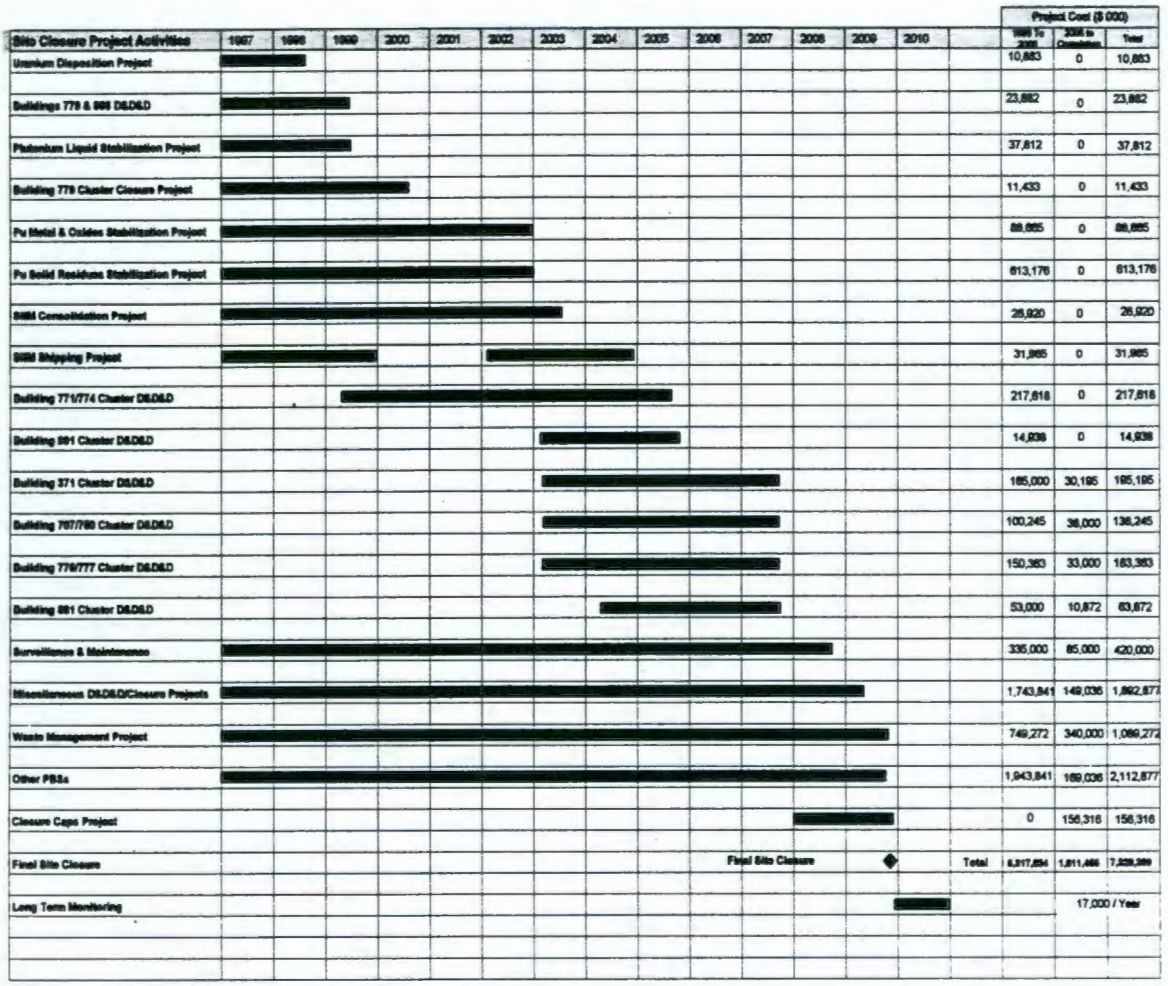
2.3 Graphical Information

In response to stakeholder comments and requests, each Site Plan must contain several required graphics. These graphics will improve the articulation of the scope and assumptions underlying the Plan. Each Operations/Field Office will develop a graphic that displays its overall completion profile (including total life-cycle cost and anticipated completion date for each project/group of projects). Site waste and material disposition maps similar to those generated by EM Integration, will be used to show the plan for moving waste and materials from their current state to final disposition. Each site plan will include a critical closure path, as described in Section 8.0, which identifies the critical path for reaching final closure of each site. Site maps will be developed to document site end state/land use for major EM sites. The use of these visual aides will improve communication.

Completion Profile

Each Operations/Field Office must develop and include in its Site Plan a graphic that illustrates the expected life-cycle cost and end date for each project or group of projects. The smaller projects (from a cost perspective) should be logically grouped (e.g., by activity). The following example shows the format for the development of this graphic:

Rocky Flats Environmental Technology Site
Site Closure
(DRAFT data)



Disposition Maps

Waste and material disposition maps provide a graphical depiction of the disposition of EM-managed contaminated media, waste, and material from their current state to final disposition and are a required component of each Site Plan. Through the Complex-Wide EM Integration initiative, disposition maps for six waste and material streams at eleven major DOE sites and several of the smaller sites have been developed. Instructions for generating the maps along with examples are included in Attachment G.

In addition to providing the graphical depiction of the disposition path for each category of waste and material at the sites, the disposition maps will be used as a tool to improve the data quality for waste and material transfers, to provide the appropriate metrics for waste/material quantities and flows data tables, and to identify complex-wide integration opportunities. From these maps, data will be summarized for each PBS to provide metric data and waste and materials inflow/outflow volume data using the Consolidated PBS Quantity Table.

Critical Closure Path

Major EM sites must include a critical closure path chart in their cleanup plans. This information identifies the present activities, sequence, and schedule that, given current funding, performance, and compliance conditions, constitute the earliest projected closure data for the site. For sites to close earlier, enhanced performance of these critical path projected activities would need to occur or funding/compliance constraints would need to be modified. An example of this chart, and information detailing the various elements which it must contain, can be found in Section 8.0, Critical Closure Path Analysis.

Site End State/Land Use Map

Sites must develop maps indicating EM activities and land use for inclusion in their site summaries and site level plans. This approach was successfully used in the 1996 Baseline Environmental Management Report for the five large sites. The site maps should depict three time frames: now, end of FY 2006, and the final end state (if different from the end of FY 2006). These maps should use the land-use categories outlined on page E-4 to indicate the maximum allowable use given the cleanliness (or contamination) of the areas.

Maps are required for:

- Savannah River Site
- Rocky Flats Environmental Technology Site
- Idaho National Environmental Engineering Laboratory
- Hanford Site
- Oak Ridge Reservation
- Mound
- Fernald
- Nevada Test Site

Operations/Field Offices are encouraged to provide other maps where possible.

3.0 National Planning Assumptions

Each Site Plan and supporting Project Baseline Summary (PBS) data should be developed based upon the following assumptions:

- **Funding Constraints** - The estimated Budget Authority (BA) allocations in the following table are in current year dollars and should be viewed as constraints for the purposes of site planning. In the outyears, it is not necessary to use all of the funding allotted. The annual EM funding target is based upon a $5.75 billion allocation for FY 1999 through the period of closure. FY 1997 is based on the FY 1997 Appropriation and FY 1998 is based on the FY 1998 Congressional Request. These amounts EXCLUDE any distribution of National Program BA to the Field (with a few exceptions as outlined in Section 4.0--Budget). Each Operations/Field Office should prepare a PBS for all non-National Program activities. PBSs for all National Programs (except for those outlined in Section 4.0) will be prepared by Headquarters. Funding is flat for each Operations/Field Office after 2006 based on the $5.75 billion allocation. The following table shows new BA targets for each Operations/Field Office through FY 2070, excluding privatization, in millions of current year dollars:

Site $5.75 B Allocation Levels (Current Year, Millions of Dollars)

Operations Office	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual 2007 to Closure
Albuquerque	$360,623	$315,146	$289,000	$290,000	$290,000	$290,000	$290,000	$290,000	$290,000	$290,000	$28,555
Carlsbad	$187,949	$163,061	$185,591	$190,000	$190,000	$190,000	$190,000	$190,000	$190,000	$190,000	$190,000
Chicago	$67,239	$50,564	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$0
National Programs	$734,597	$850,591	$780,665	$741,500	$721,500	$690,500	$649,500	$577,500	$525,500	$1,024,500	$529,116
Idaho	$415,639	$397,774	$419,000	$425,000	$429,000	$449,000	$466,000	$523,000	$559,000	$569,000	$507,165
Nevada	$70,443	$68,978	$75,000	$75,000	$75,000	$75,000	$86,000	$86,000	$86,000	$86,000	$56,291
Ohio	$493,623	$451,825	$518,000	$533,000	$549,000	$560,000	$573,000	$588,000	$604,000	$95,000	$21,328
Oakland	$102,403	$97,160	$92,000	$94,000	$94,000	$94,000	$94,000	$94,000	$94,000	$94,000	$75,000
Oak Ridge	$614,569	$751,274	$582,244	$591,000	$591,000	$591,000	$591,000	$591,000	$591,000	$591,000	$411,542
Rocky Flats	$487,385	$518,250	$583,000	$585,000	$585,000	$585,000	$585,000	$585,000	$585,000	$585,000	$367,699
Richland	$980,552	$988,186	$993,000	$993,000	$993,000	$993,000	$993,000	$993,000	$993,000	$993,000	$1,597,499
Savannah River	$1,151,407	$1,110,837	$1,180,500	$1,180,500	$1,180,500	$1,180,500	$1,180,500	$1,180,500	$1,180,500	$1,180,500	$1,965,806
Complex-wide Total	$5,666,429	$5,763,646	$5,750,000	$5,750,000	$5,750,000	$5,750,000	$5,750,000	$5,750,000	$5,750,000	$5,750,000	$5,750,000

Notes:

- *Current dollars* represent the dollar value of goods or services in terms of prices current at the time of sale. (Inflation is included in the dollar value.)

1997 and 1998 Costs: Based on FY 1997 Actuals and FY 1998 Budget Request

1999 - 2006 Costs: Based on the $5.75 B allocation case (Option 2), with the following modifications:

Idaho:	2000	$26M added to allocation
	2001	$54M added to allocation
	2002	$22M added to allocation
	2003	$21M added to allocation
Nevada:	2003-2006	$15M added to allocation
National Programs:	2000-2006	Reduced by funds allocated elsewhere (i.e., Idaho and Nevada) and reflects expected decrease in cost over time. Any additional funds made available from reduction in National Programs allocated proportionately to Idaho, Richland, and Savannah River.
Post 2006 Costs:		Based on the 2007 value of the minimum of the allocation case or the site submittal. Any additional funds made available from reduction in site costs, are distributed proportionately among Savannah River and Richland. The post 2006 costs for some sites need to be adjusted to reflect their closure dates.

The table on the previous page represents the annual BA for each Operations/Field Office from FY 1999 to closure. It is expected that sites will achieve the scope included in their baseline within these funding targets even if baseline estimates currently exceed these funding targets. In fact, each Operations/Field Office has committed to achieving certain efficiency targets (see table below) that, in effect, increase the scope of work to be performed within the target for each year through 2006. If a site's current baseline exceeds its allocation of the $5.75 billion funding target, then it is assumed that enhanced performance will be achieved such that the closure objectives are met within the funding constraints. Please note that inflation has already been included in the efficiency target, thereby representing current dollars.[1] The following table, which does not vary significantly from the $5.75 billion allocation to the Field, has been calculated from the $6.0 billion high case scenario from the February 28, 1997, PBSs. Please note that efficiency targets stop after 2006. Efficiency targets need to be adjusted to reflect non-discretionary costs such as grants, AIPs, etc., and sites that have a high percentage of fixed price contracts.

Enhanced Performance Targets
$5.75 B Allocation Case
Current Year ($M)

Operations/Field Office	Target Completion Date	Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Albuquerque	2005	$679	$	$13	$34	$56	$75	$83	$91	$99	$109	$118
Carlsbad	2040	$610	$	$15	$34	$50	$66	$76	$83	$90	$96	$101
Chicago	2004	$103	$	$3	$5	$6	$8	$10	$12	$18	$20	$21
Idaho	2035	$1,175	$	$27	$69	$111	$139	$144	$157	$163	$175	$190
Nevada	2006	$199	$	$3	$9	$14	$20	$22	$29	$32	$34	$36
Ohio	2005	$937	$6	$25	$42	$63	$85	$104	$126	$142	$164	$180
Oakland	2006	$156	$	$3	$9	$17	$21	$18	$18	$20	$23	$27
Oak Ridge	2012	$1,183	$6	$53	$77	$82	$108	$132	$151	$172	$195	$206
Rocky Flats	2006	$2,823	$109	$147	$184	$241	$290	$343	$365	$369	$370	$403
Richland*	2033	$2,925	$52	$205	$270	$234	$292	$321	$349	$376	$400	$427
Savannah River*	2026	$2,280	$58	$115	$175	$142	$218	$252	$284	$314	$345	$378
Total		$13,070	$231	$609	$908	$1,017	$1,322	$1,505	$1,664	$1,795	$1,931	$2,087

* The efficiencies shown for Savannah River and Richland are based on the results of their respective workouts.

[1] *Current dollars* represent the dollar value of goods or services in terms of prices current at the time of sale.

Additional National Planning Assumptions

- Sites should assume that post-2006 funds are available for closure and long-term surveillance and monitoring (S&M). Sites should request the required amount for post-2006 to complete closure and conduct long-term S&M.

- Each **approved, pre-existing** privatization project must be a unique PBS. This is consistent with instructions for privatization projects in the December 20, 1996, Ten-Year Plan guidance. If this is inconsistent with any changes to your Operations/Field Office's PBS project structure submitted on September 10, 1997, please contact Gene Schmitt at (202) 586-8754.

- **Privatization** - For this update, Operations/Field Offices should **not** report budget authority (BA) above their targets for any **new** privatization projects. BA for **approved, pre-existing** privatization projects may be included in an Operations/Field Office submittal and is permitted to exceed the target funding level in the near term. Outlays for existing privatization projects must be included in an Operations/Field Office's base program in the outyears.

- **Budget** - Budget data should be provided as new BA for FY 1997 through FY 2000 at the PBS level by Appropriations Account and at the SSL by category and subcategory. At the Operations/Field Office level, both the BA reported by Appropriations Account at the PBS level, and BA by category and subcategory reported at the SSL, should equal the BA targets provided in this section. Operations/Field Offices should use the integrated priority lists (IPLs) in the ODS (Attachment H) to request sufficient BA to comply with Executive Order 12088.

- **Baseline** - PBSs reflect the site baselines at a given point in time. PBSs will be updated at Headquarters once a year. A change control process will be in effect during the course of the year should additional updates be necessary.

- **Baseline Costs/Escalation** - Baseline costs are found in two places: at the project level in aggregate and at the site summary level by category and subcategory. Baselines should not include enhanced performance assumptions that the site has not yet found a way to achieve. Baseline costs should be reported in *current* year dollars assuming an annual escalation rate of 2.7 percent. The PBS will automatically calculate baseline costs in *constant* 1998 dollars.

- **Facilities** - Currently, the EM program assumes that it will maintain a stable scope of facilities and will not require constant replanning to accommodate additional facilities transferred from other programs. As a result, the scope of Site Plans and PBSs should include only facilities and nuclear materials currently in the EM program, including all active facilities and nuclear materials presently in EM's inventory. This decision may be revisited based on the recommendation of the National Association of Public Administration (NAPA).

- **WIPP** - When preparing life-cycle planning data, Operations/Field Offices should assume that the Waste Isolation Pilot Plant (WIPP) will open in FY 1998. If an Operations/Field Office intends to ship waste to WIPP, there must be a discussion with the Carlsbad Area Office to ensure that the shipping and receiving volumes are scheduled similarly.

- **Newly Generated (non-EM) Waste** - Financial responsibility for the management of newly generated waste outside the EM program will be assumed by the generating program by FY 2000; exceptions beyond FY 2000 will be considered on a case by case basis. If these costs have been included in a site baseline, Section A.2.16 of the PBS should be used to identify them. Once responsibility has been transferred, the target level of funding for that project is no longer available for EM to request, effectively reducing the target. This is because it is assumed that as management responsibility for waste management is transferred to generator programs, corresponding EM budget target funding also will be transferred.

- **Compliance** - The Department places a high priority on compliance with environmental laws, regulations, agreements, standards, nuclear safety rules, and other applicable requirements. **All** Site Plans must reflect and explicitly state this position. In completing PBSs, Operations/Field Offices will be required to identify regulatory drivers for projects. Also, PBSs will require that all significant enforceable agreement milestones are identified. Budget dollars will be tied to compliance drivers for the near term in an Operations/Field Office's integrated priority list.

- **Stakeholders** - Stakeholders should be afforded ample opportunities for substantive involvement in the phased development of each site's EM Draft Site 2006 Plan. Accordingly, an **iterative, three-phase public participation effort** is to be implemented at each site, which will allow the public to participate in both the **initial development** of the Draft Site 2006 Plan through involvement in the development of PBSs and site narratives and the **refinement** of this initial submittal, followed by an opportunity for local stakeholders and Tribal Nations to receive **feedback** on the content of each Operations/Field Office's final submission.

- **Waste/Materials Disposition** - Waste volumes provided in Site Plans must be consistent with the Federal Facility Compliance Act (FFCAct). Furthermore, all transfers of waste or materials between sites must be discussed between shipping and receiving sites.

- **WM PEIS** (Waste Management Programmatic Environmental Impact Statement) - Site Plans must be prepared in accordance with the Final WM PEIS preferred alternatives, so that the 2006 planning process is consistent with the programmatic NEPA analysis. Any proposed deviations need to be submitted to EM-1 for approval. This guidance does not preclude sites from using commercial facilities, where available. Detailed guidance on the WM PEIS information to be provided within the Site Plans is provided in Section 9.5.4.

- **Risk/Safety & Health** - EM's policies include ensuring the safety and health of workers and reducing risks to the public and the environment. Accordingly, Site Plans should be developed assuming "do work safely or don't do it." Also, risk management is assumed to be an integral element of EM's approach to setting priorities, sequencing project work, and measuring performance. Initiatives set forth in Draft Site 2006 Plans should place priority on projects that eliminate urgent risks.

- **EM assumes a site is "complete" when:**

  - Deactivation and decommissioning of all facilities currently in the EM program have been completed, excluding any long-term surveillance and monitoring,
  - All releases to the environment have been cleaned up in accordance with agreed-upon cleanup standards,
  - Groundwater contamination has been contained, or long-term treatment or monitoring is in place,
  - Nuclear material and spent fuel have been stabilized and/or placed in safe long-term storage, and
  - "Legacy" waste (i.e., waste produced by past nuclear weapons production activities, with the exception of high-level waste) has been disposed of in an approved manner.

  This definition does not imply that EM or DOE is leaving the site when the definition is met. This definition does not preclude future uses for sites. Draft Site 2006 Plans and associated PBSs should include appropriate EM planning assumptions and cost estimates for long-term costs (S&M, groundwater treatment, long-term storage/disposal) at sites that extend beyond the completion date through 2070. Sites without long-term S&M costs must explain why they are assumed not to be necessary.

4.0 Budget

4.1 Overview

Each year, EM is required to formulate a budget to satisfy Departmental, OMB, and Congressional mandates. For this update, EM will collect budget authority (BA) data for FY 1997 - FY 2000 **at the Site Summary Level (SSL)** (i.e., budget installation) according to the same **budget and reporting (B&R) code** structure by category and subcategory that was used for the August 1, 1997, Limited Update to the Project Baseline Summaries (PBSs). In addition to BA by B&R code at the SSL, EM will collect BA data for FY 1997 - FY 2000 at the **PBS level by Appropriations Account only**. All BA data submitted for the years FY 1997 through FY 2000 must be budget quality data, and PBS BA totals **MUST** equal SSL BA totals at the Operations/Field Office level. **Life-cycle cost** data submitted for the outyears should be budget quality data wherever possible, although planning data is acceptable. Life-cycle cost data will be collected by functional cost category at the site level for this update.

Guidance for all requested budget information is included in this comprehensive update package. Budget information will be returned to Headquarters in phases so that the data will be as up to date as possible for formulation purposes. Metrics will only be updated once a year, currently scheduled for the fall.

4.2 Requirements

The following information is required:

November 26, 1997:

- Each Operations/Field Office will provide a current FY 1999 IPL, which will include programmatic drivers according to the new categories outlined in Section 10.0 of this guidance. This deliverable will also include a current set of IPL narratives. Providing a current FY 1999 IPL at this time will make apparent the relationship between the budget and site closure plans.

- Each Operations/Field Office will submit BA data by Appropriations Account at the PBS level and BA data by B&R code by category and subcategory at the SSL. FY 1997 and FY 1998 should be based upon the FY 1997 Appropriation and FY 1998 Congressional Request (or FY 1998 Appropriations if site allocations have been finalized), respectively, and FY 1999 and FY 2000 should be developed based upon the $5.75 billion allocation. The Operations/Field Office BA totals by PBS (at the Appropriations Account level) and by SSL (at the B&R code level) for a given year should be equal to each other and identical to the target for that given year.

- Each Operations/Field Office will submit site narratives that discuss the life-cycle objectives of the EM program. The narrative should also discuss closure date and high visibility project life-cycle cost, end dates, and metrics in the context of the current year (FY 2000). See Attachment I for a list of high visibility projects. These narratives will be used to support the FY 2000 budget formulation process and will reside both in the Site Plans and at the Site Summary Level (SSL). These narratives will be updated on March 15, 1998 to include specific information to be used for FY 2000 budget formulation purposes. Any general PBS-level information, such as the purpose, scope, technical approach, status at and post 2006, and end state of a project, that is required in

support of FY 2000 budget formulation, will be drawn from the general PBS narratives provided on November 26, 1997. Each Operations/Field Office will be required to submit PBS-level narratives that also discuss issues (e.g., quantity impacts) and accomplishments for FY 1998, FY 1999, and FY 2000.

March 15, 1998:

- Each Operations/Field Office will be required to submit a FY 2000 IPL (including compliance drivers and IPL narratives) based upon targets received in late December as a result of the OMB Passback. If the FY 2000 budget targets differ significantly from the targets used to formulate the data provided on November 26, 1997, and result in a substantial change in metrics or BA, these deviations must be reflected in resubmitted PBS narratives.

- Each Operations/Field Office will be required to resubmit the site narrative that was originally submitted on November 26, 1997. The site narrative should be split by Appropriations Account and should include the number of projects in the Appropriations Account; a description of how projects are managed; the number of high visibility projects in the Appropriations Account and a description of each; a description of how metrics are derived from the PBSs (and the relationship of metrics to PBSs); and a description of the activities in the appropriations account by B&R code, including a discussion of FY 1997, FY 1998, and FY 1999 accomplishments. The updated site narrative should break down the discussion of site objectives consistent with the relevant B&R code categories from Attachment H. A template is provided in Attachment H that demonstrates how site BA data and budget narratives will be presented in the EM budget. Site BA data and narratives will be aggregated to the Operations/Field Office level at Headquarters.

This schedule will ensure that the 2006 Plan guides the budget formulation process, and that both are developed using the same data.

4.3 Allocation Tables

The reference case for this update to the PBSs (FY 1999 - FY 2070) is based upon a $5.75 billion allocation. Full PBSs are only required for the $5.75 billion reference case. FY 1997 is based upon the FY 1997 Appropriation, and FY 1998 is based upon the FY 1998 Congressional Request. FY 1998 data will be updated with the FY 1998 Appropriation once those funding levels become available. Sites will discuss the impacts of a $5.0 billion case, a $5.5 billion case, and a $6.0 billion case only in the narrative portions of their IPLs. See Section 3.0 of this guidance for Operations/Field Office annual targets at these levels. Each Operations/Field Office is required to develop its PBS BA request consistent with the targets in Section 3.0 of this guidance. Within those targets, Operations/Field Offices are reminded that requests must comply with Executive Order 12088, which requires that the Field request enough funding to be in compliance with all applicable laws, statutes, enforceable agreements, and orders. Specifically, compliance with Executive Order 12088 is derived from programmatic driver categories 1-4 as outlined in Section 10.0 of this guidance. Headquarters will review all BA categorized as complying with Executive Order 12088 for verification purposes. It is important that each site assume scope that can be achieved within its target; resubmittal may be required if there is any divergence.

4.4 Privatization

For this update, Operations/Field Offices should **not** report BA for any new privatization projects. BA for **approved, pre-existing** privatization projects should be included in an Operations/Field Office submittal and is permitted to exceed the traditional BA target in the near term. The operating portions of existing privatization projects must be included in an Operations/Field Office's base program (traditional BA) in the outyears.

4.5 Integrated Priority Lists

Each Operations/Field Office is required to provide a prioritization listing of all elements at the IPL level. It is recognized that each Operations/Field Office has its own priority-setting process or system in place. Some site priority-setting processes may be quantitative in nature, while others may be qualitative. EM Headquarters does not intend to impose a standardized prioritization system, nor will it compare the prioritization system results from site to site. It is further recognized that each process or system was designed with input from regulators, local stakeholders, and Tribal Nations. However, Operations/Field Offices should also consider the following EM principles in developing their priority lists:

- Eliminate the most urgent risks.
- Maintain compliance.
- Reduce mortgage and support costs to free up funds for further risk reduction.
- Protect worker health and safety.
- Reduce the generation of wastes.
- Create a collaborative relationship between DOE, regulators, stakeholders, and Tribal Nations.
- Focus science and technology development on filling technology gaps and cost/risk reduction.
- Integrate waste treatment and disposal across sites.

The process used for project prioritization and sequencing to maintain project and end-state integrity, while ensuring the safety of site workers and the public, is particularly significant in cases relating to budget constraints and changing project scope and schedules.

Stakeholders and Tribal Nations do not all agree with the Departments strategic approach for prioritizing EM work. IPL data collected in the ODS will represent the Site's current prioritization of EM projects, and will help to make the tradeoffs between different strategic approaches more explicit. Stakeholders should still participate at the site level in how work is prioritized.

Operations/Field Offices will no longer be required to report risk information separately in their FY 1999 or FY 2000 IPLs. Risk information is still being collected in PBSs as it was for the February 28, 1997, submittal. Each Operations/Field Office is required to update its FY 1999 IPL for the November 26, 1997, full update to the PBSs, including an update to compliance drivers (based upon the new categories described in Section 10.0 of this guidance) and an update to the IPL narratives. Each Operations/Field Office will also be required to complete a FY 2000 IPL for the March 1998, Limited Update to the PBSs based on the updated budget targets transmitted to the Field in December 1997. Each IPL should outline, by sub-PBS, the entire scope of work that the site would be able to accomplish up to a $6.0 billion funding level. Operations/Field Offices should also indicate whether or not a PBS or sub-PBSs would be funded at the $5.75 billion, $5.5 billion, and $5.0 billion funding scenarios. In addition, each IPL

includes narrative fields for discussing general accomplishments and compliance issues at $5.0 billion, $5.5 billion, $5.75 billion, and $6.0 billion funding levels (although the PBSs should be written to the $5.75 billion case only). Target funding levels for each of these scenarios for FY 1999 follows:

Alternate Funding Targets for FY 1999*

Operations Office	$5.0 billion	$5.5 billion	$5.75 billion	$6.0 billion
Albuquerque	$251,304	$276,435	$289,000	$301,565
Carlsbad	$161,383	$177,522	$185,591	$193,660
Chicago	$45,217	$49,739	$52,000	$54,261
National Programs	$678,839	$746,723	$780,665	$814,607
Idaho	$364,348	$400,783	$419,000	$437,217
Nevada	$65,217	$71,739	$75,000	$78,261
Ohio	$450,435	$495,478	$518,000	$540,522
Oakland	$80,000	$88,000	$92,000	$96,000
Oak Ridge	$506,299	$556,929	$582,244	$607,559
Rocky Flats	$506,957	$557,652	$583,000	$608,348
Richland	$863,478	$949,826	$993,000	$1,036,174
Savannah River	$1,026,522	$1,129,174	$1,180,500	$1,231,826
Complex-wide Total	$5,000,000	$5,500,000	$5,750,000	$6,000,000

*To be used for the update to the FY 1999 Integrated Priority List (Section B of the ODS)

5.0 Alternative Analysis

The objective of the Draft National 2006 Plan is to compile, understand, and analyze the EM program under the baseline scenario and to quantify the effects on the program when achieving enhanced performance objectives. As discussed in Section 7.0, each site baseline should include enhanced performance goals that the site knows how to plan on achieving. In addition to these "known" enhanced performance activities, each Operations/Field Office has agreed to additional efficiency targets that it will work to achieve over the life cycle (see Section 3.0 of this guidance for the efficiency table by Operations/Field Office). In order to understand the impacts of enhanced performance on life-cycle cost and closure date for each site, Headquarters is requesting each site to provide both quantitative and narrative information as follows:

- At the Operations/Field Office level, each Operations/Field Office must report annual costs over the life cycle that assume that ALL enhanced performance objectives are achieved (see section 3.0 for targets). The funding allocation will remain at $5.75 billion. Presumably, costs under the full enhanced performance scenario will be lower in the outyears when compared to the site baseline.

- Also, each Operations/Field Office must report the closure date for each geographic site assuming that all enhanced performance targets are met. This will be compared to the baseline closure date for analysis at Headquarters. Presumably, closure dates under the full enhanced performance scenario will be sooner than they were for the baseline.

- Each Operations/Field Office will also be required to discuss at the Operations/Field Office level the impacts of enhanced performance. This will include a discussion of anticipated methodologies the site will use to achieve enhanced performance and an analysis of the logic the site used to arrive at the changes to the baseline cost and closure date it attributes to enhanced performance.

6.0 Public Participation

Introduction

Tribal Nations, states, regulators, local government officials and other stakeholders should be afforded opportunities for substantial involvement in the development of each Draft Site 2006 Plan between now and February 1998. DOE Operations and Field Offices should communicate these opportunities to stakeholders and Tribal Nations, and continue to involve them using already-established mechanisms in order to ensure that their views are fully and accurately represented. For the development of Draft Site 2006 Plans, an **iterative public participation effort** is envisioned where stakeholder involvement could occur at several phases of the process, as follows.

Phase I: Initial Development of Draft Site 2006 Plan

The first phase in this process runs from the end of the official public comment period (on September 9, 1997) for the *Focus on 2006: Accelerating Cleanup Discussion Draft* until each Site submits their initial Draft 2006 Plan to Headquarters on November 26, with the entire Draft Site 2006 Plan due on December 5, 1997. During this period, for most EM sites, the public involvement efforts will represent the continuation of ongoing stakeholder participation activities in the 2006 planning process.

Public comments made on the Discussion Draft will be incorporated into the Draft National 2006 Plan. In support of this, Headquarters staff is presently compiling and categorizing, by subject area, all responses received from Tribal Nations, states, regulators, local government officials, and other stakeholders throughout the public comment period. Issues which garnered a significant number of comments include: key 2006 Plan assumptions, stakeholder participation, enhanced performance, budget/cost estimates, and prioritization. Headquarters will issue a *Preliminary Comment Disposition Document* this fall, following the initial site submittals, which will summarize how these public responses are to be addressed in the Draft National 2006 Plan.

Phase II: Data Refinement of the Draft Site 2006 Plan

During the following month, each site's initial submittal will undergo further refinement, as necessary, to resolve data gaps and inconsistencies. This will continue until December 18, 1997, when the corporate database will be frozen for the finalization of the National and Site Draft 2006 Plans. During this phase, Sites' initial submittals will be revised based on dialogue between Headquarters, Operations and Field Offices, Tribal Nations, states, local governments, and other stakeholders.

Phase III: FY 2000 Integrated Priority Listing (IPL) Formulation; Feedback to Stakeholders

After December 18, 1997, emphasis will be on the formulation of the Sites' FY 2000 Integrated Priority Listings (IPLs), which are due to Headquarters in March 1998. Since at this stage in the process it will no longer be possible to make changes to the Draft Site 2006 Plans, the focus during this phase will be for the Field to provide feedback to the local community and Tribal Nations, by way of continued dialogue and education, as to the content and distinctive characteristics of each site's submission — including the degree to which stakeholder comments and concerns have been incorporated from earlier phases into the developmental process of the Draft Site 2006 Plan.

The National and Site Draft 2006 Plans, along with the FY 1999 Budget request, will be submitted to Congress in February 1998. At that time, the Draft 2006 Plans will be made available to the public for a 45-day comment period. Based on comments received, the Draft 2006 Plans will be revised accordingly, and are presently scheduled to be issued as the *Initial 2006 Plans* to Congress and the public in late June 1998.

Other Public Involvement Activities

During this period, several focused meetings for particular groups are also being planned. Headquarters' Office of Intergovernmental and Public Accountability (EM-22) is convening a meeting for the Site-Specific Advisory Board (SSAB) Chairs, to be held in Dallas, Texas, on October 28–29. The primary purpose of this meeting will be to hear from each of our advisory boards in regard to their issues of greatest concern. In addition, Headquarters staff will outline the opportunities for SSAB and other public involvement in the process leading to the issuance of the RODs pursuant to the WM PEIS — including transportation concerns, integration and cross-site issues, etc. A comparable meeting for the members of the reconstituted State and Tribal Government Working Group (STGWG) is scheduled for November 4–6 in St. Louis, Missouri. Additionally, Headquarters' senior staff recently met with the Environmental Management Advisory Board (EMAB) to apprise its members of the 2006 planning process and EM's cross-site integration efforts.

Finally, an *integrated timeline* which reflects the Draft 2006 Plan development, integration and cross-site issues related to the WM PEIS, and other public involvement activities (including the National Dialogue regional pilot workshops) is under development and will be provided to all Operations and Field Offices at the earliest opportunity. This timeline will clarify and reinforce the relationships between individual site (and SSAB), cross-site, and other public involvement activities—for example, discussions with local government officials, states, and the National Governors Association (NGA)—and support the resolution of integration issues that are of particular importance to stakeholders and Tribal Nations.

Additional Guidance, Summary, and Point of Contact

In addition, each site is requested to provide some brief, narrative feedback to Headquarters concerning both the character and relative success of its public participation opportunities in each of these phases of Draft Site 2006 Plan development. In this way, EM Headquarters will be able to gain insight into which activities and designs for public involvement are particularly effective, with an eye toward documenting and sharing these as "best practices" for all Operations and Field Offices.

In summary, it is not the intent of Headquarters to be prescriptive as to the *nature* of public participation at each site. Indeed, experience continues to confirm that a "one-size-fits-all" approach to stakeholder involvement is ineffective, given the broad differences among sites in terms of mission, workforce, site-specific advisory board membership, and history of community interactions, among other factors. Rather, this guidance is intended to ensure that there is *deliberate, formalized engagement* with local-community stakeholders and Tribal Nations during several different phases of Draft Site 2006 Plan development — while still preserving a high degree of flexibility to Field managers as to how this should be accomplished locally.

Questions should be directed to Fred Butterfield, Office of Intergovernmental and Public Accountability (EM-22) at (202) 586-8809.

7.0 Baseline Development

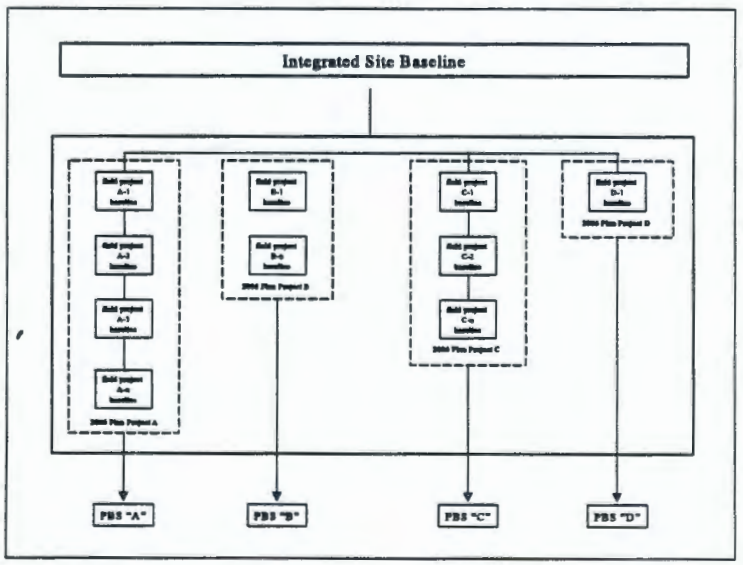
The Field is responsible for developing baselines for each field project. Field project baselines should be consistent with compliance agreements and outyear funding expectations. Field projects are organized into 2006 Plan projects for the purposes of planning, budgeting, and accountability at the EM level. The field project baselines should be integrated with other associated on-site and off-site projects to develop an integrated site baseline. A Project Baseline Summary (PBS) will be maintained for each 2006 Plan project. The baseline information in the PBS is a summary of the information in the field project baselines. Information reported in EM programmatic documents, such as the 2006 Plan, will be consistent with the information reported in the baseline section of the PBS, which in turn, will be consistent with the field project baselines. This will ensure traceability from the field project baselines through the 2006 Plan.

7.1 What is a Baseline?

A field project baseline is a quantitative expression of field project scope, schedule, and cost requirements against which the status of resources and the progress of the project can be measured. These three components should encompass all aspects of a field project and should be fully integrated with each other. The degree of detail should be consistent with the project-phase and adopt the graded-/rolling-wave approach (i.e., greatest level of detail for the near-term activities (three year window)). The Field should organize work into field projects to best support the ability to plan and execute the required scope.

Figure 7.1 shows the relationship between individual field projects, 2006 Plan projects, PBSs, and the integrated site baseline. See Attachment J for attributes of a defensible project baseline. The 2006 Plan projects should not be confused with "field projects". The term "field project" is used here to represent the basic building blocks of the 2006 Plan project.

Figure 7.1 EM Baseline Management Framework



Individual field projects should be integrated at the site level to form the integrated site baseline. The integrated site baseline should include a clear definition of requirements, a description of the work scope to be performed, milestones supported by critical path schedules, and time-phased cost/resource requirements. The integrated site baseline covers the life cycle of all the field projects. See Attachment J for attributes of a defensible, integrated site baseline.

7.2 PBSs and Reporting to Headquarters

Individual field projects are also organized into 2006 Plan projects for purposes of planning, budgeting, and accountability at the EM complex-wide level. Field projects that have common attributes, such as a common end state, geographic location, activity type, etc., are typically organized into 2006 Plan projects. Headquarters formally controls the 2006 Plan project structure. The PBS is the single, summary-level report that describes the major management characteristics of each 2006 Plan project. The PBS functions as the main source of project information and includes the scope, schedule and cost baseline, life-cycle metrics and annual performance targets, financial history and budget, and other information such as risk and assumptions. PBS data will be used for budget formulation and project performance tracking. In essence, the PBS represents a contract between the Field and the Headquarters organizations. A separate PBS is required for each 2006 Plan project. Information reported in EM programmatic documents, such as the 2006 Plan, will be consistent with the information reported in the baseline section of the PBS, which in turn, will be consistent with the field project baselines. This will ensure traceability from the field project baselines through the 2006 Plan.

Starting in the Fall of 1997, Headquarters will ask the Field to update the baseline information in each PBS once a year. Information reported in EM programmatic documents, such as the Draft National 2006 Plan, must be consistent with the information reported in the PBSs, which in turn, should represent a snapshot of the field project baselines. Between annual PBS submittals, the Field should adjust the field project baselines, as necessary, using site change control procedures. Four types of changes to 2006 Plan project baselines will require change notification and approval:

- Changes in the project's end state,
- Changes to the projects's end date if delayed more than one year,
- Changes to selected milestones for high-visibility projects, and,
- Changes that have a potential to impact multiple sites.

See Section 7.4 on the change management process for more information about these criteria and thresholds.

These thresholds ensure that Headquarters is notified in writing whenever the 2006 Plan projects' end states and end dates change, when other sites have been affected by a decision, and, in the case of high visibility projects, when selected milestone dates change significantly. Changes to established line item projects will continue to be processed using the existing change control process.

After a Headquarters baseline change request has been approved, it may be necessary to update PBSs. Decisions to update PBSs between annual updates will be made on a case-by-case basis.

7.3 Validation

Headquarters will collect information about the status of 2006 Plan project baselines and the validation status within the PBS. Each site is responsible for having a process (in place) for validating project baselines (scope, schedule, and cost). The depth and scope of the validation process should be commensurate with the complexity and size of the project. To ensure consistent validations standards are implemented throughout EM, Headquarters shall establish and provide to the Field the necessary and sufficient elements of a project validation.

In establishing a validation process as required by IPABS, field sites should work closely with Headquarters program managers to coordinate their processes with any applicable requirements of other Department elements. This coordination effort should attempt to consolidate validation requirements and avoid duplication of reviews. The objective of the validation is to determine if the baseline is totally defensible relative to scope, schedule, cost, and management systems in supporting budget requests and Congressional inquiries. The validation process should include an examination of the detailed scope of work and all assumptions used as a basis for estimating costs.

Validation data collected in this guidance will be used to address Congressional concerns that the Discussion Draft of the National 2006 Plan could not be supported by the details. Sites are requested to provide data consistent with their site baselines. Site should maintain additional supporting detail and documentation, consistent with what is provided to Headquarters in a PBS.

See Attachment J for more details on baseline elements that should be addressed during the baseline validation processes.

7.4 Change Management and Baseline Systems Implementation

Effective change management is the key to achieving the principles of accountability defined by IPABS. This new focus on accountability, when coupled with criticisms of historical change control performance (at Headquarters and sites across the DOE complex), requires a re-examination and re-invention of traditional processes. An overview of the EM change management process is illustrated in Figure 7.2 on page 31.

Three types of baseline changes are predicted. Field and Headquarters responsibilities will vary depending on the type of change:

	Criteria	Example	Field Responsibilities	HQ Responsibilities
Change Type 1 **EM Policy Decisions**	Policy decisions that affect the entire EM program or a significant number of project baselines	Decision on EM land-use policy, or EM policy on waste shipments	Provide input, as necessary, to action plans and incorporate HQ approved policy changes as directed changes through the site's change control process	Establishes and maintains the Policy Decision Change Process and approves action plans (Lead site DAS staffs action plans and EM-1 approves)
Change Type 2 **Project Baseline Decisions Requiring HQ Approval**	(1) Changes to project end state; (2) changes to project end date resulting in >1 year delay, (3) changes to selected milestones for high visibility projects, and (4) changes that affect other sites	Decisions on project end state, project end date, selected milestones for highly visible projects, or changes that affect other sites	Requests changes and submits appropriate PBS or other documentation updates	Approve changes (always approve-there is no other decision possible)
Change Type 3 **Project Baseline Changes**	Changes affecting project's baseline (technical, schedule, or cost) in accordance with site change control procedures	Decision to change project technical approach or work scope re-sequencing within the project	Approve changes and report changed information to HQ as appropriate though routine PBS update	Incorporate changed project information in key programmatic documents, plans, reports, etc.

Notes: Changes to HQ controlled documents (e.g., EM Project Structure and EM's Management Commitments) must be requested from and approved by HQ.

Until further notice, changes to current line item projects will be subject to existing change control procedures.

EM Policy Decision Process (Change Type 1)

The objective of this process is to ensure that the policy and implications of cross-site integration decisions are considered and appropriate stakeholder participation is taking place. Additionally, this process will be used to implement any change directed by EM-1.

Headquarters Change Management (Change Type 2)

Although Headquarters will not develop and implement site baseline change control procedures, certain project decisions will require Headquarter's approval prior to implementation. The Headquarters Change Management process will manage changes to project end state, project end date (if delayed by more than one year), selected milestones for highly visible projects, and changes that affect multiple sites. The discipline and control of the change management process will apply equally to PBS modifications that are derived from new regulatory or stakeholder requirements.

The change processes associated with these types of changes are described below:

- *Changes to the EM Project Structure, EM Management Commitments, Project End State, Project End Date, or Selected Milestones*

  It is anticipated that the Field would update the baseline information in the PBS on an annual basis or when change requests are approved. Requests for changes to project end state, project end date, or selected milestones can be made at any time, however, it is anticipated that it would not be more frequent than once a year. The timing of the scheduled complex-wide baseline update would likely be after the receipt of the enacted appropriation at the start of each FY (in other words, October - December).

  The Field will identify selected milestones for Headquarter's consideration for high visibility projects and projects with activities affecting other sites for change control purposes. These milestones will be selected and finalized during the management commitment development process during the month of November for FY 1998.

  Proposed changes to the EM Project Structure must be formally requested. Attachment K (released to the Field in August 1997) presents an overview of the PBS change control used for the project restructuring that was approved in October 1997; future requests for changes to EM Management Commitments, Project End State, Project End Date or Selected Milestones will be subject to a similar approval procedure. Requests will be staffed by the Lead Site DAS and approved by EM-1.

- *Changes That Impact Multiple Sites*

  Sites are often dependent on one another to meet compliance agreements and other requirements. When one site proposes a change, that change may have "ripple effects" that impact additional sites. Any change that impacts, or has the potential to impact, other sites must be reviewed and approved by Headquarters.

Field Baseline Management Process (Change Type 3)

As described in IPABS, baseline change control is a Field responsibility. Headquarters will no longer establish or implement baseline change control processes. However, to ensure completeness and consistency in change management across the complex, a set of attributes for a good baseline change management process is provided below. Each Operations/Field Office must ensure its baseline change management process adequately and effectively addresses each attribute. **Each Operations/Field Office must provide a complete description of current baseline change control processes in their Draft Site 2006 Plan.**

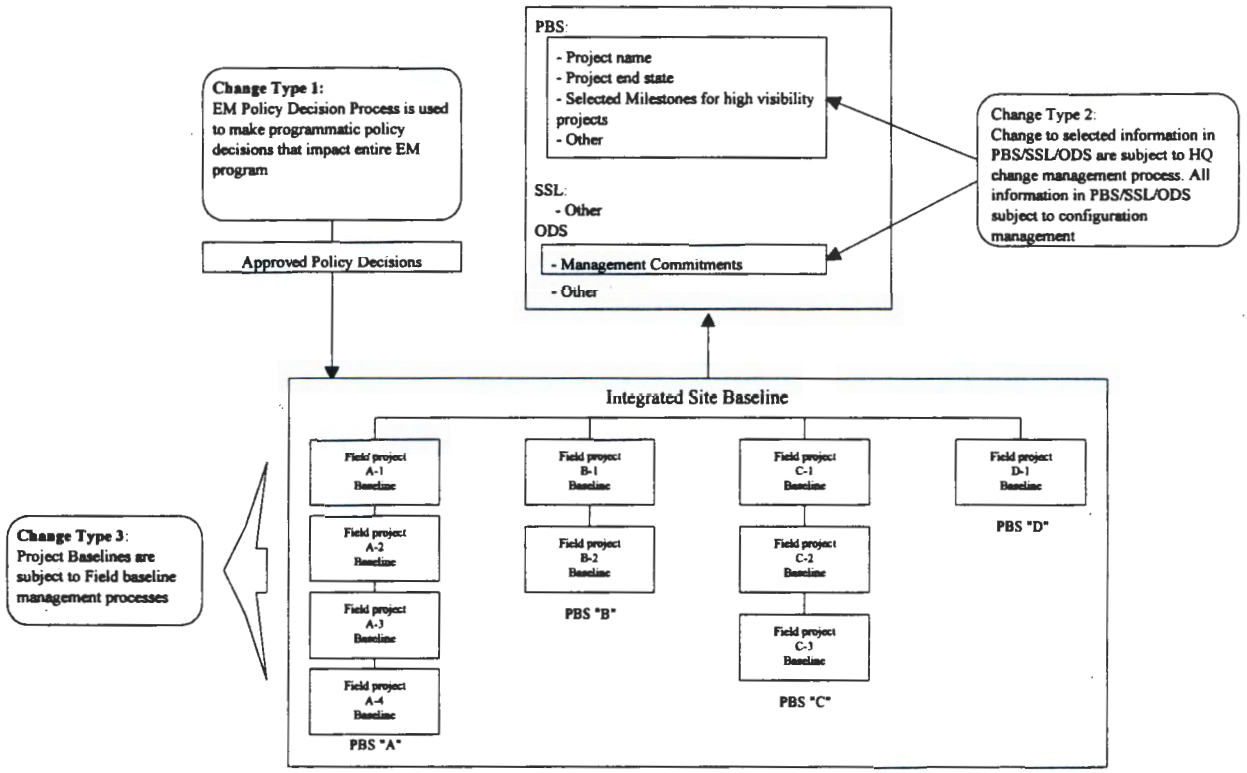
Attributes for a good baseline change management process:

- Systematic process for change description, evaluation, approval, and implementation;
- Thorough documentation;
- Rapid submission and review of change requests;
- Consistent definitions for categories of types of changes, with emphasis on enhanced performance definitions, including:
  - Work scope deletion: eliminate work without affecting outcome
  - Work scope deferral: shift work from the current fiscal year to outyears
  - Work scope acceleration: bring outyear work forward to be performed in current year
  - Work scope addition: increase work without accelerating outcome
- Appropriate approval authorities for decisions on change requests; and
- Integration of changes with appropriate configuration control systems.

See Attachment J for details associated with each of these attributes.

All 2006 Plan projects that are funded as line items should also comply with the Secretarial, Office of Management and Budget, and Congressional Requirements imposed by DOE Order 430.1 Life-Cycle Asset Management and OMB Circulars.

Figure 7.2 EM Change Management Process Overview



7.5 Project End State

As indicated in Attachment A, each Draft Site 2006 Plan should discuss the current technology, economic constraints, and other assumptions under which the end-state/land-use projections have been developed. This discussion should also document the site's intention for potentially revisiting site end-state/land-use assumptions should new technologies be developed or economic conditions improve. The assumptions used in developing Site 2006 Plans do not preclude some future scenario where the ultimate end state is "cleaner" if breakthrough technologies become available or economics change.

The project end state is the desired final set of conditions for the geographic area(s) addressed by the PBS. The overall expectation is that: a) the project end state identifies how it supports attainment of the future site-wide end state (e.g., greenfield, reindustrialization, etc.); b) the project can be documented to be complete as defined at the project end state; c) the project can be documented as being in compliance or achieving compliance at the project end state with applicable regulations, especially with respect to radioactive and hazardous materials and wastes, and health and safety requirements; d) both short-term and long-term protection of the public, the workers, and the environment are ensured at the project end state; and e) the project end state satisfies commitments made to stakeholders and Tribal Nations. The site-wide end state refers to the planned ultimate status of each parcel of land, facility, material, or waste, for which the EM program is accountable as an entity until EM has completed its responsibilities and has either transferred it to another entity (not within EM), or dismantled and/or disposed of it.

Because sites and project end states are of great importance to stakeholders and tribal nations, this guidance requests more detailed information regarding end states and long-term stewardship, including the extent to which end state agreements have been finalized, and characterization of associated uncertainties.

In the appropriate section of the PBS, the end state of land, facilities, wastes, and/or materials (all that apply) for the geographic areas addressed by the PBS must be discussed. The linkage to preceding and succeeding PBS projects should be identified to show the progression toward the desired site-wide end state. End state information is of great importance to stakeholders and Tribal Nations. It is important that project end states be clearly defined. In addition, under the proposed EM change management approach, project end state will require Headquarters' approval to change.

The following are guidelines for defining end states for activities performed in a project. Some PBS projects address more than one type of activity. The PBS must address end states for all activities performed in the project:

- Land - Identify pertinent information including, but not limited to: a) whether contamination is contained, removed, or consolidated; b) cleanup levels; c) remaining treatment, storage, or disposal facilities; and d) planned land use (e.g., greenfield, reindustrialization). If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements.

- Groundwater - Identify cleanup levels, long-term active remediation assumptions, restrictions (if applicable), and the length of time that long-term monitoring will be required.

- Facilities - Describe the final end state for legacy facilities and EM storage/treatment/disposal facilities. Closure requirements for storage and disposal facilities and long-term surveillance and maintenance (S&M) requirements need to be stated. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements. For legacy facilities identify pertinent information including, but not limited to: a) the planned end states of buildings/facilities which compose the project [entombment (either permanent or temporary), decontaminated, demolished, reused (indicate EM, DOE, or other reuse intended), etc.]; b) the condition and location of facilities upon transfer; and c) types, amounts, and location of treatment, storage, and disposal of residuals. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements.

For the following categories, it is assumed that the end state is consistent with the definition of "complete" in Section 3.0. Consistent with that definition, elaborate further on the status of waste, materials, and spent fuel as discussed below:

- Waste - Identify the type, quantity, and resulting location of waste that is generated, stored, treated, and/or disposed. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements. If this is not the ultimate end state, identify when and/or where it will be transferred for treatment, disposal, etc.

- Nuclear Materials - Identify pertinent information including, but not limited to: a) type of material; b) whether stabilized materials will be ready for disposal or transferred to on-site/off-site long-term storage; and c) the condition and location of materials upon transfer. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements. If this is not the ultimate end state, identify when and/or where it will be transferred for stabilization, treatment, disposal, etc.

- Spent Fuel - Identify pertinent information including, but not limited to: a) whether spent nuclear fuel (SNF) will be ready for disposal or transferred to on-site/off-site long-term storage; and b) the condition and location of materials upon transfer. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements. If this is not the ultimate end state, identify when and/or where it will be transferred for stabilization, treatment, disposal, etc.

- High Level Waste - Identify assumptions with respect to tank residuals and cleanup levels. Discuss whether tanks are closed in place or removed.

It is expected that for a limited number of projects, the ultimate end state of a parcel of land, a facility, a material, or a waste may be currently unknown. If this is the case, the assumptions concerning any work scope performed beyond surveillance and maintenance should be documented. If the end state has not been agreed to with regulators, stakeholders, and Tribal Nations, describe the process that will be used to establish an agreed upon end state and include the target date for end-state agreement.

7.6 Glossary of Terms for Baselines and Enhanced Performance

Accelerations - Moving work from the outyears into the current fiscal year. This should lead to accelerated outcomes (i.e., end states).

Additions - Increases to the baseline for work not originally included in the baseline. Additions do not accelerate work from outyears. Note: Additions that do not accelerate work from the outyears, those either overlooked in the original baseline or new work being defined by DOE or the Regulators, are not considered an offset to savings (i.e., negative enhanced performance).

Baseline - The integrated technical, schedule, and cost plan required to deliver the desired results. It is established at the beginning of the year and adjusted throughout the year using change requests or change proposals. It is the starting point from which savings are measured. It is three components: Technical, Schedule, and Cost.

Change Request (CR) - A formal document prepared by the contractor and approved by DOE which identifies and authorizes changes to the baseline.

Deferrals - Moving work from the current year into the outyears, beyond the current fiscal year. Deferrals close the financial "gap" between the baseline and the authorized funding levels for the current year but are not part of reported savings.

Deletions - The value of the work in the original baseline which has been eliminated without affecting program outcomes. Deletions are accomplished through a baseline change, and represent the elimination of "low value" work scope which does not impact program outcomes. Another critical component of deletions are Strategic Reductions. Deletions are part of the savings.

Efficiency (Enhanced Performance) - This is the difference between planned cost and actual cost. Savings result from doing the planned work in the baseline for less cost than estimated costs. Alternatively, Efficiency Savings accomplish the same scope of work, while not delaying results, for less cost.

Outcomes (End States) - The measurable results of the work efforts throughout the Site which are clear and tangible.

Schedule Component of the Baseline - The sequential, time-based portrayal of the work described in the Technical Component of the Baseline. The Schedule Component of the Baseline serves as the basis for measuring schedule performance, may be altered via the Change Control process, and may be multi-year in dimension.

Technical Component of the Baseline - This delineates the work required to achieve stated outcomes or objectives. The Technical Component of the Baseline provides a logical diagram of sequential, interdependent activities, based upon the technical relationship between identified elements. The Technical Component of the Baseline may be adjusted through the Change Control process, utilizing CRs.

8.0 Critical Closure Path Analysis/Programmatic Risk Management

The **critical closure path** for each site will be provided to:

1. Identify the specific project activities, sequence, and schedule that (given current funding, performance, and compliance conditions) constitute the earliest projected closure date for the site.

2. Demonstrate to Congress, other stakeholders, and Tribal Nations that all activities needed to achieve site closure are identified, understood by the Department of Energy (DOE), and included in each site's closure plan.

3. Identify site closure activities, events, and decisions that warrant management visibility and attention to prevent unexpected growth in cost and schedule.

Programmatic Risk:

Programmatic risk categories are new closure plan elements required by this guidance. They are defined in Table 8.0. Their purpose is to provide each site an opportunity to identify areas of programmatic risk (i.e., risk to cost, schedule, and technical performance) associated with the increasingly ambitious site closure dates. As Operations/Field Offices take on the challenge of accelerating site closure dates, areas with high programmatic risk will become the focus of DOE management attention to ensure appropriate visibility and resources are provided.

Programmatic risk is associated with a project's cost, schedule, and performance; it should not be confused with risk to the worker, public, and environment as discussed in Section 11.0.

Each site cleanup plan should describe the "critical closure path" for the major activities required for site closure[2]. The critical closure path is a streamlined schedule of high level activities, events, and/or decisions that warrant DOE management attention and must occur "on schedule" to achieve the site closure date. The critical closure path is composed of two sources of schedule information: Critical Path and Critical Events.

A. Critical Path information is obtained from the site's analysis of all activities scheduled to complete the EM mission and achieve closure. It is defined as the longest path (in terms of duration) through the schedule of project activities that achieve site closure. The duration of

[2]As used here, site closure refers to completion of all EM activities at a site, consistent with the definition provided in Section 3.0. This definition does not imply that EM or DOE is leaving the site after closure/completion, nor does this definition preclude ongoing or future uses for sites (e.g., research and development, material stewardship, reindustrialization).

activities on the critical path drives the site closure date. Delay in a critical path activity will delay the closure of the site; similarly, acceleration of the site closure date can occur only if acceleration occurs with critical path activities. Many other non-critical path activities are included in the site's cleanup plan, however, sufficient float (i.e., slack time) exists with these activities to allow some flexibility in their accomplishment without affecting the site closure date. It is expected that over time, the specific project activities that comprise the critical path may change. An example of such critical path changes would be changes to the planned end states associated with breakthrough technologies. For sites to close earlier, enhanced performance of the critical path activities would have to occur or funding/compliance conditions would need to be modified.

B. Critical Events are those selected milestones, events, decisions, and/or projects that are not on the critical path but occur within the next three to five years and are of sufficient programmatic risk to warrant upper level DOE management and stakeholder attention. **Critical events, except projects, should be included as milestones in Section A.3 of the Project Baseline Summary (PBS).**

To provide a consistent presentation of each site's critical closure path within the Draft National 2006 Plan, a chart should be presented similar to Figure 8.0. (Figure 8.0 contains preliminary information from Rocky Flats Environmental Technology Site). Figure 8.1 provides a more detailed explanation of the format used to present information for the critical closure path.

The critical closure path can be developed with each site using its own project management methodology and software. Once identified, the critical closure path is described in the site cleanup plan by listing its projects, activities, decisions, and/or events with sufficient detail to demonstrate understanding of the site closure process. These critical closure path elements (i.e., critical path and critical events) should be listed in tables in Attachment E, Detailed SSL Spreadsheet Guidance. Tables 8.1 and 8.2 provide sample information with a level of detail that satisfies the Critical Path and Critical Events data requirements.

For Operations/Field Offices that have not identified a critical closure path, either because the site is extremely large or because the critical path identification process is still in progress, the best information available should be provided. When this is the case, the site's cleanup plan should identify its critical closure path identification process and a date when the critical closure path will be available.

When developing the critical closure path, sites should also identify the "Programmatic Risk Category" for each project, milestone, event, and/or decision contained in the critical closure path. The intent of the Programmatic Risk categories is to convey the site's sense of project risk to cost, schedule, and performance; it should not be confused with risk to the worker, public, and environment described in Section 11.0. Programmatic risk categories are described in Table 8.0.

The data being requested in the critical closure path of this guidance will help address stakeholder and Tribal Nation concerns that the Department is not adequately developing contingencies should their planning assumptions deviate from what is expected. In fact, sites will need to develop plans to mitigate potential programmatic risks that could affect overall cost and schedule.

For all high programmatic risk (4 or 5) Critical Events, sites should develop Programmatic Risk Management Plans. These plans should describe (1) the programmatic risk; (2) the proposed resolution process, including contingencies and alternative backup approaches as applicable; (3) other sites or other agencies that must be consulted; (4) any need for Headquarters assistance or coordination; and (5) provide a preliminary schedule for resolution. High programmatic risks that involve waste or material inflows/outflows should also be shown on the site disposition maps as red squares (see Attachment G). High programmatic risks associated with technology development should have corresponding Site Technology Coordination Groups (STCG) Need numbers. As noted in Section 14.0, Action Plans, sites should submit to Gene Schmitt, Programmatic Risk Management Plans where HQ assistance or coordination has been identified, otherwise, these plans should be maintained at the site. The lead DASs will be responsible for assisting sites, as requested, in the resolution of high programmatic risk.

For Operations/Field Offices that have multiple, geographically separated sites, a critical closure path should be identified for each geographic area as illustrated in Figure 8.0. Operations/Field Offices should describe the critical closure path for their multiple sites with sufficient detail to convey understanding and management control of the activities necessary to close each site. **If effective, the critical closure path for multiple sites may be included in the same data tables and on the same figure.** The level of detail can vary based on the size and complexity of the sites.

Table 8.0: Programmatic Risk Categories

Programmatic Risk Categories	Technology	Work Scope Definition	Inter-Site Dependency
5 (high)*	• No technology to accomplish the planned activity has been found to exist and no technology is under development. • The identified STCG Need is listed in Table O.9.2.	• Project end state is not determined or supported by stakeholders or Tribal Nations • Waste/material quantities and characteristics are unknown • Process operations are not identified or supported by stakeholders or Tribal Nations • Final disposition location for waste/material has not been identified	• Activity involves multiple sites • No concurrence has been reached between sites
4*	• A potential technology has been identified to accomplish the planned activity, but development is only at the laboratory scale level or earlier, • The identified STCG Need is listed in Table O.9.2.	• Project end state is determined but may be controversial to stakeholders or Tribal Nations • Process operations are identified, but may be controversial to stakeholders or Tribal Nations • Final disposition location for waste/material has not been identified and approved	• Activity involves multiple sites, site concurrence has been verbally reached • The Waste Acceptance Criteria (WAC) has not been resolved • No funding has been identified and no schedule for receipt or treatment of the waste/material exists
3*	• A potential technology has been identified to accomplish the planned activity, and is being demonstrated at least at a pilot scale level. • The identified STCG Need is listed in Table O.9.2.	• Project end state is determined and is expected to be acceptable to stakeholders or Tribal Nations • Waste/material quantities and characteristics are broadly known • Process operations are identified and are expected to be acceptable to stakeholders or Tribal Nations • Final disposition location for waste/material has been identified and EIS is being prepared	• Activity impacts another site, site concurrence has been verbally reached • Receiving facility is reviewing characterization data to determine WAC acceptability • Funding has been identified but no schedule for receipt or treatment of the waste/material exists

Programmatic Risk Categories	Technology	Work Scope Definition	Inter-Site Dependency
2*	• The required technology has been fully developed and demonstrated at another site with a similar waste/material type	• Project end state is determined and supported by stakeholders or Tribal Nations • Waste/material quantities and characteristics are well known • Process operations are identified and are supported by stakeholders or Tribal Nations • Final disposition location for waste/material has been identified and EIS ROD is prepared	• Activity doesn't impact another site or Site concurrence has been documented if multiple sites are impacted • Receiving facility has verified WAC acceptability • Funding has been identified but no schedule for receipt or treatment of the waste/material exists
1 (low)*	• Technology has been demonstrated at the site on some actual waste/materials and is operationally ready	• Project end state is determined and supported by stakeholders or Tribal Nations • Waste/material quantities and characteristics are well known • Process operations are identified and are supported by stakeholders or Tribal Nations • Final disposition location for waste/material has been identified and EIS ROD is pending	• Activity doesn't impact another site or Site concurrence has been documented if multiple sites involved • Receiving facility has verified WAC acceptability • Funding is identified in an approved PBS and facility is ready to receive the waste/material

*The numerical categories used to determine level of Programmatic Risk will be converted to colored symbols on waste/material disposition maps. Category 1 is shown as a green circle, Categories 2 and 3 are shown as a yellow triangle, and Categories 4 and 5 are shown as a red square.

Table 8.1: Critical Path To Site Closure

Project (i.e., PBS Title)	PBS Number	Short Activity Description	Activity Scheduled Start Date (month/year)	Activity Scheduled Completion Date (month/year)	Programmatic Risk Category (1 through 5)		
					Technological	Work Scope	Inter-Site Dependency
Pu Solid Residue Stabilization Project	9	Stabilize and remove all Pu residues from the site	10/96	05/02	4	4	4
Special Nuclear Material Consolidation Project	6	Consolidate all Pu from former nuclear processing facilities for off-site shipment.	05/02	09/04	1	3	1
Building 371 Cluster Closure Project	16	Complete the decommissioning and closure of the IHSS	09/04	09/07	3	4	2
Building 707/750 Cluster Closure Project	17	Complete remediation of the IHSS and closure.	09/07	09/08	3	4	2
Closure Cap Project	13	Complete the construction of an environmental cap over the former Pu processing site.	09/08	09/09	3	2	1

Table 8.2: Critical Events for Site Closure

Critical Event Title (Milestone, Decision, etc.)	Related PBS Number	Critical Event Description	Scheduled Date (month/year)	Programmatic Risk Category (1 through 5)		
				Technological	Work Scope	Inter-Site Dependency
Liquid Organic Waste Receiver Site Available	6	A site is available on this date and approval is in place to receive RFETS Liquid Organic Waste	12/97	1	2	3
ROD for Residue Reprocessing	9	Record of Decision occurs for Programmatic EIS to allow Pu residue processing.	1/98	2	3	1
Pu Residue SS&C Receiver Site Available	9	A site is available on this date and approval is in place to receive RFETS Plutonium Sand, Slag, and Crucible (SS&C) Residues as described in the site closure plan.	5/98	1	3	4
Start Pu Stabilization Processing System in Building 707	9	All activities including cold testing and the readiness assessment is approved to allow "Hot Start" of the Pu Stabilization Processing System in Building 707.	9/98	4	3	1
WIPP Opens	All	The Waste Isolation Pilot Project (WIPP) opens and approved to accept RFETS Waste as described in the site Closure Plan.	5/98	N/A	N/A	N/A
TRUPACs available	12	Additional TRUPACs available to meet the shipping schedule contained in the Site Closure Plan.	10/98	1	1	1
Fluorides Receiver Site Available	9	A site is available and approved to receive RFETS Pu Fluoride Residues as described in Site Closure Plan.	5/99	1	3	4
Scrub Alloy Receiver Site Available	8	A site is available and is approved to receive RFETS Pu Scrub Alloy Residues as described in the Site Closure Plan.	10/01	1	3	4

Metal & Oxides Receiver Site Available	8	A site is available and is approved to receive RFETS Pu Scrub Alloy Residues as described in the Site Closure Plan.	10/01	1	3	4
Residues Complete (DNFSB 94-1)	All	Complete processing and packaging Pu solid residues as required for safe interim storage.	5/02	3	3	1
Final Site Closure	13	Regulator approved closure report documenting the environmental remediation and D&D activities at RFETS.	9/09	1	3	1

Figure 8.0: Critical Closure Path (Rocky Flats Example)
(Critical Events and Critical Path)

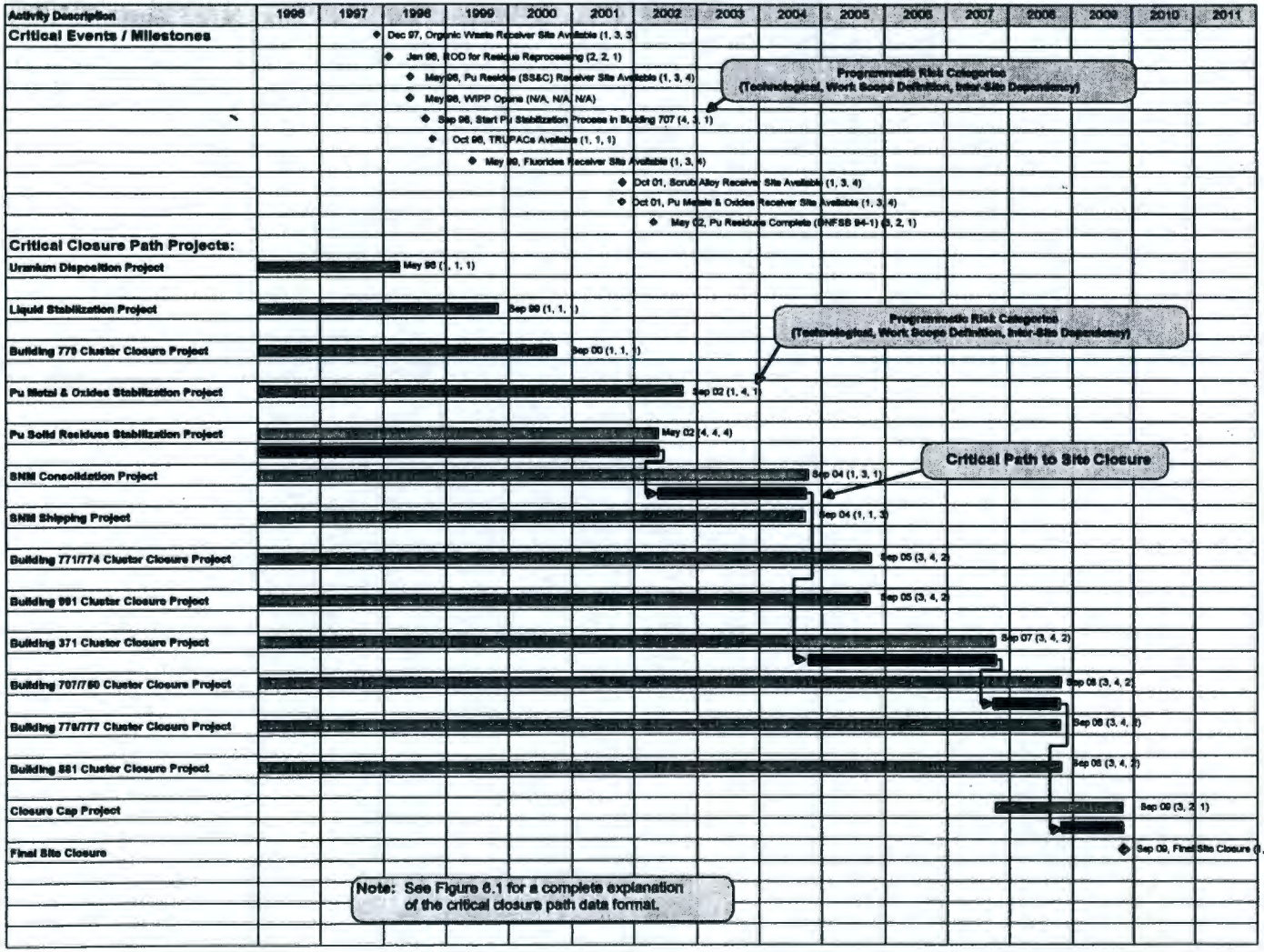
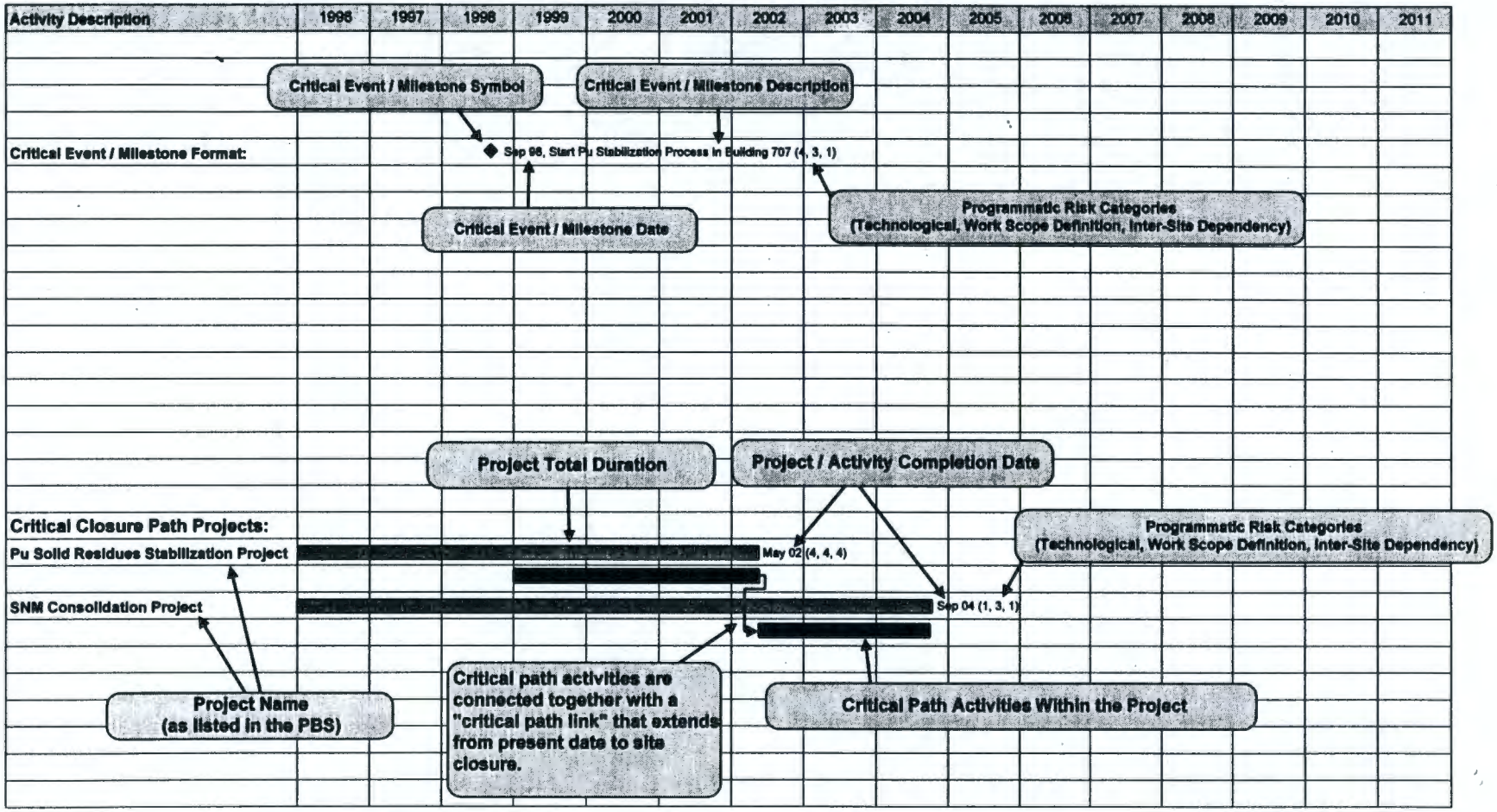


Figure 8.0: Critical Closure Path
(Rocky Flats Example)
(Critical Events & Critical Path)

Figure 8.1: Critical Closure Path Format

Typical Critical Event and Critical Path Data Structure



9.0 Business Strategies

9.1 Enhanced Performance

Enhanced performance (doing more with less) is the key to life-cycle cost reduction and therefore, site accelerations. Improvements in the productivity must have the highest priority if EM is to achieve its goals. This section explains how EM will measure enhanced performance and demonstrate savings.

Enhanced Performance Targets
$5.75 B Allocation Case
Current Year ($M)

Operations/Field Office	Target Completion Date	Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Albuquerque	2005	$679	$	$13	$34	$56	$75	$83	$91	$99	$109	$118
Carlsbad	2040	$610	$	$15	$34	$50	$66	$76	$83	$90	$96	$101
Chicago	2004	$103	$	$3	$5	$6	$8	$10	$12	$18	$20	$21
Idaho	2035	$1,175	$	$27	$69	$111	$139	$144	$157	$163	$175	$190
Nevada	2006	$199	$	$3	$9	$14	$20	$22	$29	$32	$34	$36
Ohio	2005	$937	$6	$25	$42	$63	$85	$104	$126	$142	$164	$180
Oakland	2006	$156	$	$3	$9	$17	$21	$18	$18	$20	$23	$27
Oak Ridge	2012	$1,183	$6	$53	$77	$82	$108	$132	$151	$172	$195	$206
Rocky Flats	2006	$2,823	$109	$147	$184	$241	$290	$343	$365	$369	$370	$403
Richland*	2033	$2,925	$52	$205	$270	$234	$292	$321	$349	$376	$400	$427
Savannah River*	2026	$2,280	$58	$115	$175	$142	$218	$252	$284	$314	$345	$378
Total		$13,070	$231	$609	$908	$1,017	$1,322	$1,505	$1,664	$1,795	$1,931	$2,087

* The efficiencies shown for Savannah River and Richland are based on the results of their respective workouts.

Background

Within EM, enhanced performance is used to refer to programs and methods of operation that increase efficiency in carrying out the EM cleanup mission. EM has historically had many successes with enhanced performance, however, the continuing budget constraints are pushing EM to find additional means of doing more for less.

Establishing Targets, and Information on Comparable Industries

The original goals of the National 2006 Plan Discussion Draft were based on three enhanced performance objectives:

- Reduce support costs to 30 percent of site costs by FY 2000,
- Improve definable project (or pure projects) productivity by 3.5 percent annually, and
- Improve operations (or operational projects) productivity by 6 percent annually.

Targets were developed because of the agreement by Headquarters and Operations/Field Office managers to develop and implement overall performance enhancements as the most practical approach to achieving completion and compliance goals. The targets are based on a two step process:

- First, the specific site support costs are compared to the goal of 30 percent . If a site's support costs exceed 30 percent, an annual target to reduce support cost and increase mission direct work will be established. The rate used in this target is based on rates of change sites' have achieved.

- Second, all projects segmented by type are given annual enhanced performance goals. On an aggregated basis this averages 5 percent per year. This is conservative when compared to commercial enterprises in industries with significant and similar environmental regulations. Four industries were specifically compared: Coal Mining, Steel, Petroleum Refining, and Industrial Chemical. These trends show that EM's enhanced performance goals are less than those the comparable industries realized over a twenty five year period 1975 to 1994.

Application of these targets to life-cycle cost estimates that had been made by Operations/Field Offices resulted in revised performance targets and enhanced performance goals for each site.

Measuring Enhanced Performance: Expected vs. Actual Performance

Expected performance is delineated in the Draft Site Ten-Year Plans, submitted on February 28, 1997. Enhanced performance is the result of the agreement by Headquarters and Operations/Field Office managers to develop and implement overall performance enhancement targets as the most practical approach to achieving completion and compliance goals. Measuring enhanced performance determines, quantifies and categorizes what enhanced performance is being achieved. This is determined by comparing expected performance to actual performance on a life cycle and yearly basis. Specifically, achievement of enhanced performance will be measured by comparing data submitted following the end of the fiscal year in the annual Project Baseline Summary (PBS) update to the projections derived from the February 1997, PBS submittal.

Headquarters will track enhanced performance progress toward 2006 Plan targets in two ways:

- **Projected** enhanced performance -- tracked through changes in life-cycle cost projections as found in PBS updates, and then rolled up to a site level, and

- **Actual** enhanced performance -- tracked through periodic comparisons of planned objectives (cost, schedule, metrics) with actual performance (cost, schedule, metrics).

The process will achieve three objectives: 1) give field sites credit toward their overall life-cycle enhanced performance goal, 2) identify additional areas for efficiency improvement, and 3) measure actual performance.

Baseline and Enhanced Performance

The Field should develop baselines and PBSs that are realistic within the proposed funding targets developed for the respective Operations/Field Office. Attributes of the change control process and definitions including those related to enhanced performance are discussed in Section 7.0. Sites are responsible for tracking and understanding all changes to their baselines through their site change control processes. All measurements of enhanced performance are related to the baseline and include information (to the extent measurable and supportable) regarding:

- Enhanced performance achieved prior to February 1997,
- Enhanced performance achieved execution year (FY 1997), and
- Enhanced performance planned to be achieved in budget year (FY 1998).

In response to comments from stakeholders and Tribal Nations, the Department is collecting data in the enhanced performance section of this guidance to support a rigorous methodology for measuring and documenting cost savings resulting from enhanced performance. Sites are asked to only incorporate known methods for achieving enhanced performance into baselines. In other words, baselines should reflect how much the site realistically thinks it will cost to complete the required workscope.

Enhanced Performance Achieved Prior to February 1997

Draft Site 2006 Plans may include a description of efforts to improve project performance undertaken prior to the development of the National 2006 Plan Discussion Draft. These efforts may have been undertaken as a part of a larger EM program initiative or unique site-specific thrusts such as:

- DOE's Contract Reform Cost Savings Report,
- EM productivity savings reported via EM QMR,
- Project EM Savings,
- Workouts,
- Benchmarking Activity-Based Cost Estimating, and
- Application of innovative technology.

If a site chooses to include this section on prior enhanced performance efforts it must describe efforts to validate and verify proposals or actual experience using:

- Site-specific change control actions,
- Independent audits or assessments,

- Ongoing value engineering or value analysis programs, and
- Other documentation should be discussed with Headquarters. Please contact John Mullarkey or Ned Larson (304)285-4157 if you have any questions.

Additionally, the site should indicate whether prior efforts apply site wide to specific projects, subprojects, or activities.

Enhanced Performance Achieved Execution Year (FY 1997)

Enhanced performance measurements from last year's baseline should be measured and reported, and in addition, change control documentation supporting these efficiencies should be summarized and reported.

Enhanced Performance Planned to be Achieved Budget Year (FY 1998)

Some efficiencies are continuing and their achievement meets the baseline threshold of "realistic within the proposed funding targets." Please consider Corps of Engineer recommendations when identifying these enhancements. These should be incorporated into the project PBS baseline and reported in PBSs. As their achievement will not result in a change control action (achievement is within plan), they should be separately identified in the baseline and reported. If additional efficiencies are achieved, or if planned efficiencies are not achieved, either condition should result in a change control action and be reported.

Percentage of Work Completed

The context for measuring EM's enhanced performance goals (life-cycle cost reductions and accelerated cleanup), in both the short and long term, is percentage of work completed. This is particularly true for EM's large, complex and multi-year PBSs. Percentage of completion measures the progress being achieved in relation to the ultimate goal. How progress is measured varies both in sophistication and specificity. Progress in some PBSs can be simple to measure, others require a great deal of data and analysis. Also, measurement of progress has a cost. As the need for accuracy in measuring progress increases, so does the cost. Therefore, the need to measure progress has to be balanced with the need to make progress. Site management needs to determine the appropriate approach and level of detail necessary in measuring the progress of each PBS. This will be influenced by a PBS's characteristics and ability to measure progress. EM Headquarters, in summarizing reported progress, has a corresponding need to effectively communicate progress achieved.

Transition to PBS Baselines

The best approach to use in measuring progress is related to the underlying complexity, magnitude and uncertainties inherent in each PBS. As progress measurement becomes more important, so will baselines and change control. However, as discussed in Section 7.0, Headquarters understands that the transition to PBSs baselines "may require a reworking of the current baseline." If this is applicable to measuring a site's enhanced performance in this interim period, a number of options exist including:

1. Measurement of enhanced performance from existing project baseline even though these have not been fully converted to PBSs. This would include identification of the current project baseline, achieved efficiencies, and an estimate of those efficiencies by PBS. The efficiencies will be rolled up from the PBSs and reported at the site level.

2. The existing performance measures can be used to provide a basis for measuring enhanced performance in this interim period. Using performance measures, enhanced performance can be calculated by taking the number of units to be completed during the year and then dividing that into the budget for that activity. This will give a dollars per unit measurement (i.e. dollars per cubic meter of waste disposed). If more measures are completed during the year, then at the end of the year another dollars per unit calculation will be made and compared with the value at the beginning of the year. This method will account for situations where more work is moved into a fiscal year or where the same work is done for less money. Again, if this approach is used, an estimate of those efficiencies by PBS should be made.

3. An Operations/Field Office may use another method for determining enhanced performance at its site. It must be accepted by John Mullarkey or Ned Larson (304)285-4157.

The reporting of the performance measures and costs associated with them will be done during the established performance measure process that is used for the Quarterly Management Report (QMR) and for the Government Performance and Results Act (GPRA). An enhanced performance discussion may also be incorporated into the QMR process.

The Enhanced Performance Process

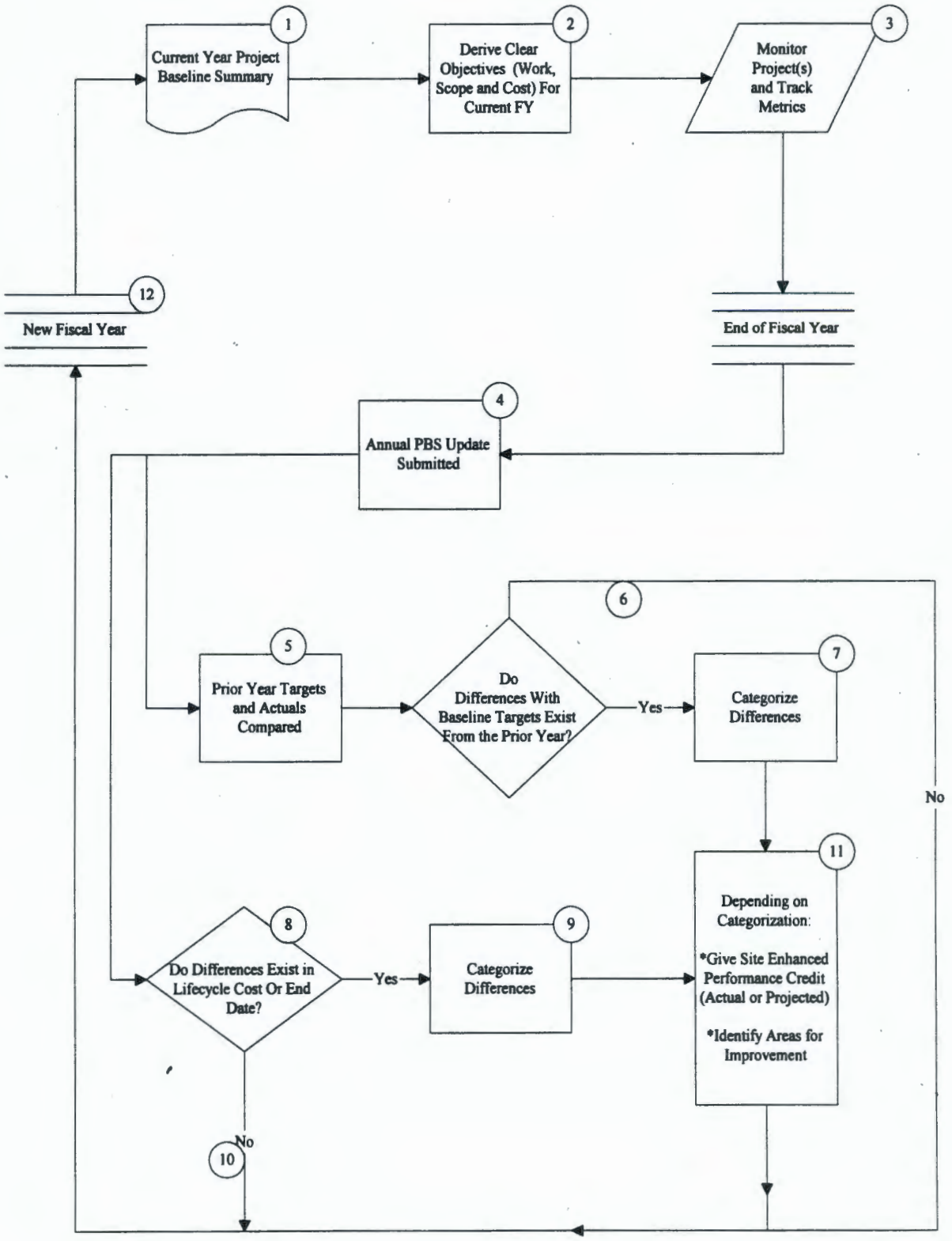
Most comparisons and analyses will be made at the conclusion of the fiscal year. Enhanced performance determinations will be based on the baseline as reflected in the PBS or for targets not allocated to a PBS in relation to that target. Figure I outlines the process involved in tracking changes to the baseline and determining actual and projected enhanced performance.

From Figure I:

1. The efficiency targets are issued to a site and will be reported back to HQ at the site level.
2. The guidance will include a site target for the upcoming fiscal year. The target should then be first allocated to PBSs where the site believes its achievement is "realistic within the proposed funding targets." Any remaining target amount should be identified and related enhancements achieved during the year tracked. PBSs should include projected and actual metrics that capture work completion (performance, milestones, etc.) as well as cost. The projected values will be reported at the beginning of the fiscal year and the actuals will be submitted at the end of the fiscal year. The actual metrics should include all metrics completed during the year, including those from targets not allocated to the PBS at the beginning of the year.
3. During the course of the year, the sites will monitor the project(s) and collect metrics data, changes to the baseline, and actual performance data. The data is submitted to Headquarters periodically.
4. At the conclusion of the fiscal year, a PBS update will be submitted to Headquarters. The data in the PBS will be rolled up from the PBS's and used in the determination of site enhanced performance.
5. To determine if **actual** enhanced performance had occurred in the prior year, rolled up data in the updated PBSs are compared to the baseline targets that had been set for the prior year.
6. If there are no differences between the baseline and the actuals, then the project is on target.
7. If differences do exist between the actuals and the estimates, then the differences must be categorized.
8. To determine **projected** enhanced performance (savings estimated to occur in outyears), the new estimates of life-cycle cost and end date will be compared to estimates from the previous fiscal year.
9. If there were differences in the estimates, the differences must be categorized.

10. If there are no differences, the project is on target to hit its life-cycle and end date goals.
11. Once the differences have been categorized, they will be analyzed to determine if sites have made efficiency gains (enhanced performance) or the changes are due to other reasons. Headquarters may also participate in identifying areas of improvement.
12. In the subsequent fiscal year, the process begins again from #1.

Figure I


1
Current Year Project Baseline Summary
2
Derive Clear Objectives (Work, Scope and Cost) For Current FY
3
Monitor Project(s) and Track Metrics
12
New Fiscal Year
End of Fiscal Year
4
Annual PBS Update Submitted
6
5
Prior Year Targets and Actuals Compared
Do Differences With Baseline Targets Exist From the Prior Year?
Yes
7
Categorize Differences
No
11
Depending on Categorization:
*Give Site Enhanced Performance Credit (Actual or Projected)
*Identify Areas for Improvement
8
Do Differences Exist in Lifecycle Cost Or End Date?
Yes
9
Categorize Differences
No
10

Actual Enhanced Performance Achieved (Execution Year)

All actions that result in a reduction of life-cycle costs will be counted as enhanced performance. A partial list of examples of such actions includes streamlined processes, mortgage reduction, scope deletion, and scope avoidance. Scope deferrals will not be counted as enhanced performance.

Enhanced performance for the execution year is based upon the sites ability to manage its work scope for that year at a cost below the baseline projection or to get more work scope done for the same cost.

Projected Enhanced Performance (outyears)

Life-cycle costs and end date could be impacted by changes in plans for future operations (these changes may or may not be in effect by the beginning of the fiscal year). In conjunction with the changed life-cycle cost estimate, the reasons behind the changes should be documented using the categorization scheme described in the following section.

Categorizing the Differences

At the end of each fiscal year, sites should revise each project's life-cycle cost estimates and compare the completed performance measures to the current year baseline. If the actual performance data differ from the baseline, sites should assign these differences to one of the following three categories:

Differences with the baseline can fall under one or multiple categories shown below. The Project Manager will simply select one of the following category headings that best represents the reason for the differences:

- Changed end state: includes cost avoidance and newly incurred costs. Cost avoidance is defined as situations where project savings are accrued through a change in outcome (i.e., end state) that is reviewed and approved by all stakeholders, Tribal Nations, and regulators. Newly incurred costs are a result of scope increases (end state to be "more clean"). **Cost avoidance is considered enhanced performance.**

- Scope addition/deletion: results in the changes in project costs. Scope addition is an increase in costs without a change in outcome (i.e. end state remains constant). Scope deletion is defined as the achievement of cost savings without changing the outcome. **Scope deletion is considered enhanced performance** when it reduces the life-cycle cost.

- Changed end date: includes accelerated schedule and scope deferral (schedule delay). Accelerated schedule occurs when scope from the outyears is moved forward to the current year. Scope deferral (schedule delay) is the opposite of accelerated schedule; scope from the current year is rescheduled for completion for an outyear. **Accelerated schedule is considered enhanced performance.**

When changes in the baseline are a result of actions that are considered enhanced performance (accelerated schedule, scope deletion, or cost avoidance), a qualitative description of where the efficiency gains were made is necessary. The differences between actual performance data and the baseline can be discussed under the following categories:

- Use of new technologies or techniques
- Streamlined process
- Resequencing of projects (mortgage reduction)
- Privatization
- Innovative contracting
- Pollution prevention
- Site activity integration
- Site support cost changes

9.2 Science and Technology Development and Deployment

In the preparation of their Draft Site 2006 Plan, each site is encouraged to utilize innovative technologies to the maximum extent possible in achieving the 2006 Plan goals outlined by the Assistant Secretary. Sites must consider basic research and technology development activities and needs and establish an approach to ensure deployment of innovative technologies to meet Plan objectives. These sections are needed to link science and technology needs and benefits to specific 2006 Plan projects at the sites.

Each Operations/Field Office will complete three tables, documented in Attachment F, Section O.9. This information should be developed in conjunction with the Site Technology Coordination Groups (STCGs). These tables address three aspects of science and technology relevant to the Environmental Management (EM) program: plans for the deployment of innovative technologies and identification of technologies for site-specific Technology Deployment Management Plans (Section O.9.1); identification of the needs for basic research and technology development activities to address site problems (Section O.9.2); and expected and/or potential benefits from science and technology development activities, including cost savings, risk reduction, and the provision of solutions to problems which are otherwise unsolvable (Section O.9.3). These sections are designed to link science and technology needs and benefits to specific 2006 Plan projects at the sites. Both national and site-specific science and technology needs and activities should be accounted for in the Draft Site 2006 Plan. A summary of the role of science and technology for the EM program at each site should also be included in Attachment F, Section O.9.4. In addition, Attachment M describes the outline for Technology Deployment Management Plans, based on the Assistant Secretary's memo of July 3, 1997.

Data collected in the Science and Technology section of the guidance, particularly in Section O.9.3, will be used to address stakeholder and Tribal Nation concerns over the Department's ability to achieve significant cost savings through the deployment of innovative technologies. In addition, sites are requested to link technology needs (opportunities for savings) to disposition maps and critical closure paths.

9.3 Performance Metrics

9.3.1 Purpose

The primary purpose of EM's performance measurement is to demonstrate progress toward accomplishing the program's 2006 Plan vision, goals, and objectives. Performance measurement will help EM to assess the results of key activities compared to planned goals, determine progress towards achieving the projects' and sites' end states, and improve program performance at all organizational levels. EM's corporate measures meet the requirements and intent of the GPRA and related legislation, and will be used to credibly and convincingly communicate EM's most important program results to OMB, Congress, and the public.

9.3.2 Legislative Drivers for Performance Measurement

The main legislative driver for performance measurement is the Government Performance and Results Act (GPRA) of 1993 (P.L. 103-62). The GPRA transforms the way government operates by encouraging federal agencies to increase their emphasis on the outputs, outcomes, and results of projects, rather than inputs, program definition, or policy formulation. The emphasis is on formal planning and quantitative measurement. As required by the GPRA, all government agencies will submit Strategic Plans to OMB and Congress by September 30, 1997, and FY 1999 Annual Performance Plans to OMB with the budget in the Fall of 1997. EM was selected as a GPRA pilot during the spring of FY 1994. As a pilot, EM developed Annual Performance Plans and Reports for FYs 1994, 1995, and 1996.

Other legislative requirements for performance measurement include the:

- Government Management Reform Act (GMRA) which gives additional impetus to improve management of government performance by requiring, among other things, annual audited financial statements;

- Chief Financial Officer's Act (CFO) which requires each federal agency to develop and maintain an integrated agency accounting and financial management system, including financial control, which provides for the systematic measurement of performance; and

- Setting Customer Service Standards (Executive Order 12862) which requires federal agencies to identify and survey customers and establish post service standards and measure results against those standards.

EM's corporate measures will also be the basis for developing EM's contribution to the Secretary's Performance Agreement with the President.

9.3.3 Use of Performance Measures

EM's corporate performance measures support a wide variety of management and regulatory requirements. Measuring and tracking performance provides useful information for making informed management decisions at both Headquarters and in the Field, and provides Congress and OMB with data to perform their oversight responsibilities. Specifically, EM's measures play a critical role in developing the following products:

- **DOE Strategic Plan** - outlines the goals, objectives, strategies and success measures for DOE's major functions and operations. EM has overall responsibility for the Environmental Quality (EQ) section of the DOE Strategic Plan.

- **DOE Annual Performance Plan** - includes performance measures and goals for the fiscal year budget request for key Departmental activities. The FY 1999 Annual Performance Plan is submitted along with the budget to OMB in the fall and is finalized when the budget is transmitted to Congress in early February. EM's section of the Department's Plan will include key measures and associated fiscal year goals.

- **DOE Annual Performance Report** - provides the actual results and progress toward the Department's performance goals defined in the Annual Performance Plan.

- **Secretary's Performance Agreement with the President** - identifies DOE's highest priority fiscal year commitments and success measures for each business line.

- **Quarterly Management Reviews (QMRs)** - Performance results are reviewed and discussed by the Assistant Secretary for Environmental Management and the Assistant Manager for Environmental Management for each site during Headquarters/Field senior level management reviews.

- **Management Commitments** - The Assistant Secretary for Environmental Management and each Site Manager sign an agreement each year that commits each site to accomplishing a certain scope of work. These commitments are based upon performance measures data, milestones, and measures for EM's high visibility projects.

- **Performance Based Budgets** - EM's budgets will be performance-based to link measured results with funding allocations.

9.3.4 Key Elements

Performance measures provide the link between the processes of planning, budgeting, executing, and evaluating. As such, performance measurement is a key component of the Integrated Planning, Accountability, and Budgeting System (IPABS). Performance information plays a role in all aspects of IPABS:

- **Planning** - As an integral part of the *planning* process, each site will establish performance goals against EM's corporate measures, as applicable to their work scope. Planning information will inform the budget process.

- **Budget Formulation** - During the *budgeting* process, performance information will be used to justify and defend EM's budget to OMB, Congress, stakeholders, and Tribal Nations. Performance goals that were established during the planning phase may be adjusted to reflect the results of Congressional actions, as necessary.

- **Budget Execution** - Site Project Managers and contractors will *execute* their work scope in accordance with the approved Site Plans, including their performance measures and goals.

- **Program Evaluation** - Program results will subsequently be *evaluated* against the pre-established site and project performance measures goals and will be reported as part of EM-1's QMRs.

9.3.5 Data Needs

EM has developed a single set of corporate performance measures that focus the organization on achieving EM's 2006 Plan end states and program outcomes, as well as on those crosscutting areas essential to accomplishing program results effectively and efficiently (i.e., financial, safety and health, risk reduction, and stakeholder trust and confidence measures). Fiscal year goals will be established and actual results will be collected on a periodic basis for all EM performance measures. The performance goals that are provided as part of the PBS submittal must be consistent with the baseline, accurate, complete, and challenging. In addition, the actual performance results must be valid and verifiable.

Most of EM's performance measures data will be collected at the project level in the PBSs. Some performance data, however, is more appropriately collected at the site level (i.e., number of acres of land released to the public) or the Operations/Field Office level (i.e., safety and health measures such as "total recordable case rate"). The data elements that comprise the project level measures are included in Section A.4 of the PBS; data elements that comprise the site and Operations/Field Office measures are shown in the Site Summary Level (SSL) and Operations/Field Office Data Summary (ODS) formats, respectively.

9.3.6 EM Corporate Performance Measures

A summary of EM's corporate performance measures and their data collection level (i.e., PBS, SSL, or ODS) follows.

> **Note: Waste and material metrics by PBS will be derived from the Consolidated PBS Quantity Table. Each PBS Project Manager will be responsible for his/her portion of the site metrics as reflected in the Consolidated PBS Quantity Tables.**

Project Baseline Summary (PBS)

Waste Stored/Treated Disposed

FY 1997 actuals will be collected using the traditional formats (Table A.4) for FY 1998 and beyond. The following data will be collected in the Consolidated PBS Quantity Tables.

- Volume of waste treated by waste type (HLW, TRU, MLLW, LLW) in cubic meters
- Volume of waste disposed by waste type (TRU, MLLW, LLW); Disposal-ready HLW in canisters; Disposal-ready TRU in cubic meters
- Inventory (storage) by waste type (HLW, TRU, MLLW, LLW) in cubic meters

Release Sites Completed

These data will now be derived from the detailed release sites list attached to each PBS (Section A.5).

- Number of release site assessments completed
- Number of release sites completed

Facilities Deactivated/Decommissioned

The decommissioning data will now be derived from the facilities list attached to each PBS (Section A.5).

- Number of facilities deactivated during the period
- Inventory of facilities by status (i.e., not yet deactivated and deactivated)
- Number of facility assessments completed
- Number of facilities decommissioned

Material Stabilized/Made Disposition-Ready

FY 1997 actuals will be collected using the traditional formats (Table A.4) for FY 1998 and beyond. The following data will be collected in the Consolidated PBS Quantity Tables.

- Quantity of material stabilized by material type (i.e., plutonium, uranium, and other nuclear material (in kg) and Spent Nuclear Fuel (SNF) (in $MTHM/M^3$) during the period;
- Quantity of material made disposition ready by material type (i.e., plutonium, uranium, and other nuclear material and SNF); and
- Inventory of materials by status (i.e., not yet stabilized, stabilized but not disposition ready, and disposition ready) and material type (i.e., plutonium, uranium, other nuclear material and SNF).

Technology Deployment

- Number and type of innovative technologies deployed (Responsibility for technology deployment rests with EM-30, EM-40, EM-60, and Operations/Field Offices); and
- Costs avoided through the deployment of innovative technologies (Responsibility for technology deployment rests with EM-30, EM-40, EM-60, and Operations/Field Offices).

Risk Reduction

- Number of projects with associated public, worker, or environmental risks that are reduced from Urgent, High, or Medium levels to lower levels each year (not collected as a separate measure, but from risk information provided in Section C.1 of the PBS).

Site Summary Level (SSL)

Land/Geographic Site

- Number of acres of land released to the public,
- Number of acres of land available for alternative future use, and
- Number of geographic sites completed.

Pollution Prevention

- Reduction in waste generation from routine operations by waste type (TRU, MLLW, LLW, Hazardous, and Sanitary). This measure is not collected as a separate measure but is derived from the Consolidated PBS Quantities Tables.

- Quantity of secondary waste generated from cleanup and stabilization operations. Includes all waste types (TRU, MLLW, LLW, Hazardous, and Sanitary). This measure is not collected as a separate measure but is derived from the Consolidated PBS Quantities Tables.

Stakeholder trust and confidence measures (collected independent of the PBS)

Operations/Field Office Data Summary (ODS)

Safety and Health Measures (procedure violations/deficiencies, total recordable case rate, lost work day case rate, and corrective action status)

9.4 EM Management Commitments

9.4.1 Purpose

The Assistant Secretary for Environmental Management and each Site Manager will sign an agreement for the execution year that commits each site to accomplishing a certain scope of work. The management commitments are comprised of major milestones for EM's high visibility projects, a limited number of other key milestones, and EM's Corporate Performance Measures. These commitments will be tailored to individual Operations/Field Offices and will provide a balanced approach to determining critical program expectations and for assessing EM's progress towards meeting key programmatic and high visibility project goals and objectives. The Operations/Field Office manager's signature, as shown in the attached "Draft FY 1998 Management Commitments Format", indicates his/her concurrence with the management commitments selected and with the other execution year commitments in his/her Draft Site 2006 Plan.

The FY 1998 approved commitments will be subject to change control to ensure revisions and updates to the commitments are endorsed by EM Headquarters/Field senior managers and are appropriately documented. It is anticipated that the EM-1/Operations/Field Office Manager commitments will be incorporated into managers' performance standards and appraisals, as appropriate, to enhance accountability. Reporting against each Operations/Field Office's management commitments will occur during EM's Quarterly Management Reviews (QMR).

9.4.2 Establishing FY 1998 Management Commitments

The FY 1998 EM Management Commitments will be derived primarily from the High Visibility Project milestones and Corporate Performance Measures data reported in the Field's PBSs, SSLs, and ODSs. Note that all EM Operations/Field Offices will not have projects that are designated "high visibility". EM Headquarters will extract data reported from the Field in their November 26, 1997, submittal and complete a Draft FY 1998 Management Commitments document for each Operations/Field Office, similar to the attached format. Sites may select high visibility project milestones and other key milestones as proposed Management Commitments for FY 1998 by checking the appropriate box in the milestone table of the PBS.

The Corporate Performance Measures will be based on a rollup of the Operations/Field Offices' PBS data and applicable SSL and ODS data. Please note that stakeholder trust and confidence is measured by conducting periodic surveys of key Departmental stakeholders and Tribal Nations. Therefore, specific EM FY 1998 management commitments for stakeholder trust and confidence will not be established.

The draft FY 1998 Management Commitments from each Operations/Field Office's November 26, 1997, PBS submittal will be distributed to EM Headquarters and the Field for review, discussion, and concurrence prior to transmittal to EM-1 and each Operations/Field Office Manager for approval. The final approved management commitments will reflect high level milestones and the corporate measures that are especially critical to EM program success.

DRAFT
XX Operations/Field Office
FY 1998 Management Commitments Format

(1) High Visibility Projects Major Milestones

*Includes from one to three major milestones for FY 1998 for EM's high visibility projects as provided by each Operations/Field Office in the "Revised 2006 Plan PBS: Milestones" format under the Management Commitments column. These milestone dates should also be consistent with dates reported in EM's Progress Tracking System (PTS). Milestones indicate the start or completion of **major** programmatic actions or significant interim progress towards a key project/program event and include a specific date or time frame*

- Project A
  Major Milestone 1:
  Major Milestone 2:
  Major Milestone 3:

- Project B
  Major Milestone 1:

- Project C
  Major Milestone 1:
  Major Milestone 2:

(2) Other Major Milestones (Not Captured Above)

Includes from zero to three additional major program milestone(s) for FY 1998 that do not fall within a High Visibility project. These milestone(s) are provided by each Operations/Field Office in the "Revised 2006 Plan PBS: Milestones" format under the Management Commitments column. Milestones reflect only those that require senior level EM Headquarters and Field management attention.

- Major Milestone 1:

- Major Milestone 2:

- Major Milestone 3:

(3) Corporate Performance Measures

Summary tables will be developed for each Operations/Field Office based on PBS, SSL, and ODS Corporate Performance Measures data for FY 1998 (see Section 9.3). Commitments will address: Geographic Site Completions; Land Use; Release Site and Facility Assessments; Release Site Completions; Facilities Deactivated and Decommissioned; Waste Treated/Disposed; Material Stabilized/Made Disposition-Ready; Pollution Prevention; Safety & Health; Enhanced Performance; Technology Deployments and Costs Avoided Through Deployments (TBD); and Risk Reduction (TBD).

The XX Operations/Field Office commits to accomplishing the key management commitments highlighted herein and to accomplishing the work scope as reflected in its Draft Site 2006 Plan for FY 1998.

XX signature

Alvin L. Alm

Manager
XX Operations/Field Office

Assistant Secretary for
Environmental Management

XX Operations/Field Office
FY 1998 EM Corporate Performance Measures

The XX Operations/Field Office commits to the following FY 1998 Corporate Performance Measures as reported in the PBSs, SSLs, and ODS:

	FY 1998 Commitment	2006 Goal	Life-cycle Goal
Geographic Sites			
• xx EM geographic sites completed	xx	xx	xx
Land Use			
• xx acres of land available for alternative future use	xx	xx	xx
• xx acres of land intended to be released for public use	xx	xx	xx
Release Sites			
• xx assessments completed	xx	xx	xx
• xx release sites completed	xx	xx	xx
Facilities Deactivated/Decommissioned			
• xx facilities deactivated	xx	xx	xx
• xx assessments completed	xx	xx	xx
• xx facilities decommissioned	xx	xx	xx
Waste Treated/Disposed			
Treated			
• xx cubic meters HLW	xx	xx	xx
• xx cubic meters TRU	xx	xx	xx
• xx cubic meters MLLW	xx	xx	xx
• xx cubic meters LLW	xx	xx	xx
Disposed			
• xx cubic meters MLLW	xx	xx	xx
• xx cubic meters LLW	xx	xx	xx
Disposal Ready			
• xx canisters HLW	xx	xx	xx
• xx cubic meters TRU	xx	xx	xx
Material Stabilized			
• xx kg plutonium	xx	xx	xx
• xx MTHM SNF	xx	xx	xx
• xx kg uranium	xx	xx	xx
• xx kg other nuclear material	xx	xx	xx
Material Made Disposition Ready			
• xx kg plutonium	xx	xx	xx
• xx MTHM SNF	xx	xx	xx

• xx kg uranium	xx	xx	xx
• xx kg other nuclear material	xx	xx	xx

Notes:

(1) All Operations/Field Offices will <u>not</u> have work scope that applies to each measure. (2) The 2006 and Life-cycle Goals are provided to set the measure within the context of the overall work scope.

	FY 1998 Commitment	2006 Goal	Life Cycle Goal
Pollution Prevention			
Quantity of routine waste reduced (based on 1993 waste generation rates):			
• xx cubic meters LLW	xx	xx	
• xx cubic meters MLLW	xx	xx	
• xx cubic meters HAZ	xx	xx	
• xx cubic meters TRU	xx	xx	
Decrease in secondary waste from cleanup and stabilization operations			
• xx cubic meters LLW	None*	xx	
• xx cubic meters MLLW		xx	
• xx cubic meters HAZ		xx	
• xx cubic meters TRU		xx	
* Commitment begins in FY 1999			
Safety & Health			
• xx Total Recordable Case Rate	xx		
• xx Lost Workday Case Rate	xx		
• xx Procedure violations/deficiencies	xx		
• xx Corrective Action Status	xx		
Enhanced Performance			
• $xx enhanced performance that will result in additional work scope that must be completed within the $xx budget allocation for FY 1998	xx	xx	xx
Contracting			
• xx percentage increase in competitively awarded Firm Fixed Price (FFP) contracts compared to the total contract dollars for FY 1998	xx	xx	

Technology Development

- Number of Innovative Technologies Deployed - TBD
- Costs Avoided Through Deployment of Innovative Technologies - TBD

Risk Reduction – TBD

9.5 Integration

The DOE-EM program faces significant technical and financial challenges in cleaning up the environmental legacy of nuclear weapons production and research and development, while facing an uncertain future in obtaining the needed funding to perform this work. Historically, the sites have managed their programs by focusing on the needs of the site. To meet the programmatic objectives within an acceptable budget, DOE-EM has committed to addressing problems common to multiple DOE sites from an integrated, complex-wide perspective. The first steps in identifying these integration opportunities are to clearly define and communicate the baseline disposition path for DOE-EM waste and materials, and to ensure that quality data are provided.

- Sites should incorporate the WM PEIS preferred alternatives in their Draft Site 2006 Plans (see Section 9.5.4). Alternatively, sites must explicitly propose deviation from the preferred alternative for EM-1 approval.

- The waste data provided in Site Plans and reflected on disposition maps must be traceable to Federal Facility Compliance Act (FFCAct) consent orders and other regulatory commitments. Site Plans may differ from the FFCAct, but must provide a clear discussion of these differences and how the changes have been, or will be, accepted by regulators.

- Sites should incorporate proposed nuclear materials actions in their plans, indicating where the action is contingent on the completion of NEPA activities (e.g., Rocky Flats Plutonium Residues and Scrub Alloy EIS).

Questions on Disposition Maps, the Consolidated PBS Quantities Table, or Integration should be directed to Doug Tonkay (301)903-7212.

9.5.1 Disposition Maps

Disposition maps are graphical representations of a site's conceptual approach for managing wastes, nuclear materials, and contaminated media from current status through storage, treatment, and disposal, including shipping and off-site treatment and disposal. Disposition maps will serve multiple purposes at DOE. These maps have been requested by stakeholders to provide a clear understanding of the path to achieve final disposition of waste and materials, including inter-site transfers; they will allow DOE to work with national stakeholders (e.g., NGA) on national planning and to identify integration opportunities across the complex. Disposition maps will also be used to generate the Consolidated PBS Quantity Tables, from which performance metrics are derived. This is one of the first steps toward integrating programmatic databases (e.g., EM-40 Core Database) into the Integrated Planning, Accountability, and Budgeting System (IPABS).

PBSs are organized in the manner that each site actually performs work. However, following the flow of wastes and materials through PBSs is complicated. Waste and material disposition maps provide a high level graphical depiction of the disposition of EM-owned waste and material from their current state to final disposition, crossing PBS boundaries. Preliminary disposition maps for four waste types and material streams and for the environmental restoration program activities of eleven major DOE sites, and several of the smaller sites, have been developed. These maps must be included, updated,

and verified in the Draft Site 2006 Plan. All sites need to have disposition maps included in their Draft Site 2006 Plans illustrating the following categories:

- High Level Waste
- Transuranic Waste
- Mixed Low Level Waste
- Low Level Waste
- Environmental Restoration Program
- Spent Nuclear Fuel
- Plutonium
- Uranium
- Special Isotopes and other Nuclear Materials

Because of the technical nature of disposition maps, it is important that they are developed by the appropriate subject matter experts directly working on each project. Use the example disposition maps and step-by-step instructions presented in Attachment G as a guide in developing your site-specific maps. The waste and materials volumes for each stream on a disposition map must be identified and included in the Consolidated PBS Quantity Table (Attachment G). **The disposition maps must accurately reflect the quantities/flows data in the Consolidated PBS Quantity Table.** Separate disposition maps should be prepared for the ***Environmental Restoration program, with appropriate links depicted.***

Note: Waste and material metrics by PBS will be derived from the Consolidated PBS Quantity Table, for 1998 through closure. FY 1997 actuals will still be collected in the traditional format in table A.4. Each PBS Project Manager will be responsible for his/her portion of the site metrics as reflected in the consolidated tables.

The Environmental Restoration program maps are somewhat different than those developed for waste management activities and nuclear materials since a number of environmental restoration activities will not generate wastes requiring subsequent treatment and disposal. These maps should address the entire Environmental Restoration program at the site, including media/materials currently targeted for in-situ management. An example disposition map for environmental restoration activities is shown in Figure G.3 of Attachment G. Information currently in the EM-40 Core Database has been used to develop an additional view of the EM-40 data. The data submittal process will merge both the existing (EMI) and EM-40 Core Data into one unified disposition map.

For each disposition map element also identify the programmatic risk associated with that element. Programmatic risk categories are described in Table 8.0. This provides the opportunity for the site to identify areas of programmatic risk (i.e., risk to cost, schedule, and technical performance) associated with the disposition at each waste stream. This should not be confused with risk to the worker, public, and environment. As Operations/Field Offices take on the challenge of accelerating site closure dates, areas with high programmatic risk will become the focus of DOE management attention to ensure appropriate visibility and resources are provided. For activities that are ranked as high programmatic risk (i.e., risk categories 4 or 5), sites should prepare Programmatic Risk Management Plans as described in Section 14.0, Action Plans. For activities with a technology risk of 4 or 5, the STCG need number should be identified.

9.5.2 Shipping/Receiving Transfer Data

To ensure that shipping/receiving sites have consistent data, reflecting the Department's current policy on disposition of waste and nuclear materials, the following procedure must be used when completing the Consolidated PBS Quantity Table:

1. If you are the shipper, you must contact the receiving site's point of contact (POC) and discuss with the POC how much waste or materials you are planning to ship to the POC's receiving site and when you plan to ship it.

2. If the receiving site's POC acknowledges that they are expecting the waste/material (e.g., transfers have been occurring routinely and regulators, stakeholders, and Tribal Nations are in agreement), the shipping site will indicate in its plan that the waste/material is APPROVED BY the receiving site.

3. If the receiving site acknowledges that they are considering accepting the waste/material, but that planning is not complete; regulators, stakeholders, or Tribal Nations have not yet agreed; or a final decision has not been made, the shipping site should indicate that the receiving site is their POTENTIAL RECEIVER. Both shipping and receiving sites need to include the same information on their disposition map "Site X Potential Receiver (or Shipper). The shipping site may only use the POTENTIAL RECEIVER designation if agreed to by the receiving site.

4. If the shipping site has not selected a receiving site, or a receiving site does not agree to be APPROVED or a POTENTIAL RECEIVER, then the shipping site will mark the waste stream's receiving site as TO BE DETERMINED (TBD*), and submit an accompanying attachment to the site plan. This attachment must reference the disposition map name, specific stream ID number, possible site options available, and a short discussion of the path forward for determining the receiving site, including plans for involving stakeholders and Tribal Nations in the decision making process. The attachment also should meet the following two requirements:

    - be consistent with programmatic NEPA analysis (see Section 9.5.4) (e.g., Waste Management Programmatic Environmental Impact Statement). The attachment for mixed low-level waste (MLLW) or low-level waste (LLW) disposal could be: "Options include one of the preferred sites to be selected from the six DOE sites (Hanford, INEEL, LANL, NTS, Oak Ridge, and Savannah River) that currently dispose LLW or an available commercial disposal site." A narrower list of sites can be named in the attachment as long as several options are listed, so that it is clear that a decision has not been made.
    - provide a reference to table/narrative in the shipping site's Site Plan describing the options available or referencing the management decisions that are needed.

    Cost estimates for shipping and receiving sites need to include the full life-cycle cost of waste and materials disposition. If the TBD designation is used, the shipping site must include a complete estimate of costs for disposition of the waste/materials in their PBSs. In this instance, cost estimates should be representative of the available options. It is fully recognized that such estimates are pre-conceptual and will be refined as options are evaluated and disposition paths are selected. Useful information on unit disposal costs is available in a recent Low-Level Waste

Cost Study completed by the Office of Waste Management. The unit costs for disposal at the six DOE sites that currently dispose LLW are as follows:

- $993/cubic meter at Hanford
- $2,243/cubic meter at INEEL
- $510/cubic meters at LANL
- $950/cubic meter at Nevada
- $4,671/cubic meter at Oak Ridge
- $1,618/cubic meter at Savannah River

A generic unit cost of $1000/cubic meter can be used for LLW disposal at DOE sites. A generic unit cost for MLLW disposal at a DOE site (based on very preliminary information) would be about $1500/cubic meter. Commercial disposal is available in some instances and unit costs vary widely depending on the site and waste form. A generic unit cost for commercial LLW disposal can be assumed to be in the range from $300/cubic meter (for bulk soils) to $700/cubic meter (for debris and laboratory waste).

5. Sites sending waste or materials to commercial facilities will require the same categorization scheme outlined above.

9.5.3 Evaluation and Implementation of Complex-wide Integration Opportunities

> The Complex-wide EM Integration Project has identified integration opportunities that, if implemented, could result in accelerating the cleanup of DOE sites and saving taxpayer dollars. Stakeholders have expressed their desire to actively participate in the necessary discussions to select and apply acceptable alternatives. Each site should discuss the status of opportunities that are being considered.

DOE-EM initiated the Complex-wide EM Integration Project in July 1996. EM Integration developed a suite of alternatives for disposition of six waste and material streams at eleven sites. If implemented, these opportunities provide significant cost and schedule improvements over the baseline. These opportunities must now be evaluated by the Field, regulators, stakeholders, and Tribal Nations. As a result of the evaluation and ensuing discussions, some of these integration opportunities may be incorporated into updates of the Draft National 2006 Plan, some may be rejected, and others may have action plans written for resolution.

Site 2006 Plans should discuss the status of the Complex-wide EM Integration recommendations (identified in the *Accelerating Cleanup: Focus on 2006* Discussion Draft, Attachment G) that are being considered, including potential cost savings (prior to 2006 and life cycle). These potential savings should be tied to the site's performance enhancement target. If any of the integration alternatives have been incorporated into the Draft Site 2006 Plan, those alternatives need to be reflected on the site's disposition map.

9.5.4 WM PEIS and WIPP SEIS-II Compliance

The purpose of this section is to clarify how sites should consider the Final *Waste Management Programmatic Environmental Impact Statement* (WM PEIS) and Final *Waste Isolation Pilot Plant Supplemental Environmental Impact Statement for Disposal Operations* (WIPP SEIS-II) preferred alternatives in developing their Draft Site 2006 Plans.

Previous 2006 Plan guidance required sites to include a strategy for ensuring adequate and timely compliance with the National Environmental Policy Act (NEPA) in their proposed Draft Site 2006 Plan. Specifically, sites were instructed to identify whether NEPA would apply to each element of its plan (e.g., projects or programs) and, if it did, how the site intended to comply. Plans were to explicitly state that the implementation of each element of the Plan was contingent upon the completion of whatever evaluation was required under NEPA.

In May 1997, the Department issued the Final WM PEIS, a nationwide NEPA analysis examining the environmental impacts of managing more than 2 million cubic meters of radioactive wastes from past, present, and future DOE activities. The Final WM PEIS established preferred alternatives for transuranic waste (TRU) treatment and storage, low-level waste (LLW) treatment and disposal, mixed low-level waste (MLLW) treatment and disposal, high-level waste (HLW) storage, and hazardous waste (HW) treatment. Though configuration decisions have yet to be made (in the form of WM PEIS Records of Decision), sites are requested to incorporate the WM PEIS preferred alternatives, for planning purposes, in their Draft Site 2006 Plan treatment, storage, and disposal proposals --or explicitly propose a deviation from the preferred alternative, for EM-1 approval. Section 9.5.2 of this guidance provides details on the protocol sites are to follow for contacting proposed receiving sites and obtaining agreement, before including the proposed transfer in Site 2006 Plan PBSs.

The following paragraphs clarify the WM PEIS preferred alternatives and provide specific guidance on which DOE sites may be used for which treatment, storage, and disposal activities. The WM PEIS preferred alternatives do not preclude any sites from using commercial facilities for treatment, storage, or disposal activities.

Transuranic Waste (TRU) Treatment and Storage. Under the Department's preferred alternative, all but five sites with TRU should plan to treat and store it on site. The following five sites should plan to ship their TRU to other sites for treatment: Pantex should plan to ship its very small amount of TRU to Los Alamos for treatment; Rocky Flats should plan to ship some of its TRU to Idaho for treatment; Oak Ridge should plan to send its contact-handled TRU to Savannah River for treatment; Savannah River should plan to send its remote-handled TRU to Oak Ridge for treatment; and Sandia should plan to send its small amount of TRU to Los Alamos for treatment. Pending a decision on TRU disposal or other disposition, sites should plan to store TRU where it is treated.

Low-Level Waste,(LLW) Treatment. Under the Department's preferred alternative, each site with LLW should plan to treat its waste on site. Each site should plan to perform minimum treatment on its wastes to prepare them for disposal, although each site has the flexibility to perform additional treatment if it would decrease costs and requirements for transportation by significantly reducing the volume of LLW requiring disposal.

Low-Level Waste (LLW) Disposal. The Department's preferred alternative is to have sites send their LLW to regional disposal sites after it is treated. After consultations with stakeholders and Tribal Nations, the Department plans to select two or three preferred sites from the six DOE sites (Hanford, Idaho, Los Alamos, Nevada Test Site, Oak Ridge and Savannah River) which currently dispose LLW (though the WM PEIS preferred alternative does not preclude any site from using commercial disposal facilities). Following these consultations, the Department will notify the public which specific sites it prefers for disposal of LLW by publishing a notice in the *Federal Register*. The Department will not issue a Record of Decision (ROD) selecting any regional disposal sites for LLW until at least 30 days after the publication of its preferred alternatives for LLW disposal sites in the *Federal Register*. Sites should specify where their LLW will be disposed, consistent with the protocols established in Section 9.5.2. Sites should consider the results of the Department's recently published Disposal Cost Study in determining which disposal locations to use.

Mixed Low-Level Waste (MLLW) Treatment. Under the Department's preferred alternative, sites with small amounts of MLLW should plan to send their MLLW to other sites for treatment. The sites that would receive these wastes and treat them under the Department's preferred alternative are Hanford, Idaho, Oak Ridge, and Savannah River. Argonne East, Fernald, Lawrence Livermore, Los Alamos, Pantex, Portsmouth, Rocky Flats, and Sandia should all plan to treat their own MLLW on site.

Mixed Low-Level Waste (MLLW) Disposal. At this time, the Department's preferred alternative is to have sites send their MLLW to regional disposal sites after it is treated. After consultations with stakeholders and Tribal Nations, the Department will select two or three preferred sites from six DOE sites (Hanford, Idaho, Los Alamos, Nevada Test Site, Oak Ridge and Savannah River) (though the WM PEIS preferred alternative does not preclude any site from using commercial disposal facilities). Following these consultations, the Department will notify the public which specific sites it prefers for disposal of MLLW by publishing a notice in the *Federal Register*. The Department will not issue a ROD selecting any regional disposal sites for MLLW until at least 30 days after the publication of its preferred alternatives for MLLW disposal sites in the *Federal Register*. Sites should specify where their MLLW will be disposed, consistent with the protocols established in Section 9.5.2.

High-Level Waste (HLW) Storage. The Department's preferred alternative at this time is to have sites plan to store their immobilized HLW where the waste is treated, pending a decision on its disposal in a geologic repository or other disposition. Because it is impractical for sites to ship liquid HLW for treatment, the Department had previously decided that each of the four sites with HLW (Hanford, Idaho, Savannah River, and West Valley) would treat its own waste on site.

Hazardous Waste (HW) Treatment. The Department's preferred alternative for sites with hazardous waste to continue to use commercial facilities to treat most of its non-wastewater hazardous waste.

The Final WIPP SEIS-II was approved by the Deputy Secretary of Energy in September 1997, and the Department is currently drafting a Record of Decision. Sites should plan to ship TRU waste to WIPP in accordance with the preferred alternative. Sites should coordinate shipping schedules with the Carlsbad Area Office so that Draft Site 2006 Plans and the National Transuranic Waste Management Plan are kept consistent.

Sites proposing a deviation from the above preferred alternatives must highlight this in their Draft Site 2006 Plan narrative and also should contact Karen Guevara at (301)903-4981.

9.6 Transportation Business Strategy -- National Transportation Program (NTP)

As part of the 2006 planning process, the NTP will analyze waste inflow and outflow information to establish complex-wide requirements, coordination, and the minimization of inter-site impacts, while providing for the management of transportation volumes, and the more cost-effective fulfillment of these requirements, by the individual sites.

9.6.1 Objectives

An objective of the 2006 Plan is to accelerate the schedule for the disposal of radioactive wastes. To achieve acceptable disposition "end states", much of this material must be packaged and transported to a final destination for disposal. The NTP objective is very simple: to provide the integration and policy to enable achievement of these "end states" in a safe and economic manner and with thoughtful consideration of stakeholder issues.

9.6.2 Description

As of late FY 1997, the NTP has been managed by a joint Headquarters and Albuquerque and Idaho Operations Offices team. Within this team arrangement, Headquarters will have primary responsibilities for program policy, coordination and communication; Albuquerque will have primary responsibility for ensuring efficient transportation operations; and Idaho will have primary responsibility for systems engineering and integration. This joint management team will prepare the NTP PBS. The Transportation Emergency Preparedness Program (TEPP) and the Facility Emergency Preparedness program will remain a Headquarters function focused on policy, communication, and coordination. The Carlsbad Area Office has responsibility for managing the Department's TRU Waste Transportation Program.

9.6.3 Background and Key Definitions

The Department has an excellent record in the safe transport of radioactive materials. This record is based on adherence to the framework of regulations and through the successful deployment of sophisticated transportation and packaging systems that provide safety in both normal and accident conditions.

In order to sustain the Department's safety record, and to engage the programs, stakeholders, and Tribal Nations in the planning and execution processes, the NTP must a) establish good communications with other DOE Elements (including Field offices) to facilitate coordination; b) identify transportation needs through the systems engineering analysis work of the Idaho Operations Office; c) determine a well-configured transport subsystem sensitive to the larger system that it serves; d) complete a vigorous examination of all projected DOE material flows that will require shipment, (in particular radioactive waste); e) conduct a forward looking, aggressive transportation technology program to resolve complex transportation and packaging system problems, confront regulatory excesses, and present the DOE technical position before regulators and consensus standards bodies; f) maintain a corporate

institutional program to interact with national and regional stakeholders and Tribal Nations; and g) execute an aggressive transportation emergency management function to preclude site shipping campaigns delays.

Development of disposition maps will allow stakeholders and Tribal Nations to understand the baseline assumptions with respect to potential inter-site transfers. This will provide a point-of-departure for further dialogue for the transportation of waste and materials.

The TEPP mission is to ensure that federal, tribal, state, and local responders have access to the plans, training, and technical assistance necessary to safely, efficiently, and effectively respond to transportation incidents involving DOE unclassified radioactive materials. This mission is consistent with the fundamental goals of the Draft National 2006 Plan. Because the Draft National 2006 Plan will accelerate some activities, many of which involve the transport of radioactive materials, the TEPP must focus activities to respond to these new challenges. The TEPP goal is that federal, tribal, state, and local civil authorities emergency management concerns do not delay shipping plans in the Draft National 2006 Plan. Emergency management planning and policy must reflect a rational and thoughtful consideration of stakeholder, Tribal Nation, and programmatic needs, and must support the "end-state" goals of the Draft National 2006 Plan.

9.6.4 Data Needs

The request for specific data related to Transportation and Emergency Management needs is consistent with the 2006 planning effort and the Department's policy that radioactive materials be transported safely, efficiently, and after careful consideration of stakeholders and Tribal Nations concerns.

Transportation and Emergency Management needs dovetail with waste/material transfer data and include the following data elements -- origin/destination, material/waste type, purpose, facility, quantity, packaging type, and shipping method.

This transportation data will be contained in the Consolidated PBS Quantity Table in Attachment G. The NTP realizes that the development and evolution of this data will follow from the sites progress toward "end states." As the projects become more defined and transportation data gains more clarity, integration and risk reduction efforts will follow. The sites will face many challenges from local and national stakeholders and the Tribal Nations; regulatory challenges including NEPA, DOT, and NRC compliance and interaction; and technical challenges related to the deployment of new, safe, and economical packaging and transportation systems.

9.7 Mortgage Reduction/Sequencing of Projects

The objective of mortgage reduction is to identify opportunities that reduce the EM Program's life-cycle costs through a reduction in fixed costs. Analyses of these opportunities will allow EM to clearly articulate to Congress, regulators, stakeholders, and Tribal Nations the areas and methods through which mortgage costs can be reduced. These analyses may result in streamlining activities within a project or changes to the sequencing and execution of mortgage reduction projects across the complex.

Specifically, the objective of the EM mortgage reduction initiative is three-fold:

1. Identify projects with high support costs where acceleration of activities (e.g., materials stabilization, waste treatment/disposal, facility deactivation) may significantly reduce costs for support activities.

2. Identify those projects which have a high potential internal rate of return (IRR) if funding could be increased and if the mortgage reduction benefit could be quantified.

3. Identify those projects that are currently providing mortgage reduction benefits and quantify those benefits.

Mortgage costs (or fixed costs) are significant and often account for roughly one half to two-thirds of total site budgets. In order to absorb federal budget reductions and simultaneously accelerate site cleanup and closure, mortgage costs need to be reduced.

Achieving a lower mortgage cost over the long-run can be accomplished by employing the following general approaches:

Re-engineering: Re-engineering a project to optimize mortgage reduction opportunities within a project (i.e., accelerating or streamlining activities within a project with high fixed costs)

Re-sequencing. Slowing projects with a low fixed cost down at a site to accelerate other projects that have higher fixed costs to reduce the overall site mortgage

As mortgage cost reductions are realized and more funding is available for cleanup activities, cost savings will be realized over time. As a result, each Operations/Field Office that achieves cost savings through mortgage reduction will receive Enhanced Performance credit as defined in Section 7.6 of this guidance.

Summary Data Needs

- To identify the most promising mortgage reduction opportunities and to validate mortgage reduction as an effective project prioritization strategy, data will be required on project-level support costs (as identified by storage costs and surveillance and maintenance (S&M) costs. The Project Baseline Summaries (PBSs) will be the source of the required data. **Note:** Storage

and S&M costs must be identified for all projects, not just projects that are traditionally considered storage and S&M projects. Projects with a high ratio of storage and S&M costs relative to the total project cost will be targeted for additional analyses for mortgage reduction potential.

- Sites are to identify projects (or subprojects) that could have an internal rate of return (IRR) greater than 10 percent through accelerating the project schedule. In other words, if cost savings for the total life-cycle cost of a project could be achieved through higher initial spending (up front investment), these projects should be identified. It is possible that these projects could be targeted for additional funding in order to accelerate the schedule and take advantage of mortgage reduction.

- Sites can choose to calculate discounted net savings from mortgage reduction (e.g., accelerating projects with high fixed costs) in accordance with the process recommended by the General Accounting Office (GAO) to the Department in July 1995 *(Savings from Deactivating Facilities Can Be Better Estimated*, GAO/RCED-95-183):

  - Calculate annual net savings (or cost) by subtracting annual costs for each project in the baseline scenario from annual costs for each project in each alternative scenario, and
  - Discount the annual net savings (or cost) for each project in each alternative scenario using both a three percent and a seven percent discount rate.

Path Forward

A team will be established that will include participation of both Field and Headquarters representatives. Part of the work of this group will be ensuring that the proper information exists to support the identification and evaluation of promising mortgage reduction candidates and for assessing existing mortgage reduction activities. Once additional mortgage reduction activities have been identified, additional information may be required at the subproject level to better quantify the mortgage reduction opportunity and to identify the most effective means of achieving the mortgage reduction benefit (e.g., Reengineering or Resequencing). Finally, Field and Headquarters staff will work closely to implement mortgage reduction initiatives at each site.

Definitions

To ensure mortgage reduction projects are consistently identified and baselined at EM sites, the following definitions for mortgage and mortgage reduction have been established.

- **Mortgage** - The term *mortgage* applies to support activities and to their associated costs. Mortgage costs represent the fixed portion of a project and cover the activities required to maintain a facility waste and/or material in a stable or operable configuration. Support activities do not include treating, stabilizing, or in any way changing the facility, waste, or material. Functional cost categories associated with support activities include: storage costs and S&M costs.

- **Mortgage Reduction** - The term *mortgage reduction* applies to those mission-direct activities, and their associated costs, whose primary focus is to treat waste, stabilize nuclear material, and deactivate, decontaminate, and decommission facilities. One result of such activities is mortgage reduction costs.

9.8 Contracting Strategies

The Field is responsible for maintaining and tracking detailed contracting performance data to demonstrate progress in achieving contract reform. This data will allow the Field to demonstrate that the principles of contract reform are being utilized to achieve 2006 Plan goals and objectives.

9.8.1 Objectives

The Office of Environmental Management (EM) expects the sites to continuously improve their contracting performance through the development and/or use of a comprehensive contracting strategy that enhances the performance of 2006 Plan activities. These site strategies should include:

- Continuous monitoring of contract reform initiatives within EM;
- Development of a contracting improvement process that is cross-cutting, analytical, and continuous; and
- Definition of specific work products that will reflect implementation of the contracting strategy.

The overall objective of these efforts is to create a system that is focused on efficient acquisition and execution of contracts and achieving desired 2006 Plan performance outcomes. In pursuing this objective, EM expects that contract issues will exert greater influence on the EM planning basis at the Deputy Assistant Secretary and Operations/Field Office Manager level and will raise the intensity of engagement in site-specific contracting strategies. EM expects this approach to provide better linkage to, and coordination with, the Office of Procurement and Assistance Management and the Office of Contract Reform. Additional detail on EM site-specific contracting strategy is provided in Attachment L.

9.8.2 Data Needs

In order to ensure the accomplishment of 2006 Plan objectives, the sites will be required to maintain and track detailed contracting performance data and provide an overall description of the strategy, current state, and future goals of their programs with regard to meeting the objectives of the contracting improvement strategy previously described. It is expected that this summary level data, combined with additional data from existing sources (e.g., procurement databases), will provide the necessary input for the Draft National 2006 Plan, and allow for monitoring of the overall EM contract improvement process by Headquarters, consistent with current requirements. The specific input required for the Draft National 2006 Plan and annual updates will be collected in the Draft Site 2006 Plans (guidance provided in Attachment A) and Operations/Field Office Data Summaries (ODSs) (guidance provided in Attachment F), and will include input that describes the following in detail:

- Contracting Approach - The overall contracting approach for the site, including how that approach integrates with the principles of contract reform. The site should describe how the overall contract strategy proposed integrates the other business strategies and objectives of its Draft Site 2006 Plan.

- Contract Management and Administration - The organizational responsibilities and processes at the sites for federal management and administration of contracts and subcontracts.

- Contracting Profile - Percentage of the Operations/Field Office's overall budget expended on different contract types, and the future goals for improvement of those percentages, through 2006. The contracting profile should be based on prime and first tier subcontractor project expenditures, for each contract type, as a percentage of the Operations/Field Office's overall budget.

Sites are also requested to provide similar information for subcontracts that have been identified as privatization/outsourcing[3], but are funded from the base program.

[3]Information on projects funded from the privatization account is being collected via other reporting requirements.

9.9 Pollution Prevention Business Strategy

9.9.1 Objective

Pollution prevention is required by various Federal laws, including the Pollution Prevention Act of 1990 and the Resource Conservation and Recovery Act (RCRA); several executive orders (EO), especially EO 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements; and EO 12873, Federal Acquisition, Recycling, and Waste Prevention. In addition, pollution prevention performance metrics have been established pursuant to GPRA.

9.9.2 Description

Pollution prevention data and information is currently collected through the Waste Minimization Reporting System (WMINRS). This report requires data input on all waste types (except classified wastes, spent fuel, wastes generated by Naval Reactors Facilities and Naval Shipyards, and 11e(2) materials), specifically providing data on the amount of each newly generated waste from routine operations, as well as wastes from cleanup and stabilization program activities. This information is published in the *Annual Report on Waste Generation and Pollution Prevention Progress* which documents the success of DOE pollution prevention activities across the complex. This annual report provides the data necessary to track Department-wide progress in meeting the goal to reduce routine waste generation by 50 percent by the end of the calender year 1999 (from the 1993 baseline).

Another GPRA goal, to reduce the secondary waste generation from cleanup and stabilization activities by 10 percent annually, will be tracked as part of IPABS, and it will be reported as part of the annual pollution prevention report. Secondary waste is "new waste" generated during environmental management program activities and will be rebaselined each year.

9.9.3 Future Pollution Prevention Data Collection under the PBS System

The PBSs currently contain the majority of data fields necessary to address the annual pollution prevention reporting requirements for EM. As such, pollution prevention is an area where redundancy in operational reporting can be reduced. Other reports requiring data that are not part of the EM PBS (e.g., affirmative action procurement and recycling and return-on-investment) will continue to be collected separately along with other DOE program offices.

To ensure that the appropriate data is being collected, the WMINRS will be maintained to collect the calender year 1997 pollution prevention program information. Following a favorable comparison with the current PBS data, it is expected that EM can eliminate the separate WMINRS for FY 1998. However, quarterly waste generation data will be required until calender year 2000 to track the routine waste goal.

9.9.4 Pollution Prevention as a Part of Enhanced Performance

Pollution prevention can be used to achieve EM enhanced performance objectives. Pollution prevention activities, as implemented across EM sites, can yield a variety of waste reduction and financial benefits. The life-cycle benefits from pollution prevention often extend beyond avoided waste management costs. The total savings from these projects typically include significant

contributions resulting from improved efficiency; reduced labor; reductions in personnel protective equipment requirements; reduced raw material, utility, and supply usage; and reduced maintenance requirements.

9.9.5 Key Definitions

Pollution Prevention: Preventing or reducing the generation of pollutants, contaminants, hazardous substances, or wastes at the source, or reducing the amount for treatment, storage, and disposal through recycling. Pollution Prevention also includes increased efficiency in the use of raw materials, energy, water, or other resources, including affirmative procurement.

Life-cycle Costs: The total cost associated with all aspects of an operation. The costs extend beyond waste treatment, storage, and disposal, and also include design and construction, energy and material input, operation and maintenance, environmental compliance, and dismantlement. There can be considerable life-cycle savings through the elimination of hazardous or toxic materials.

Secondary Waste: Newly generated wastes (e.g., personnel protective equipment; sampling tools; building equipment) produced during "one time" environmental restoration operations to remove/treat primary (i.e., "pure") wastes are considered secondary wastes. Secondary waste generation is the total amount of newly generated waste created as the result of cleanup/stabilization actions.

9.9.6 Path Forward

EM will provide necessary waste data to the PBS to compute the waste reduction quantities and track progress in meeting Departmental pollution prevention goals. This information will be updated in the PBS reports. A final report documenting the pollution prevention progress, and the sites' pollution prevention projects, will be prepared at completion of each fiscal year.

Current pollution prevention goals are to be met by the end of the calender year 1999. Future goals for pollution prevention, including routine and environmental restoration wastes for 2000 and beyond, will be developed.

10.0 Regulatory Compliance

10.1 Programmatic Drivers

The Department places a high priority on compliance with environmental laws, regulations, enforceable agreements, and other applicable requirements, and underscores its position that site-specific and Draft National 2006 Plans must reflect this overarching position.

In response to the EM Program's initial efforts to develop Site 2006 Discussion Drafts, stakeholders, Tribal Nations, and others expressed concerns that achieving the 2006 Plan vision appeared to hinge on relaxing environmental standards and avoiding full compliance with environmental laws, regulations, and agreements. Stakeholders also suggested that use of so-called "optimum regulatory flexibility" was an attempt to avoid compliance with existing requirements. The stakeholders and Tribal Nations further noted that so called compliance short cuts contributed to, or caused, environmental problems in the past. They asserted that Draft 2006 Plans should not assume "optimum regulatory flexibility": DOE should fully comply with all existing compliance agreements.

As previously stated, the Department places a high priority on compliance with all applicable environmental requirements. This position must be reflected in the Draft Site 2006 Plans to be submitted to Headquarters later this year. In accordance with Executive Order 12088, EM will request sufficient funds for compliance with applicable pollution control standards necessary to conduct EM activities. EM will ensure that funds appropriated and apportioned for the prevention, control, and abatement of environmental pollution are not used for any other purpose unless permitted by law and specifically approved by OMB. More broadly, EM will comply with all activities required by applicable federal, state, and local environmental statutes and regulations; activities required under the terms of permits, administrative orders, or judicial decrees; and enforceable milestones or schedules established in agreements negotiated between EM and its regulators. In addition, EM intends to meet commitments to the Defense Nuclear Facility Safety Board (DNFSB).

This section is intended to identify how requirements may influence the cost of a project. The total yearly cost for a project can be broken down into subprojects that respond to the requirements established by one of the ten programmatic driver categories listed below. These categories cover the entire spectrum of requirements that may apply to a project and extend from binding compliance agreements to best management practices.

Programmatic Driver Categories

Category	Description of Driver
1.	***Required by a compliance agreement.*** This category includes activities required to meet enforceable milestones agreed to in cleanup and compliance agreements as well as program support/management activities that are directly required to meet such milestones.
2.	***Required by a court order, settlement agreement, or consent decree.*** This category includes activities taken to comply with consent decrees, settlement agreements, or court orders, as well as program support/management activities that directly support such activities.

3. ***Required by federal environmental statute or regulation (includes permits).*** This category includes activities required to comply with federal environmental statutes, regulations, and permits that are not already captured under categories 1, 2, 4, or 6. Federal environmental statutes include but are not limited to, the Atomic Energy Act, Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, Safe Water Drinking Act, Comprehensive Environmental Response, Compensation and Liability Act, and National Environmental Policy Act. This category also includes program support/management activities that directly support compliance with these federal laws and regulations.

4. ***Required by state or local statute or regulation (includes permits).*** This category includes activities necessary to comply with applicable state or local statutes, regulations, existing permits, draft permits, or proposed agreements that are not already captured under compliance categories 1, 2, or 3. This category also includes program support/management activities that directly support compliance with these laws and regulations.

5. ***Required to comply with commitments to the Defense Nuclear Facilities Safety Board.*** This category includes activities necessary to comply with Departmental commitments to the DNFSB. This category also includes program support/management activities that directly support compliance with such commitments.

6. ***Required by DOE Order - Environment, Safety, and Health (DOE ES&H).*** This category includes activities required to meet one or more internal DOE ES&H requirements, that are not already captured by categories 1, 2, 3, 4, or 5. This category also includes program support/management activities that directly support compliance with DOE ES&H orders.

7. ***Required by DOE Order - Management and Other.*** This category includes all actions taken in response to DOE orders designed to implement best management practices. Program/management support activities (such as DOE staff, support contractors, budget planning, and facility operation) are included in this category when the primary activity to be supported does not fall under categories 1, 2, 3, 4, 5, or 6 above.

8. ***Required by Agreements in Principle or Agreements with Indian Nations.*** This category includes activities that are not required by either categories 1, 2, 3, 4, 5, or 6 above, but are essential to meeting requirements of Agreements in Principle or agreements with Indian nations.

9. ***Required to meet a proposed Compliance Agreement.*** This category includes proposed or ongoing activities that are required by the projected provisions of a proposed compliance agreement and are not already captured by categories 1, 2, 3, or 4.

10. ***Other Essential Management Functions.*** This category includes activities that are not required by either environmental law or internal S&H requirement, but are considered essential to effective site operations.

Please note that an additional driver category has been added. Defense Nuclear Safety Board recommendations that are not captured under categories 1 through 4 have been broken out as a separate category (Category 5). All other categories remain the same.

Funding by programmatic driver must be identified for each **Integrated Priority List (IPL) element** (see ODS Guidance in Attachment F). At the $5.75 billion allocation level in the IPL, the total budget authority (BA) for all programmatic driver categories should equal the total Operations/Field Office budget. Please note that this level of data collection is different than how driver information was collected in the February 28, 1997, PBSs. For each IPL element, identify the BA associated with each driver category and assign the appropriate portion to each for every IPL element in the following manner:

- In the rare case that only one driver category applies to a single IPL element, all BA for that element should be placed in that driver category. Generally, however, EM management, stakeholders, and Tribal Nations have found that IPL elements that have only a single programmatic driver lack credibility. IPL elements that report only a single programmatic driver will be subject to validation.

- In most cases, more than one programmatic driver category will apply to a single IPL element. In the case where several programmatic drivers apply to a part of an IPL element and **there is no way to discern which programmatic driver applies to which part** (i.e., they are overlapping to the extent that they cannot be separated), the Project Manager should assign the BA to the programmatic driver category ranking the highest from the listing above. If there is another part of the same IPL element as above for which **a specific driver can be separately identified**, funding for that driver should be included in the column for that specific driver in the same IPL element line of the spreadsheet.

Given this manner of allocating funding to driver categories, any category below the first should be considered incremental (e.g., BA associated with DNFSB, Category 5, should not be considered all inclusive, as other DNFSB-related work scope may also be required by compliance agreements, and therefore, included under Category 1).

For purposes of budget development and discussions with stakeholders, Tribal Nations, and the Hill, compliance with Executive Order 12088 will be defined as BA associated with driver categories 1 through 4. The incremental BA associated with Minimum Safe activities will be defined as driver categories 5 and 6. The incremental BA associated with other high priority EM activities will be defined as driver categories 7 through 10.

10.2 NEPA Compliance

Each site must include a strategy for ensuring adequate and timely compliance with the National Environmental Policy Act (NEPA) in its Draft Site 2006 Plan. *This should be included in your site narrative* (see Attachment A). Specifically, each site should identify whether NEPA would apply to each element of its Plan (e.g., projects or programs) and, if it does, how the site intends to comply. The Plan should explicitly state that the implementation of each element of the Plan is contingent upon the completion of whatever evaluation is required under NEPA.

In preparing your NEPA strategy, please keep in mind that some elements of your plan may have already been evaluated under NEPA, some are currently being evaluated, some, such as CERCLA cleanups, may not require review under NEPA, some will need to be evaluated soon, and some may be so indefinite that they cannot be evaluated for some time. In developing your strategy, you should consult with your NEPA Compliance Officer and the Office of Chief Counsel. For unusual circumstances, you also should consult with the EM NEPA Compliance Officer and/or the Office of Environment, Safety and Health's (EH) Office of NEPA Policy and Assistance.

The proposals that are most likely to have sufficient detail for evaluation under NEPA, are those that DOE is likely to implement during the next three to four years. Many of the proposals included in the sites' earlier drafts of their Site 2006 Plans fall into this category and most of these have already been, or are currently being evaluated, under NEPA. For example, alternatives regarding management of spent nuclear fuel pending disposal in a geologic repository are evaluated in the Spent Nuclear Fuel Programmatic Environmental Impact Statement, which was completed in April 1995. Similarly, the Department is evaluating the extent to which it might consolidate waste management activities at particular sites in the Waste Management Programmatic Environmental Impact Statement (WM PEIS). Several sites, including Hanford, Idaho National Engineering Laboratory, Savannah River Site, Nevada Test Site, Rocky Flats Environmental Technology Site, Los Alamos National Laboratory, Lawrence Livermore National Laboratory, and Waste Isolation Pilot Plant, have either completed, or are preparing, site- and project-specific NEPA reviews on proposals for spent fuel management, waste management, and environmental restoration.

Sites that include in their plans such definite, near-term proposals, should identify in their strategies whether these proposals have already been reviewed under NEPA and, if so, whether these reviews are sufficient for the site to implement the proposal. For example, a site evaluated in the WM PEIS as a regional site for treating transuranic (TRU) wastes, and subsequently selected to do so in a record of decision (ROD), cannot begin construction of the treatment facility solely on the basis of the analyses in the WM PEIS. It must have additional NEPA analyses (which may have already been completed) that evaluate the specific treatment facility and alternatives. On the other hand, if a definite proposal has not yet been evaluated under NEPA (or requires additional NEPA review), you should propose your site's schedule for fulfilling these NEPA obligations in the Draft Site 2006 Plan.

The plans may contain other objectives that have not yet developed to the point where meaningful evaluation is possible but that will require NEPA review once more fully developed. The Site NEPA strategy should identify the expected level and timing of the NEPA review for all such objectives. An objective in a Site 2006 Plan is sufficiently definite for evaluation under NEPA when the Department can make a specific proposal on how it will address a particular need and how it can develop reasonable alternatives to its proposal for evaluation. For example, some plans contain objectives such as "reduce the generation of radioactive wastes by fifty percent by the year 2003" or "clean up Area X by the year 2006." While these are appropriate objectives for a Site 2006 Plan, they are not sufficiently definite for evaluation under NEPA until the site develops a specific proposal for how it intends to accomplish these objectives.

Some elements of the Draft Site 2006 Plans may not require evaluation under NEPA. The most likely candidates are cleanups under CERCLA (for which the Department normally relies on the process set forth in the National Contingency Plan to analyze environmental impacts) and actions that are categorically excluded from evaluation by DOE's NEPA regulations. If the site includes a proposal in the Plan that it believes does not require review under NEPA, the site should provide a detailed

rationale for that conclusion. A site's conclusion should be confirmed with its NEPA Compliance Officer and the Office of Chief Counsel.

Under NEPA, Environmental Impact Statements (EISs) and Environmental Assessments (EAs) must evaluate the cumulative impacts of the proposed action, past actions, related actions, and reasonably foreseeable actions that have not yet occurred. Actions cannot be segmented into smaller actions to minimize their impacts. As DOE cleans up its sites during the coming decade and beyond, objectives in 2006 Plans that were once too indefinite to evaluate under NEPA may evolve over time into reasonably foreseeable actions that must be included in the analyses of cumulative impacts in other EISs and EAs, and eventually may become definite proposals that should be evaluated in their own NEPA analyses.

11.0 Risk

- Risk is used at sites as a decision-making tool in setting priorities and sequencing work (i.e., reducing the most urgent risks first).
- Risk reduction is a measure of performance and is discussed in the DOE Strategic Plan.
- Risk information is needed to ensure that PBSs meet the expectations of the Environmental Management Advisory Board (EMAB).
- Risk data will be collected in the PBSs to support these initiatives.

Risk is an integral part of setting priorities, sequencing project work, measuring progress, and showing that the Department is reducing the most serious risks first. Past analysis has shown that the majority of compliance activities do address significant risk.

Building on existing risk information applicable to each project (including Risk Data Sheets and the FY 1999 Integrated Priority Lists), the Project Manager will establish, in the format shown, the relative risks to workers, the public, and the environment for the project. Information generated as a result of compliance documentation for a number of ES&H requirements (e.g., DOE Orders, etc.) may also be used to support risk based decisions. It is anticipated that all risk information generated for projects or program specific activities will be used, to the extent possible, in support of these decisions. In evaluating projects, Project Managers should consider the results of the peer review of risk data collected for the FY 1998 budget process (*http://jupiter.wpi.org/doe/em/cresp/nrp.html*).

Each project should include an evaluation of the associated risk (e.g., risks associated with the hazard, risks created during the execution of the project, etc.) for each year up to 2010, and in five year intervals from 2011 to 2070. Specific directions are found in the PBS Guidance (Attachment D). This evaluation should address risks to workers, the public, and the environment. Risk should be evaluated for each project having risk reduction benefits or impacts and documented in the PBS.

To focus efforts where they are needed most, a project screening evaluation should be conducted to determine the need and appropriate level of detail for risk evaluations. The following project categories are exempted: program direction, program management, grants and external support, technology development and National Programs (i.e., characterization management, transportation management, pollution prevention, emergency management, and science and risk policy). Project Managers may be granted other specific project exemptions if:

- There are no risk reduction benefits or impacts associated with project activities, or.
- Project risks due to the hazard and due to project implementation are no higher than "Low" for all of the three evaluation categories (public, worker, and environment).

Tracking risk information will demonstrate how dollars spent on cleanup efforts work to reduce overall risk and further the mission of EM. Any changes in risk should be linked to measurable events (e.g., subproject completions) as recorded in the milestones section of the PBS.

A series of six questions in each PBS will help to further illuminate a project's risk drivers, transfer of its hazard management to another project (if applicable), and the status of its risk evaluation. The risk evaluation narrative should indicate the incremental risk reduction metric and references to supporting risk and review information in addition to detailing the risk evaluation.

Sites should document the risk evaluation information to ensure transparency of the data used and have the results of these evaluations periodically reviewed by peers. This type of documentation will improve the consistency of the application of the evaluation process used at the site and the risk evaluation's technical credibility both internally and externally to DOE.

12.0 Safety and Health

On April 2, 1997, Secretary Fredrico Peña sent a memorandum to Assistant Secretary Al Alm (EM-1) and Assistant Secretary Tara O'Toole (EH-1) tasking them to require Field input of appropriate data to assure that safety and health (S&H) considerations are being properly addressed in the *Accelerating Cleanup: Focus on 2006 Plan* (2006 Plan). The Secretary further directed that Headquarters safety and health guidance be developed to support consistent and comprehensive project baseline summaries (PBSs) from the Field. This S&H guidance was developed by a joint EM/EH Project Team in response to the Secretary's tasking to provide the S&H information needed to support the PBSs developed for the Draft National 2006 Plan.

Stakeholders and Tribal Nations have expressed concern that accelerated cleanup is not necessarily consistent with Safety and Health objectives. However, the Office of Environmental Management's (EM) commitment is to ***DO WORK SAFELY OR DON'T DO IT***! S&H is an integral part of planning and performing the work necessary to complete the 2006 Plan projects and achieve the full 2006 Plan vision. As such, it is critical to identify the S&H needs associated with defining, preventing and mitigating hazards; achieving and maintaining compliance; and supporting the programmatic completion of EM projects. Identification of the S&H needs as prescribed in this guidance will integrate the Department's Environment, Safety and Health (ES&H) Management Planning Process into the Integrated Planning Accountability and Budgeting System (IPABS) and will:

- Ensure that necessary S&H resources are available to support the safe completion of 2006 Plan projects within schedule and budget,
- Ensure that necessary site-wide S&H programs (e.g., Fire Department, Medical) are available,
- Ensure the necessary skills mix among S&H FTEs,
- Identify status of commitments to safety management initiatives (e.g., DNFSB 95-2, Voluntary Protection Program (V.P.), Enhanced Work Planning),
- Identify resources needed to support regulatory requirements, including the transition to external regulation (e.g., OSHA, NRC), and
- Respond to the various external reporting requirements (e.g., OMB, Congress, EPA).

Available budgets are currently declining, and EM desires to accurately size its support resources. Good S&H planning will ensure that only needed resources are budgeted.

Safety is an integral part of planning and performing work. Delineation of the specific S&H resources required to address both site-wide and project-specific risks is crucial to ensuring EM projects can be accomplished with the resources allocated. This delineation is defined by:

- Identifying hazards through risk calculation of project work,
- Identifying controls to mitigate these hazards, and
- Estimating S&H skill mix and resource requirements to put controls in place (workers should be involved in this process).

Safety and health information will be integral to project planning and visible within the Project Baseline Summary (PBS). This assures Field line and ES&H managers, EM program managers, EM-1, EH-1, other concerned stakeholders, and Tribal Nations that safety and health issues have been identified and adequately funded at each EM site.

13.0 Data Management Process

The purpose of this process is to provide an efficient method for the Field to provide 2006 Plan data to Headquarters (HQ). Efficient data transfer, control, and maintenance will expedite review, ensure traceability, and enhance data quality for the Draft National 2006 Plan.

13.1 Data Points of Contact (POCs)

Each Field location should identify a Data POC for data submittal and data management. This Data POC will be responsible for coordinating the development and assembly of Field data into a data submittal package and for submitting the data to HQ. The Data POC should act as the Field site interface to HQ for resolving data issues. The Headquarters Data POC is Marilyn Tolbert-Smith. If you have questions, please contact her at (301)903-8121.

13.2 Data Collection

The Project Baseline Summaries (PBSs), Site Summary Levels (SSLs), and Operations/Field Office Data Summaries (ODSs) will all be provided as seeded, electronic spreadsheets to the Field. consolidated PBS Quantity Tables will be provided as blank spreadsheets along with hard copies of seeded disposition maps. Each Operations/Field Office will receive templates via File Transfer Protocol (FTP). The files are IBM compatible Excel 5.0 files that have been designed so that Headquarters can extract the data from the files into a database after submission from the Field. This database will become the basis for the new IPABS. Spreadsheets must be submitted by November 26, 1997.

The following templates must be filled in:

1. One PBS must be completed for each approved project (see Attachment B for a comprehensive list of 2006 Plan projects by Operations/Field Office). Specific guidance for PBSs is provided in Attachment D. The Field cannot use the older spreadsheets issued prior to October 1997. **They must receive new files from Headquarters.**

2. The SSL files and the associated narrative file (in Word or WordPerfect) must be filled out for each SSL listed in Attachment C. Specific guidance for SSLs is provided in Attachment E. SSLs are not rollups of PBSs; they are used to collect different data elements. The Field cannot use the older spreadsheets issued prior to October 1997. **They must receive new files from Headquarters.**

3. The ODS has been divided into three files based on comments from the Field (Integrated Priority List, Technology Development, Other Operations/Field Office level data). These three files must be filled out for each Operations/Field Office. Specific guidance for ODSs is provided in Attachment F. The Field cannot use the older spreadsheets issued prior to October 1997. **They must receive new files from Headquarters.**

4. The Consolidates PBS Quantity Table file and disposition maps must be completed for each geographic site listed in Attachment C. Specific guidance for the Table and disposition maps is provided in Attachment G. The Field cannot use Table A.4.a. in the older PBS spreadsheets issued prior to October 1997. They must receive new files from Headquarters. The Field

should not rely completely on the older Table A.4.a. as a guide for filling out the consolidated PBS Quantity Table and disposition maps.

****

Certain fields in the PBS spreadsheets are locked. The cells outlined with a heavy black border are entry cells to be filled in. Cells without the thick border are either descriptive, calculated, or not used. The guidance explains what data should be entered and where. You cannot add rows or columns to the spreadsheet or enter data in the calculated fields. Changes to the spreadsheet format disrupt the transfer of data from the spreadsheets to the database. Contact Marilyn Tolbert-Smith if you have questions regarding the spreadsheet format: (301)903-8121.

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13.2.1 Spreadsheet Formatting and Pick Lists

When completing the templates, you must explicitly follow the formatting in the guidance in order to ensure the correct data are received. For example, it is necessary that when dates are entered, the year must be entered as a four digit number. To enter February 6, 2003, for instance, enter "2/6/2003," not "2/6/03."

Pick lists have been provided where practical to minimize data entry and formatting problems.

13.2.2 Printing Instructions

To print the PBSs, SSLs, ODSs, and Consolidated PBS Quantity Tables follow the following steps

1. Open the file.

2. Highlight the sheets you want to print by holding down the shift key and left clicking on the sheet tabs.

3. Go to the file menu and select print. When the print screen appears, left click on "OK".

13.2.3 Freezing Title Cells (on-screen only)

Freezing title cells will allow you to view title cells in a column, row, or both to help you enter data in the correct cells.

1. To freeze horizontal panes, select the row below the last row you wish to freeze. To freeze vertical panes, select the column to the right of the last column you wish to freeze. To freeze both the uppermost and leftmost cells, select the cell below and to the right of where you want to freeze the sheet.

2. On the Window menu, click "Freeze Panes".

Note: To unfreeze panes, click "Unfreeze Panes" on the Window menu.

13.2.4 Rollup File Operation

In order to assist in rolling up the data, a special PBS rollup file will be included. If the instructions below are followed, a "Summary PBS" that adds all project dollars and quantities together from the individual PBS cost baselines, metrics, and budget forms can be generated. This file should make it much easier for Operations/Field Offices to ensure that they are within their budget targets. It should also help paint the complete picture (overall costs and quantities) for the Operations/Field Office.

13.3 Data Submittal Schedule

The Field should submit data according to a pre-determined schedule. The initial submittal date is November 26, 1997. The database will be locked in mid- to late December.

13.4 Version Control

To assure proper version control of data submitted to HQ, each submittal should include the complete data set. All re-submittals will replace previously submitted data in the official 2006 Plan database.

The 2006 Plan Data Team will maintain an archive of all submitted data.

13.5 Physical Transfer of Data

Data can be submitted to HQ using FTP, e-mail or mail. Instructions for using FTP are included with this guidance, and User IDs and Passwords can be obtained by contacting the 2006 Plan desk at (301)916-7270.

Data can be e-mailed over Departmental e-mail to Marilyn Tolbert-Smith or over Internet to: marilyn.tolbertsmith@em.doe.gov.

The mailing address is:

Marilyn Tolbert-Smith
EM-43
Cloverleaf
U. S. Department of Energy
19901 Germantown Road
Germantown, MD 20874-1290

13.6 Configuration Management Information

The Field should include the following information with each data submittal:

- The name and phone number of the Data POC,
- A description of the data submitted,
- A list of file names,
- A list of any unresolved data issues,
- Description of changes made from the previous submission (as applicable), and
- Notification of planned future submittals.

This information should be transferred, with the related submittal, over e-mail, FTP as a readme.txt file, or provided in hard copy with a hard copy transmittal.

Special arrangements with Field sites will be made in order to accommodate site-specific data submittal requirements. Questions regarding data submittal should be directed to Marilyn Tolbert-Smith at (301)903-8121.

14.0 Action Plans

In the June 1997, Discussion Draft, the Department committed to developing Action Plans to address various potential issues/opportunities associated with the 2006 Plan. This process included stakeholder input as part of the decision-making process.

In accordance with its overall stakeholder involvement policy, DOE has worked to involve stakeholders and Tribal Nations in the development of the 2006 Plan from its earliest drafts. The Department identified over 300 issues/opportunities in the comments received on the July 1996 Draft Site Ten-Year Plan. Many of these issues/opportunities were incorporated into the 2006 Plan process or Site Discussion Draft Plans. DOE further acknowledged that with the release of the Discussion Draft and ensuing public comments, the Action Plans could be refined and additional Action Plans developed.

Action Plans, in general, fell into two categories. Several Action Plans identified major assumptions or programmatic issues that required management focus. The Action Plans provided the specific steps that would be taken to close the gap of uncertainty associated with the assumptions and unresolved programmatic issues. In its Site Plan submittal, each site will identify the high programmatic risk activities on both the critical closure path diagram and disposition maps. For those activities in the baseline that are ranked as high programmatic risk (4 or 5), sites should develop Programmatic Risk Management Plans which demonstrate a credible approach to closing the uncertainty gap in their key assumptions. This should include the resolution process which will be used, the other agencies and organizations which must be consulted, and the potential need for DOE Headquarters coordination or decision making. **Programmatic risk activities that require Headquarters assistance, or that are cross-cutting, must be provided with Site Plans. The lead site Deputy Assistant Secretaries (DASs) will be responsible for assisting sites and coordinating cross-cutting activities. This narrative will more closely tie these discussions to specific PBSs and <u>will replace</u> the previous requirement for preparation of Action Plans on key assumptions and programmatic issues.**

The second category of Action Plans identified potential opportunities to significantly reduce the overall cost or accelerate the cleanup of DOE-EM sites through complex-wide integration, technology development, and other enhanced performance strategies. For example, Complex-wide EM Integration Report recommendations identified in Attachment G of the Discussion Draft are not ready for decision making. Through the action plan process and the site and cross-site discussions, input will be gathered as part of the decision making process on acceptance or rejection of these and similar opportunities. Action Plans that require Headquarters assistance, or that are cross-cutting, must be provided to Headquarters with Site Plans. As new opportunities for enhanced performance are identified, they should either be incorporated into the baseline, or Action Plans should be provided with subsequent updates in the 2006 Plan. It is not anticipated that Action Plans will be longer than one or two pages.

Attachment N provides a brief description of those issues/opportunities identified for Action Plans in the Discussion Draft, along with the office responsible for issue resolution. **Each Draft Site 2006 Plan must address the status of the Action Plans for which it is responsible. Programmatic Risk**

Management Plans or Action Plans that require Headquarters assistance, or that are cross-cutting, must be provided with Site Plans.

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Attachment A. Site Draft 2006 Plan Outline

Please provide an Executive Summary as part of your Draft Site 2006 Plan submittal. This summary should include a synopsis of each section of this outline (graphics are encouraged).

I. Introduction/Overview of Draft Site 2006 Plan
- Overview of site and EM mission (Purpose; Background)
- Generic discussion of EM policies such as compliance; risk; environment safety and health; worker transition (see Discussion Draft)
- Discussion of planning assumptions
- If applicable, describe the impact (order of magnitude) of additional facilities being accepted by the EM program on life-cycle cost and closure dates
- Describe the changes in the Draft Site 2006 Plan from the Discussion Draft released in June (e.g., analysis of one funding case with and without enhancements instead of two, etc...)
- Discussion of life-cycle cost and closure dates with and without enhancements
- Discussion of relationship between the 2006 planning process and the budget formulation process

II. End State, Future Use, and Stewardship
- Current use maps, 2006 end-state map, final end-state map (if not 2006); future use map if agreements have been reached (see Section 2.3)
- Discussion of site 2006 planning end state and final planning end state (if not 2006) -- (Draft Site 2006 Plans and associated data should be based on the current "planning" end state for each site. However, EM needs to acknowledge that as technologies improve, assumptions change, and economic feasibility issues evolve, the "planned" end state may change.)
- Discussion of future use plans for the site
- Discussion and description of long-term stewardship issues (cost of long-term surveillance and maintenance and types of activities)

III. Strategies and Prioritization
- General overview of cleanup approach; expected accomplishments through 2006 and post 2006, and what activities remain after 2006 at the $5.75 billion reference case with and without enhancements
- Identification and discussion of critical closure path that outlines high-level activities, events; waste and material interfaces, and/or decisions that have to occur to meet closure dates (insert critical closure graphic and material disposition maps described in Section 2.3)
- Identification and discussion of mortgage reduction opportunities (resequencing and/or acceleration)
- Overview of contracting approach, with description of organizational responsibilities in administering contracts, and percentage of site's overall budget expended on different contract types.

- Overview of critical science and technology developments needs and anticipated benefits from the deployment of new technologies, and the Operations/Field Office plans for the acceleration of technology deployment.

IV. Scope, Cost, and Schedule (Discuss both with and without enhancements)
- Describe scope of work to be performed to achieve the end state
- Cost and schedule (life-cycle cost profile as an annualized graphic and completion profile graphic described in Section 2.3)
- Cost and schedule methodology (include status of development of current baselines)
- Describe enhanced performance strategies; include discussion of enhanced performances that are included in baselines and the annual and ten year targets for your site (see Section 9.1)

V. Regulatory Compliance
- Compliance and the Draft Site 2006 Plan
- Describe the attainability of compliance with and without enhanced program performance

VI. Stakeholder and Tribal Nations Involvement
- Stakeholder and Tribal Nations participation to date
- Future stakeholder and Tribal Nations participation opportunities, including a discussion of how stakeholders and Tribal Nations will be involved in the formulation of the FY 2000 IPL

VII. Disposition of Stakeholder and Tribal Nations Comments on Discussion Draft
- Summation of comments received
- Describe comment disposition process and results

Attachments:
- Technology Deployment Management Plan Outline (see Attachment M of this guidance.)
- Shipping/Receiving Transfer Attachment (in cases where the receiving site has been marked as TBD--see Section 9.5.2)

Attachment B. List of Approved Projects

Albuquerque Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0529	AL	Albuquerque Misc Programs (WERC, HBCU, ITRD, NSUC, AIP-TX/MO)	AL002
0465	AL	New Mexico Agreement in Principle (AIP)	AL004
0125	IT	Lovelace Biomedical and Environmental Research Institute	AL005
0466	KC	Environmental Restoration	AL007
0467	LA	Nuclear Material Facility Stabilization R&D	AL008
0562	LA	LANL Environmental Restoration	AL009
0471	LA	LANL Waste Management - Newly Generated Waste	AL012
0472	LA	LANL Waste Management - Legacy Waste	AL013
0473	PX	Pantex Plant Site Remediation Project	AL014
0132	PX	Pantex Waste Management	AL015
0134	SN	Sandia National Laboratories (SNL) Waste Management	AL017
0135	SN	Sandia ER Project	AL018
0136	PI	Pinellas Plant Close-out and Administration of Post-Employment Benefits	AL019
0475	UM	UMTRA - Surface Remedial Action Project	AL020
0138	MF	Maxey Flats Field Management Project	AL021
0476	MM	Monticello Projects	AL022
0477	UM	UMTRA Groundwater	AL023
0478	GJ	GJO All Other Projects	AL024
0479	PI	Groundwater clean-up	AL025

Carlsbad Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0008	WP	WIPP Base Operations	CAO-1
0009	WP	WIPP Disposal Phase Certification and Experimental Program	CAO-2
0010	WP	WIPP Transportation	CAO-3
0011	WP	WIPP TRU Waste Sites Integration and Preparation	CAO-4
0013	WP	WIPP TRU Waste Transportation Privatization	CAO-6

Chicago Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0025	AM	Ames Remedial Actions	CH-AMESRA
0026	AM	AMES Waste Operations	CH-AMESWO
0003	AE	ANL-E Decontamination & Decommissioning Actions	CH-ANLEDD
0001	AE	ANL-E Program Management	CH-ANLEPM
0002	AE	ANL-E Remedial Actions	CH-ANLERA
0004	AE	ANL-E Waste Operations	CH-ANLEWO
0029	AW	ANL-W Remedial Actions	CH-ANLWRA
0034	AW	ANL-W Waste Operations	CH-ANLWWO
0033	BN	BNL Boneyard Waste	CH-BRNLBYW
0007	BN	BNL Decontamination and Decommissioning Actions	CH-BRNLDD
0005	BN	BNL Program Management	CH-BRNLPM
0006	BN	BNL Remedial Actions	CH-BRNLRA
0023	BN	BNL Waste Operations	CH-BRNLWO
0032	CH	Princeton Site A/B Payments	CH-CHOOPUAB
0031	SA	Site A Cleanup	CH-CHOOSA
0030	CH	Surveillance and Maintenance Activities	CH-CHOOSM
0709	CH	Chicago Operations Program Support	CH-COPS
0035	FR	FNAL Waste Operations	CH-FNALWO
0027	PL	PPPL Remedial Actions	CH-PPPLRA
0028	PL	PPPL Waste Operations	CH-PPPLWO

Idaho Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0435	IN	Low-Level/Mixed Low-Level Waste Center of Excellence	ID-CTREXC-101
0164	IN	Test Area North Remediation	ID-ER-101
0165	IN	Test Reactor Area Remediation	ID-ER-102
0166	IN	Idaho Chemical Processing Plant Remediation	ID-ER-103
0167	IN	Central Facilities Area Remediation	ID-ER-104
0168	IN	Power Burst Facility/ARA Remediation	ID-ER-105
0563	IN	Radioactive Waste Management Complex Remediation	ID-ER-106
0170	IN	Pit 9 Remediation	ID-ER-107
0171	IN	Site Wide Monitoring	ID-ER-108
0172	IN	Remediation Operations	ID-ER-109
0564	IN	Decontamination and Decommissioning	ID-ER-110
0193	IN	High-Level Waste Pretreatment	ID-HLW-101
0449	IN	High-Level Waste Immobilization Facility	ID-HLW-102
0565	IN	HLW Treatment and Storage	ID-HLW-103
0196	IN	Vitrified HLW Storage	ID-HLW-104
0450	IN	Low Activity Waste Treatment	ID-HLW-105
0218	IN	Environmental Engineering and Science Center	ID-LRP-101
0219	IN	Technology Deployment Center Demonstration Facility	ID-LRP-102
0566	IN	Site Wide Landlord Operations	ID-OIM-101
0206	IN	IDCPP Non-Process Plant Operations	ID-OIM-102
0207	IN	INEEL Medical Facility	ID-OIM-103
0208	IN	INEEL Emergency Response Facilities	ID-OIM-104
0209	IN	Security Facilities Consolidation Project	ID-OIM-105
0210	IN	Electrical and Utility System Upgrade (EUSU) Project, ICPP	ID-OIM-106
0211	IN	INEEL Electrical Distribution Upgrade	ID-OIM-107
0212	IN	INEEL Road Rehabilitation	ID-OIM-108
0567	IN	Health Physics Instrument Laboratory	ID-OIM-109
0568	IN	Pre-FY 2007 Surplus Facility Deactivation Project	ID-OIM-110
0214	IN	Post-FY2006 Surplus Facility Deactivation Projects	ID-OIM-111
0215	IN	Pre-2007 INEEL Surveillance and Maintenance	ID-OIM-112
0216	IN	Post-2006 Surveillance, Maintenance, and Monitoring	ID-OIM-113

Idaho Operations Office
Approved Projects (cont.)

Project Key	Site Summary Level	Project Title	Project Fieldcode
0175	IN	National Spent Nuclear Fuel Program	ID-SNF-101
0569	IN	Integrated SNF Program	ID-SNF-102
0177	IN	Emptied SNF Facilities	ID-SNF-103
0178	IN	Constructed New Facilities	ID-SNF-104
0448	IN	Dry Transfer and Storage Project (Privatized)	ID-SNF-105
0221	ID	Science and Technology Coordination	ID-TD-101
0570	IN	INEEL LLW/MLLW/Other Waste Program	ID-WM-101
0186	IN	National LLW Program	ID-WM-102
0187	IN	INEEL Transuranic Waste	ID-WM-103
0452	IN	AMWTP Asset Acquisition Project (Privatized)	ID-WM-104
0453	IN	AMWTP Production Operations	ID-WM-105
0571	IN	INEEL Site-Wide Environmental Protection	ID-WM-106
0191	IN	Long Term Treatment/Storage/Disposal Operations	ID-WM-107
0572	IN	Integrated Waste Operations Program	ID-WM-108
0710	IN	Pu Stabilization	ID-XX1

Nevada Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0222	NT	Program Integration	NV201
0223	NT	AIPs/Grants	NV202
0224	NT	Soils	NV211
0225	NT	Underground Test Area (UGTA)	NV212
0226	NT	Industrial Sites	NV214
0227	NO	Off-sites	NV240
0433	NT	Program Management	NV330
0442	NT	TRU/Mixed TRU	NV350
0444	NT	Mixed Low-Level Waste	NV360
0443	NT	Low-Level Waste	NV370

Oakland Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0200	LL	LLNL Main Site Remediation	OAK-001
0263	ET	ETEC Remediation	OAK-007
0265	ET	ETEC Landlord	OAK-009
0464	LL	Accelerated Waste Treatment	OAK-041
0258	LL	Lawrence Livermore National Laboratory (LLNL) - Site 300 Remedial Action	OK-002
0260	LB	LBNL Soils and Groundwater (Environmental Restoration)	OK-003
0261	LB	LBNL Hazardous Waste Handling Facility Closure (Environmental Restoration)	OK-004
0262	SL	Stanford Linear Accelerator Center (Environmental Restoration)	OK-005
0267	LH	Laboratory for Energy-Related Health Research Environmental Restoration	OK-010
0269	GT	Soil Remediation (GTF)	OK-011
0271	GA	Hot Cell Facility D&D at General Atomics	OK-012
0461	GE	General Electric D&D (Environmental Restoration)	OK-013
0275	LH	LEHR Waste Management	OK-014
0277	LB	LBNL Legacy Waste	OK-015
0279	LB	LBNL Newly Generated Wastes	OK-016
0462	LL	LLNL Base Program	OK-021
0463	LL	LLNL General Plant Projects	OK-026
0285	LL	LLNL Decontamination and Water Treatment Facility	OK-027
0287	OK	State Grants	OK-040
0291	ET	ETEC Waste Management	OK-042
0588	SP	SPRU	SP-SPRU

Oak Ridge Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0302	RE	Hazardous Waste Management	OR-38109
0303	RE	Sanitary/Industrial Waste Management	OR-38110
0581	RE	Mixed Low Level Waste Storage, Treatment, Disposal	OR-38111
0582	RE	Low Level Waste Storage, Treatment, Disposal	OR-38112
0583	RE	Transuranic Waste Storage, Treatment	OR-38113
0304	RE	Broad Spectrum LLMW Treatment	OR-38901
0305	RE	TRU Waste Privatization	OR-38902
0437	FS	FUSRAP New York	OR-41201
0445	FS	FUSRAP New Jersey	OR-41202
0438	FS	FUSRAP Missouri	OR-41203
0439	FS	FUSRAP Other	OR-41204
0306	RE	Y-12 East Fork Poplar Creek Remedial Action	OR-42101
0307	RE	Y-12 Bear Creek Remedial Action	OR-42102
0308	RE	ORNL Melton Valley Watershed D&D	OR-43201
0309	RE	ORNL Melton Valley Watershed Remedial Action	OR-43202
0310	RE	ORNL Bethel Valley Remedial Action	OR-43203
0311	RE	ORNL Bethel Valley D&D	OR-43204
0316	RE	ETTP Landlord	OR-44101
0313	RE	ETTP Remedial Action	OR-44301
0314	RE	ETTP Process Equipment D&D	OR-44302
0315	RE	ETTP D&D	OR-44303
0712	RE	ETTP Facility Safety Improvements	OR-44304
0312	RE	On-site Waste Management Facility	OR-44901
0317	PA	Paducah Remedial Action	OR-45301
0318	PA	Paducah Waste Management	OR-45302
0319	PO	Portsmouth Remedial Action	OR-46301
0320	PO	Portsmouth Waste Management	OR-46302

Oak Ridge Operations Office
Approved Projects (cont.)

Project Key	Site Summary Level	Project Title	Project Fieldcode
0293	WS	Weldon Spring Disposal Facility	OR-47201
0321	WS	Weldon Spring Waste Treatment	OR-47202
0322	WS	Weldon Spring Long-Term Surveillance and Maintenance	OR-47203
0323	RE	Offsite Remedial Action	OR-48101
0324	OR	Directed Support	OR-48301
0325	RE	NMFS	OR-63201

Ohio Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0228	RM	Remediation	OH-AB-01
0229	RM	Project Management, Site Services, ES&H	OH-AB-02
0230	BC	King Avenue Site Decontamination	OH-CL-01
0231	BC	West Jefferson Site Decontamination	OH-CL-02
0521	BC	Project Management, Site Support & Maintenance	OH-CL-03
0522	FM	Facility Shutdown	OH-FN-01
0523	FM	Facility D & D	OH-FN-02
0524	FM	On-Site Disposal Facility	OH-FN-03
0525	FM	Aquifer Restoration	OH-FN-04
0237	FM	Waste Pits	OH-FN-05
0253	FM	Waste Pits - Privatization	OH-FN-05P
0530	FM	Soils	OH-FN-06
0526	FM	Silos	OH-FN-07
0254	FM	Silo 3 - Privatization	OH-FN-07P
0239	FM	Nuclear Materials	OH-FN-08
0240	FM	Thorium Overpack	OH-FN-09
0241	FM	Mixed Waste	OH-FN-10
0527	FM	Waste Management	OH-FN-11
0528	FM	Program Support & Oversight	OH-FN-12
0573	MD	Tritium Operations	OH-MB-01
0574	MD	Main Hill Tritium	OH-MB-02
0246	MD	Legacy Waste	OH-MB-03
0575	MD	Main Hill Rad	OH-MB-04
0576	MD	Main Hill Non Rad	OH-MB-05
0577	MD	SM/PP Hill	OH-MB-06
0578	MD	Test Fire Valley	OH-MB-07
0579	MD	Soils	OH-MB-08
0580	MD	Facility Operations & Maintenance	OH-MB-09
0589	MD	Exit Support Project	OH-MB-10

Ohio Operations Office
Approved Projects (cont.)

Project Key	Site Summary Level	Project Title	Project Fieldcode
0255	OH	Science & Technology Coordination	OH-OS-02
0249	WV	HLW Vitrification and Tank Heel High Activity Waste Processing	OH-WV-01
0250	WV	Site Transition, Decommissioning, & Project Completion	OH-WV-02
0251	WV	Spent Nuclear Fuel	OH-WV-03
0252	WV	Project Management/Site Support	OH-WV-04

Richland Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0415	HA	100 Area Remedial Action	RL-ER01
0416	HA	200 Area Remedial Action	RL-ER02
0417	HA	300 Area Remedial Action	RL-ER03
0418	HA	Environmental Restoration Disposal Facility	RL-ER04
0419	HA	Facility Surveillance & Maintenance - ADS 3500	RL-ER05
0420	HA	Decontamination and Decommissioning	RL-ER06
0421	HA	Post Closure Surveillance & Maintenance	RL-ER07
0422	HA	Groundwater Management	RL-ER08
0423	HA	N Reactor Deactivation	RL-ER09
0424	HA	Program Management and Support	RL-ER10
0425	HA	HAMMER	RL-HM01
0426	HA	MISSION SUPPORT	RL-OT01
0427	RL	RL Directed Support	RL-OT04
0429	RL	TWRS Regulatory Unit	RL-RG01
0430	RL	PNNL WASTE MANAGEMENT	RL-ST01
0401	HA	B-Plant Sub-Project	RL-TP01
0402	HA	WESF Sub-Project	RL-TP02
0403	HA	PUREX Sub-Project	RL-TP03
0404	HA	300 Area/SNM Sub-Project	RL-TP04
0405	HA	PFP Deactivation	RL-TP05
0406	HA	PFP Stabilization	RL-TP06
0407	HA	PFP Vault Management	RL-TP07
0408	HA	324/327 Facility Transition Project	RL-TP08
0409	HA	K Basin Deactivation	RL-TP09
0410	HA	Accelerated Deactivation	RL-TP10
0411	HA	Advanced Reactors Transition	RL-TP11
0412	HA	Transition Project Management	RL-TP12
0413	HA	Landlord Program	RL-TP13
0414	HA	Hanford Surplus Facility Program 300 Area Revitalization Project	RL-TP14

Project Key	Site Summary Level	Project Title	Project Fieldcode
0203	HA	Tank Waste Characterization	RL-TW01
0384	HA	Tank Safety Issue Resolution Project	RL-TW02
0385	HA	Tank Farms Operations	RL-TW03
0386	HA	Retrieval Project	RL-TW04
0387	HA	Process Waste Support	RL-TW05
0388	HA	Process Waste Privatization Phase I	RL-TW06
0389	HA	Process Waste Privatization Phase II	RL-TW07
0390	HA	Process Waste Privatization Infrastructure	RL-TW08
0391	HA	Immobilized Tank Waste Storage & Disposal Project	RL-TW09
0392	HA	TWRS Management Support	RL-TW10
0393	HA	Spent Nuclear Fuels Project	RL-WM01
0394	HA	Canister Storage Building Operations	RL-WM02
0395	HA	Solid Waste Storage and Disposal	RL-WM03
0396	HA	Solid Waste Treatment	RL-WM04
0397	HA	Liquid Effluent Project	RL-WM05
0398	HA	Analytical Services	RL-WM06
0707	RL	LETD II (WM) Line Item Reprogramming	RL-XX1
0708	RL	B Cell Cleanout Bldg 327 (Closure Projects)	RL-XX2

Rocky Flats Field Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0202	RT	Buffer Zone Closure Project	RF001
0584	RT	Waste Management Project	RF002
0329	RT	Remediation Waste & Contingent Storage Project	RF003
0331	RT	SNM Capital Support Project	RF004
0333	RT	IAEA Project	RF005
0335	RT	SNM Consolidation Project	RF006
0337	RT	New Pu Interim Storage Vault	RF007
0339	RT	Pu Metals and Oxides Stabilization	RF008
0341	RT	Pu Solid Residue Stabilization Project	RF009
0343	RT	Pu Liquid Stabilization	RF010
0345	RT	Uranium Disposition Project	RF011
0347	RT	SNM Shipping Project	RF012
0349	RT	Closure Caps Project	RF013
0351	RT	Industrial Zone Closure Project	RF014
0585	RT	Miscellaneous Production Zone Cluster Closure Project	RF015
0355	RT	Building 371 Cluster Closure Project	RF016
0357	RT	Building 707/750 Cluster Closure Project	RF017
0359	RT	Building 771/774 Cluster Closure Project	RF018
0361	RT	Building 776/777 Cluster Closure Project	RF019
0363	RT	Building 881 Cluster Closure Project	RF020
0365	RT	Building 991 Cluster Closure Project	RF021
0586	RT	Building 779 Cluster Closure Project	RF022
0436	RT	Utilities & Infrastructure	RF023
0369	RT	Safeguards and Security Project	RF024
0371	RT	Infrastucture Improvement/Replacement Project	RF025
0375	RT	Analytical Services Project	RF027
0377	RF	Work for Others Project	RF028_H
0380	RT	K-H Project Management	RF030

Savannah River Operations Office
Approved Projects

Project Key	Site Summary Level	Project Title	Project Fieldcode
0501	SS	H Canyon Deactivation Project	FA04-HCD
0502	SS	HB Line Deactivation Project	FA05-HBLD
0514	SS	H-Area Monitoring	FA17-FAM
0110	SS	DOE Projects Line Item	SR-DO01
0113	SS	WSI Landlord Project	SR-DO02
0114	SS	Savannah River Forest Station	SR-DO03
0115	SS	Ecology Lab Project	SR-DO04
0116	SR	DOE External Program Support	SR-DO05
0118	SR	DOE Program Support	SR-DO07
0051	SS	Flood Plain Swamp Project	SR-ER01
0052	SS	Four Mile Branch Project	SR-ER02
0053	SS	Lower Three Runs Project	SR-ER03
0054	SS	Pen Branch Project	SR-ER04
0055	SS	Steel Creek Project	SR-ER05
0056	SS	Upper Three Runs Project	SR-ER06
0057	SS	Program Management	SR-ER07
0485	SS	Decommissioning Projects	SR-ER08
0486	SS	HWCTR Projects	SR-ER09
0498	SS	247-F Deactivation Project	SR-FA01
0499	SS	F Canyon Deactivation Project	SR-FA02
0500	SS	FB Line Deactivation Project	SR-FA03
0503	SS	235-F Deactivation Project	SR-FA06
0504	SS	Old HB Line Deactivation Project	SR-FA07
0505	SS	P Reactor Deactivation Project	SR-FA08
0506	SS	C Reactor Deactivation Project	SR-FA09
0507	SS	R Reactor Deactivation Project	SR-FA10
0508	SS	K Reactor Deactivation Project	SR-FA11
0509	SS	L Reactor Deactivation Project	SR-FA12
0510	SS	RBOF Deactivation Project	SR-FA13
0511	SS	D Area Deactivation Project	SR-FA14
0512	SS	M Area Deactivation Project	SR-FA15

Savannah River Operations Office
Approved Projects (cont.)

Project Key	Site Summary Level	Project Title	Project Fieldcode
0513	SS	F-Area Monitoring	SR-FA16
0515	SS	M Area Monitoring Project	SR-FA18
0516	SS	D Area Monitoring Project	SR-FA19
0517	SS	Reactors Monitoring Project	SR-FA20
0518	SS	Heavy Water Storage Monitoring	SR-FA21
0519	SS	RBOF Monitoring Project	SR-FA22
0036	SS	H-Tank Farm	SR-HL01
0037	SS	F-Tank Farm	SR-HL02
0038	SS	Waste Removal Operations and Tank Closure	SR-HL03
0039	SS	ITP/ESP	SR-HL04
0040	SS	Vitrification	SR-HL05
0041	SS	Glass Waste Storage	SR-HL06
0042	SS	Effluent Treatment Facility	SR-HL07
0043	SS	Saltstone	SR-HL08
0119	SS	Tank Farm Service Upgrades	SR-HL09
0590	SS	H-Tank Farm Storm Water System Upgrades	SR-HL10
0591	SS	Tank Farm Support Services F&H Area	SR-HL11
0592	SS	High Level Waste System Upgrades	SR-HL12
0100	SS	Plantwide Fire Protection Line Item	SR-IN01
0101	SS	Operations Support Facility Line Item	SR-IN02
0102	SS	Plant Maintenance Line Item	SR-IN03
0103	SS	Domestic Water Line Item	SR-IN04
0104	SS	CFC HVAC Chiller Retrofit (96-D-471)	SR-IN05
0105	SS	Radio Trunking System Line Item	SR-IN06
0106	SS	Site Road Infrastructure Line Item	SR-IN07
0107	SS	High Level Drain Lines Line Item	SR-IN08
0108	SS	Health Physics Support Line Item	SR-IN09
0109	SS	Environmental Monitoring Lab Line Item	SR-IN10
0111	SS	Infrastructure Line Item	SR-IN11
0112	SS	Operating Projects	SR-IN12
0120	SS	Decontamination of Laboratory Facilities, 772-F & 773-A	SR-IN13

Savannah River Operations Office
Approved Projects (cont.)

Project Key	Site Summary Level	Project Title	Project Fieldcode
0487	SS	F-Area Stabilization Project	SR-NM01
0488	SS	H-Area Stabilization Project	SR-NM02
0489	SS	Actinide Packaging Line Item	SR-NM03
0490	SS	Canyon Exhaust Line Item	SR-NM04
0491	SS	Neptunium (Np) Vitrification Line Item	SR-NM05
0492	SS	Nuclear Materials Storage	SR-NM06
0493	SS	Depleted Uranium Storage	SR-NM07
0494	SS	K-Reactor Spent Nuclear Fuel Project	SR-SF01
0495	SS	L-Reactor Spent Nuclear Fuel Project	SR-SF02
0496	SS	RBOF Spent Nuclear Fuel Project	SR-SF03
0587	SS	Heavy Water - D Area	SR-SF04
0073	SS	Alternate Technology Project	SR-SF06
0074	SS	Disassembly Basin Upgrade Line Item	SR-SF07
0075	SS	Sand Filter Refurbishment Line Item	SR-SF08
0497	SS	Spent Nuclear Fuel Transfer and Storage	SR-SF09
0077	SS	RBOF Process Support System Refurbishment	SR-SF10
0044	SS	Consolidated Incinerator Facility	SR-SW01
0480	SS	Transuranic Waste Project	SR-SW02
0481	SS	Mixed Low Level Waste Project	SR-SW03
0482	SS	Low Level Waste Project	SR-SW04
0483	SS	Hazardous Waste Project	SR-SW05
0484	SS	Sanitary Waste Project	SR-SW06
0050	SS	Pollution Prevention	SR-SW07
0060	SS	Technology Development Coordination and Management	SR-TD01

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Attachment C. List of Sites

Table 1. Site Names and Codes Table

Operations/Field Office	Geographic Site	Geographic Code	State	Status (As of End of FY 1996)
Albuquerque	AMBROSIA LAKE, NM	AMLA	NM	Complete
Albuquerque	BELFIELD, ND	BSBS	ND	
Albuquerque	BOWMAN, ND	BSBO	ND	
Albuquerque	CANONSBURG, PA	CANO	PA	Complete
Albuquerque	DURANGO, CO	DURA	CO	Complete
Albuquerque	FALLS CITY, TX	FACI	TX	Complete
Albuquerque	GRAND JUNCTION MILL TAILINGS SITE, CO	GJUS	CO	Complete
Albuquerque	GRAND JUNCTION PROJECTS OFFICE SITE	GJPO	CO	
Albuquerque	GREEN RIVER, UT	GRRI	UT	Complete
Albuquerque	GUNNISON, CO	GUMS	CO	Complete
Albuquerque	HOLLOMAN AFB	HAFB	NM	Complete
Albuquerque	INHALATION TOXICOLOGY RESEARCH INSTITUTE	ITRI	NM	
Albuquerque	KANSAS CITY PLANT	KSCP	MO	
Albuquerque	KAUAI TEST FACILITY	KATF	HI	Complete
Albuquerque	LAKEVIEW, OR	LAKE	OR	Complete
Albuquerque	LOS ALAMOS NATIONAL LABORATORY	LANL	NM	
Albuquerque	LOWMAN, ID	LOWM	ID	Complete
Albuquerque	MAYBELL, CO	MAMS	CO	
Albuquerque	MAXEY FLATS DISPOSAL SITE	MFDS	KY	
Albuquerque	MEXICAN HAT, UT	MEHA	UT	Complete
Albuquerque	MONTICELLO REMEDIAL ACTION PROJECT	MRAP	UT	
Albuquerque	MONUMENT VALLEY, AZ	MOVA	AZ	Complete
Albuquerque	NATURITA, CO	NASI	CO	
Albuquerque	NEW RIFLE, CO	NERS	CO	
Albuquerque	OLD RIFLE, CO	OLRS	CO	
Albuquerque	OXNARD FACILITY	OXSI	CA	Complete
Albuquerque	PAGANO SALVAGE YARD	POSY	NM	Complete
Albuquerque	PANTEX PLANT	PAPL	TX	

Operations/Field Office	Geographic Site	Geographic Code	State	Status (As of End of FY 1996)
Albuquerque	PEAK OIL PRP PARTICIPATION	POPR	FL	Complete
Albuquerque	PINELLAS PLANT	PIPL	FL	
Albuquerque	RIVERTON, WY	RIVR	WY	Complete
Albuquerque	SALT LAKE CITY, UT	SALC	UT	Complete
Albuquerque	SALTON SEA TEST BASE	SSTB	CA	Complete
Albuquerque	SANDIA NATIONAL LABORATORIES - CA	SNLC	CA	
Albuquerque	SANDIA NATIONAL LABORATORIES - NM	SNLN	NM	
Albuquerque	SHIPROCK, NM	SHIP	NM	Complete
Albuquerque	SLICK ROCK OLD NORTH CONTINENT, CO	OLNC	CO	
Albuquerque	SLICK ROCK UNION CARBIDE, CO	UNCC	CO	
Albuquerque	SOUTH VALLEY SUPERFUND SITE	SVSS	NM	Complete
Albuquerque	SPOOK, WY	SPOK	WY	Complete
Albuquerque	TUBA CITY, AZ	TUCI	AZ	Complete
Carlsbad	WASTE ISOLATION PILOT PROJECT*	WIPP	NM	
Chicago	AMES LABORATORY	AMES	IA	
Chicago	ARGONNE NATIONAL LABORATORY-EAST	ANLE	IL	
Chicago	ARGONNE NATIONAL LABORATORY-WEST	ANLW	ID	
Chicago	BROOKHAVEN NATIONAL LABORATORY	BRNL	NY	
Chicago	FERMI NATIONAL ACCELERATOR LABORATORY	FNAL	IL	
Chicago	HALLAM NUCLEAR POWER FACLITY	HNPF	NE	Complete
Chicago	PIQUA, OHIO SITE	PNPF	OH	Complete
Chicago	PRINCETON PLASMA PHYSICS LABORATORY	PPPL	NJ	
Chicago	SITE A/PLOT M	SAFP	IL	
Headquarters	METC*	METC	WV	
Idaho	IDAHO NATIONAL ENGINEERING LABORATORY	INEL	ID	
Nevada	AMCHITKA ISLAND	AINP	AK	
Nevada	CENTRAL NEVADA TEST SITE (CNTS)	CNTS	NV	
Nevada	GASBUGGY	PRGB	NM	

Operations/Field Office	Geographic Site	Geographic Code	State	Status (As of End of FY 1996)
Nevada	GNOME-COACH	PGTS	NM	
Nevada	NEVADA TEST SITE	NVTS	NV	
Nevada	PROJECT CHARIOT	PRCH	AK	Complete
Nevada	RIO BLANCO	PRBS	CO	
Nevada	RULISON	PRRS	CO	
Nevada	SALMON SITE	SATS	MS	
Nevada	SHOAL SITE	PRST	NV	
Nevada	TONOPAH TEST RANGE AREA	TOTR	NV	
Oak Ridge	ACID/PUEBLO CANYONS	ACPC	NM	Complete
Oak Ridge	ALBA CRAFT	ALCL	OH	Complete
Oak Ridge	ALBANY RESEARCH CENTER (ARC)	AMRC	OR	Complete
Oak Ridge	ALIQUIPPA FORGE	ALFO	PA	Complete
Oak Ridge	ASHLAND 1	ASOI	NY	
Oak Ridge	ASHLAND 2	ASHO	NY	
Oak Ridge	ASSOCIATE AIRCRAFT	AATM	OH	Complete
Oak Ridge	B&T METALS	BTME	OH	Complete
Oak Ridge	BAKER AND WILLIAMS WAREHOUSES	BAWW	NY	Complete
Oak Ridge	BAKER BROTHERS	BABR	OH	Complete
Oak Ridge	BAYO CANYON	BACA	NM	Complete
Oak Ridge	BLISS & LAUGHLIN STEEL	BLLS	NY	
Oak Ridge	C. H. SCHNOOR	CHSC	PA	Complete
Oak Ridge	CENTER FOR ENERGY AND ENVIRONMENTAL RESEARCH (CEER)	CEER	PR	
Oak Ridge	CHAPMAN VALVE	CHVA	MA	Complete
Oak Ridge	CHUPADERA MESA	CMMR	NM	Complete
Oak Ridge	COLONIE	COSI	NY	
Oak Ridge	COMBUSTION ENGINEERING	COEN	CT	
Oak Ridge	DUPONT & COMPANY	DUCO	NJ	
Oak Ridge	ELZA GATE	ELGS	TN	Complete
Oak Ridge	GENERAL MOTORS	GEMO	MI	Complete
Oak Ridge	GRANITE CITY STEEL	GRCS	IL	Complete
Oak Ridge	HERRING-HALL MARVIN SAFE CO.	HHSC	OH	Complete
Oak Ridge	KELLEX/PIERPONT	KEPS	NJ	Complete
Oak Ridge	LATTY AVENUE PROPERTIES	LAAP	MO	
Oak Ridge	LINDE AIR PRODUCTS	LIAP	NY	

Operations/Field Office	Geographic Site	Geographic Code	State	Status (As of End of FY 1996)
Oak Ridge	LUCKEY	LUCK	OH	
Oak Ridge	MADISON	MDSN	IL	
Oak Ridge	MAYWOOD	MACW	NJ	
Oak Ridge	MIDDLESEX MUNICIPAL LANDFILL	MIML	NJ	Complete
Oak Ridge	MIDDLESEX SAMPLING PLANT	MISP	NJ	
Oak Ridge	NATIONAL GUARD ARMORY	INGA	IL	Complete
Oak Ridge	NEW BRUNSWICK SITE	NEBS	NJ	
Oak Ridge	NIAGARA FALLS STORAGE SITE	NFSS	NY	
Oak Ridge	NIAGARA FALLS STORAGE SITE VICINITY PROPERTIES	NFVP	NY	Complete
Oak Ridge	OAK RIDGE ASSOCIATED UNIVERSITIES (ORAU)	ORAU	TN	Complete
Oak Ridge	OAK RIDGE RESERVATION (Y-12, ORR, K-25, and ORNL)	ORTN	TN	
Oak Ridge	PADUCAH GASEOUS DIFFUSION PLANT	PGDP	KY	
Oak Ridge	PAINESVILLE	PAIN	OH	
Oak Ridge	PORTSMOUTH GASEOUS DIFFUSION PLANT	PORT	OH	
Oak Ridge	SEAWAY INDUSTRIAL PARK	SEIP	NY	
Oak Ridge	SEYMOUR SPECIALTY WIRE	SESW	CT	Complete
Oak Ridge	SHPACK LANDFILL	SHLF	MA	
Oak Ridge	ST. LOUIS AIRPORT SITE (SLAPS)	SLAS	MO	
Oak Ridge	ST. LOUIS AIRPORT SITE (VICINITY PROPERTIES)	SLVP	MO	
Oak Ridge	ST. LOUIS DOWNTOWN SITE (SLDS)	SLDS	MO	
Oak Ridge	UNIVERSITY OF CALIFORNIA	UOCB	CA	Complete
Oak Ridge	UNIVERSITY OF CHICAGO	UOCH	IL	Complete
Oak Ridge	VENTRON	VTRN	MA	
Oak Ridge	W.R. GRACE & COMPANY	WRGC	MD	
Oak Ridge	WAYNE	WISS	NJ	
Oak Ridge	WELDON SPRING SITE	WSSP	MO	
Oakland	GENERAL ATOMICS (GA) SITE	GEAT	CA	
Oakland	GENERAL ELECTRIC (GE) VALLECITOS NUCLEAR CENTER	GENC	CA	
Oakland	GEOTHERMAL TEST FACILITY	GETF	CA	
Oakland	LAB. FOR ENERGY RELATED HEALTH RESEARCH (LEHR)	LEHR	CA	

Operations/Field Office	Geographic Site	Geographic Code	State	Status (As of End of FY 1996)
Oakland	LAWRENCE BERKELEY LABORATORY (LBL)	LABL	CA	
Oakland	LAWRENCE LIVERMORE NATIONAL LABORATORY MAIN SITE	LLMS	CA	
Oakland	LAWRENCE LIVERMORE NATIONAL LABORATORY SITE 300	LLLS	CA	
Oakland	SANTA SUSANA FIELD LABORATORY (a.k.a. ETEC)	ETEC	CA	
Oakland	SPRU	SPRU	NY	
Oakland	STANFORD LINEAR ACCELERATOR CENTER (SLAC)	SLAC	CA	
Ohio	BATTELLE COLUMBUS LABORATORIES - King Avenue	BCLK	OH	
Ohio	BATTELLE COLUMBUS LABORATORIES - West Jefferson	BCLJ	OH	
Ohio	FERNALD SITE	FEMP	OH	
Ohio	MOUND PLANT	MOPL	OH	
Ohio	RMI SITE	REME	OH	
Ohio	WEST VALLEY DEMONSTRATION PROJECT	WVDP	NY	
Richland	HANFORD SITE	HASI	WA	
Rocky Flats	ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE	RFTS	CO	
Savannah River	SAVANNAH RIVER SITE	SARS	SC	

*Note: METC and WIPP are not part of the official EM geographic site list.

Table 2. Operations/Field Office Names and Codes Table

Operations/Field Office	Name	Geographic Code	State	Status
Albuquerque	ALBUQUERQUE Operations/Field OFFICE	ALOO	NM	
Carlsbad	CARLSBAD AREA OFFICE	CBOO	NM	
Chicago	CHICAGO OPERATIONS OFFICE	CHOO	IL	
Headquarters	HEADQUARTERS	EMHQ	DC	
Idaho	IDAHO OPERATIONS OFFICE	IDOO	ID	
Nevada	NEVADA OPERATIONS OFFICE	NVOO	NV	
Oak Ridge	OAK RIDGE OPERATIONS OFFICE	OROO	TN	
Oakland	OAKLAND OPERATIONS OFFICE	OKOO	CA	
Ohio	OHIO OPERATIONS OFFICE	OHOO	OH	
Richland	RICHLAND OPERATIONS OFFICE	RLOO	WA	
Rocky Flats	ROCKY FLATS OPERATIONS OFFICE	RFOO	CO	
Savannah River	SAVANNAH RIVER OPERATIONS OFFICE	SROO	SC	

Table 3. Site Summary Level and Geographic Sites Table

Operations/Field Office	Site Summary Level	Geographic Sites
Albuquerque	Albuquerque Operations Office	• Maxey Flats Disposal Site
	Grand Junction Office	• Grand Junction Office • Monticello Mill Site
	Inhalation Toxicology Research Institute	• Inhalation Toxicology Research Institute
	Kansas City Plant	• Kansas City Plant
	Los Alamos National Laboratory	• Los Alamos National Laboratory
	Mid-West Research Institute	
	Pantex Plant	• Pantex Plant
	Pinellas Plant	• Pinellas Plant
	Sandia National Laboratories	• Sandia National Labs, CA • Sandia National Labs, NM
	UMTRA - Surface	• Old Rifle, CO • New Rifle, CO • Maybell, CO • Naturita, CO • Slick Rock Old North Continent, CO
	UMTRA - Groundwater	• Slick Rock Union Carbide, CO • Bowman • Belfield • Other UMTRA Groundwater Sites
Carlsbad	Carlsbad Area Office	
	Waste Isolation Pilot Plant	• Waste Isolation Pilot Plant

Operations/Field Office	Site Summary Level	Geographic Sites
Chicago	Ames Laboratory	• Ames Laboratory
	Argonne National Laboratory - East	• Argonne National Laboratory - East
	Argonne National Laboratory - West	• Argonne National Laboratory - West
	Brookhaven National Laboratory	• Brookhaven National Laboratory
	Chicago Operations Office	• Site A/Plot M
	Fermi National Accelerator Laboratory	• Fermi Laboratory
	Princeton Plasma Physics Laboratory	• Princeton Plasma Physics Laboratory
Headquarters	Headquarters	
	National Program	
Idaho	Idaho Operations Office	
	Idaho National Environmental Engineering Laboratory	• Idaho National Engineering Laboratory
Nevada	Nevada Operations Office	
	Nevada Off-Sites	• Amchitka Island • Central Nevada Test Site • Gasbuggy • Gnome-Coach • Rio Blanco • Rulison • Salmon Site • Shoal Site • Tonopah Range
	Nevada Test Site	• Nevada Test Site

Operations/Field Office	Site Summary Level	Geographic Sites
Oakland	General Atomics	• General Atomics Site
	General Electric	• GE Vallecitos Nuclear Center
	Geothermal Test Facility	• Geothermal Test Facility
	Energy Technology Engineering Center/Santa Susana Field Laboratory	• Energy Technology Engineering Center
	Laboratory for Energy Related Health Research	• Laboratory for Energy Related Health Research
	Lawrence Berkeley Laboratory	• Lawrence Berkeley National Laboratory
	Lawrence Livermore National Laboratory	• Lawrence Livermore National Laboratory • Lawrence Livermore National Laboratory Site 300
	Oakland Operation Office	
	OKSP	• Separations Process Research Unit
	Stanford Linear Accelerator Center	• Stanford Linear Accelerator Center

Operations/Field Office	Site Summary Level	Geographic Sites
Oak Ridge	Center for Engineering and Environmental Research	
	East Tennessee Technology Park (K-25)	• K-25 Plant
	FUSRAP	• Ashland Oil 1 • Ashland Oil 2 • Bliss & Laughlin Steel • Colonie • Combustion Engineering • Dupont & Company • Latty Avenue Properties • Linde Air Products • Luckey • Madison • Maywood • Middlesex Sampling Plant • New Brunswick Site • Painesville • Seaway Industrial Park • Shpack Landfill • St. Louis Airport Site • St. Louis Airport Site - Vicinity Properties • St. Louis Downtown Site • Ventron • Wayne • W.R. Grace and Company
	Oak Ridge Institute for Science and Education	
	Oak Ridge National Laboratory	• Oak Ridge National Laboratory
	Oak Ridge Operations Office	
	Oak Ridge Reservation	• Oak Ridge Reservation
	Paducah Gaseous Diffusion Plant	• Paducah Gaseous Diffusion Plant
	Portsmouth Gaseous Diffusion Plant	• Portsmouth Gaseous Diffusion Plant

Operations/Field Office	Site Summary Level	Geographic Sites
Oak Ridge (Continued)	Weldon Spring Site	• Weldon Spring Site
	Y-12 Plant	• Y-12 Plant
Ohio	Ashtabula (Reactive Metals, Inc.)	• RMI Site
	Battelle Columbus Laboratory	• Battelle Columbus Laboratories, West Jefferson • Battelle Columbus Laboratories, King Avenue
	Fernald Environmental Management Project	• Fernald
	Mound Plant	• Mound Plant
	Ohio Field Office	
	West Valley Demonstration Project	• West Valley
Richland	Hanford Site	• Hanford Site
	Pacific Northwest Laboratory	
	Richland Operations Office	
Rocky Flats	Rocky Flats Environmental Technology Site	• Rocky Flats Environmental Technology Site
	Rocky Flats Field Office	
Savannah River	Savannah River Operations Office	
	Savannah River Site	• Savannah River Site

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Attachment D. Project Baseline Summary Format and Instructions

This section contains spreadsheet printouts and guidance for completing the Project Baseline Summary (PBS). One PBS needs to be completed for each project. The sum of all projects must represent the entire scope for the Operations/Field Office.

Revised 2006 Plan PBS: Project Identification

A.1. - Project Identification/Header Information (Section A.0. in 2/28/97 PBS)

A.1.1. Project Title:	
A.1.2. Unique Site-Designated Project ID:	
A.1.3. Site/Group of Sites (LOCKED):	
A.1.4. Operations/Field Office (LOCKED):	
A.1.5. DOE Project Manager:	
A.1.6. DOE Project Manager Phone Number:	
A.1.7. DOE Project Manager FAX Number:	
A.1.8. DOE Project Manager e-mail Address (Internet Format):	
A.1.9. Contractor Project Manager:	
A.1.10. Contractor Project Manager Phone Number:	
A.1.11. Contractor Project Manager FAX Number:	
A.1.12. Contractor Project Manager e-mail Address (Internet Format):	
A.1.13. Unique Project ID (LOCKED):	
A.1.14. Program Element (LOCKED):	
A.1.15. Is this a Pure, Operational, or Privatization Project?	
A.1.16. Is this a High Visibility Project? (Y/N)	

A.1.17. DOE Project Manager's Signature/Date	A.1.18. Contractor Project Manager's Signature/Date

Revised 2006 Plan PBS: Technical and Scope Narratives

A.2. Technical and Scope Narratives (Section A.1. in 2/28/97 PBS)

A.2.1. Purpose of Project:

The size and shape of the narrative box can be adjusted.

A.2.2. Definition of Scope:

The size and shape of the narrative box can be adjusted.

A.2.3. Technical Approach:

The size and shape of the narrative box can be adjusted.

Revised 2006 Plan PBS: Technical and Scope Narratives

A.2.4. Project Status in FY 2006:

The size and shape of the narrative box can be adjusted.

A.2.5. Post 2006 Project Scope:

The size and shape of the narrative box can be adjusted.

A.2.6. Project End State:

The size and shape of the narrative box can be adjusted.

(Safety and Health Narrative, Section A.1.7. in the 2/28/97 PBS, has been replaced and is no longer maintained. Safety and Health Narratives are now found in Section D.1.)

A.2.7. General Narrative:

The size and shape of the narrative box can be adjusted.

(Section A.1.9. in the 2/28/97 PBS has been moved to Section A.2.14.)

(Section A.1.10. in the 2/28/97 PBS has been moved to Section A.2.15.)

(Section A.1.11. in the 2/28/97 has been moved to Section A.2.16.)

A.2.8. Cost Baseline Narrative (A.2.5. in 2/28/97 PBS)

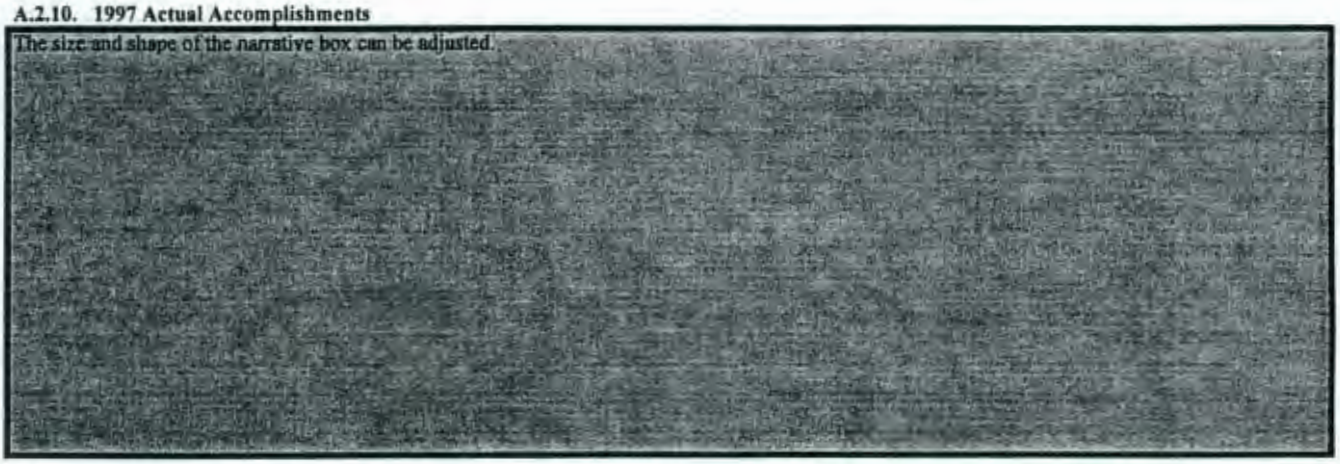
The size and shape of the narrative box can be adjusted.

A.2.9. Discuss How NEPA will be or has been Addressed

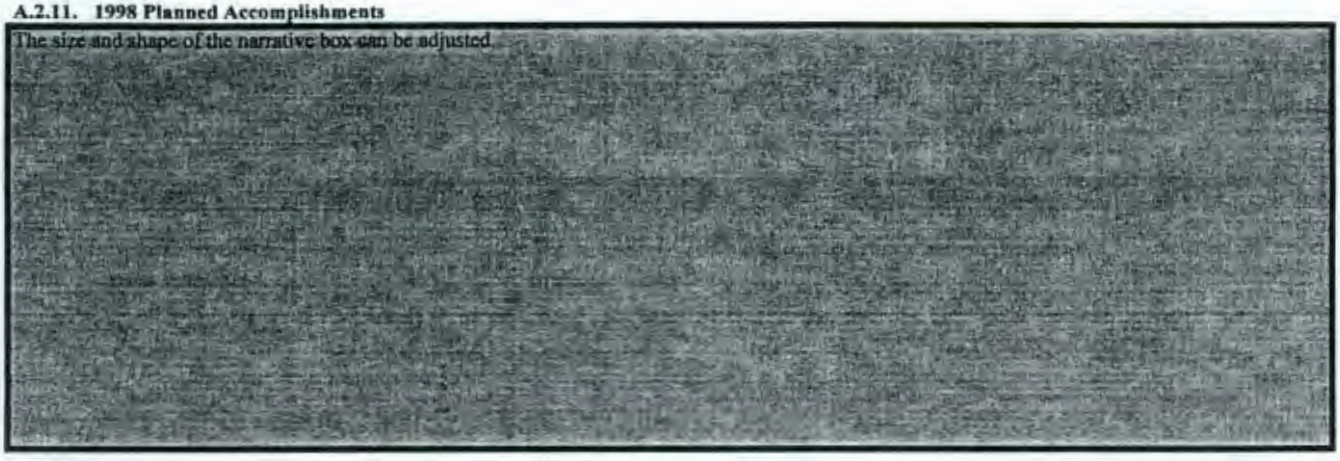
The size and shape of the narrative box can be adjusted.

Revised 2006 Plan PBS: Technical and Scope Narratives

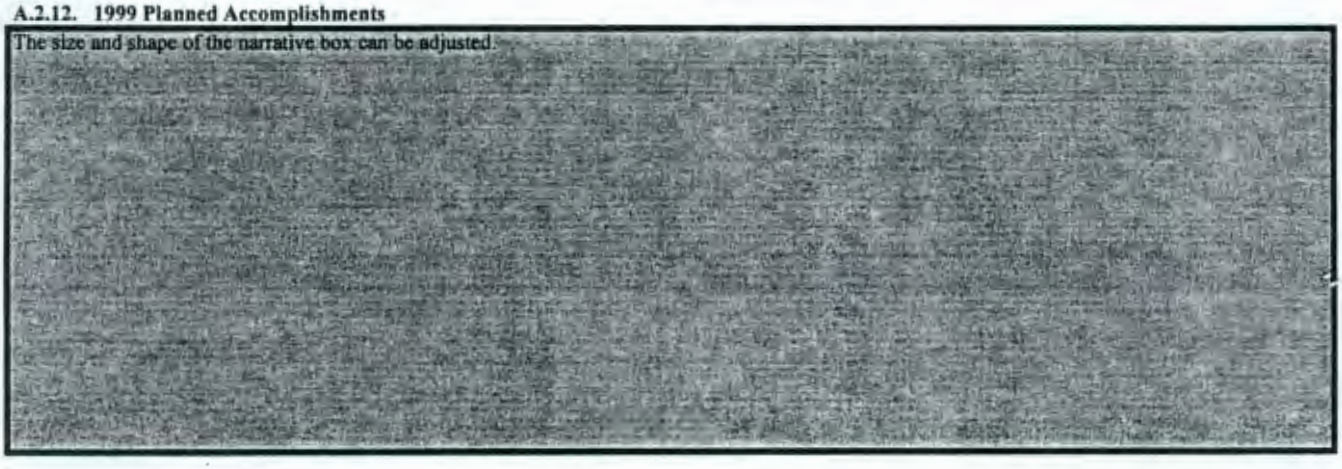
A.2.10. 1997 Actual Accomplishments



A.2.11. 1998 Planned Accomplishments

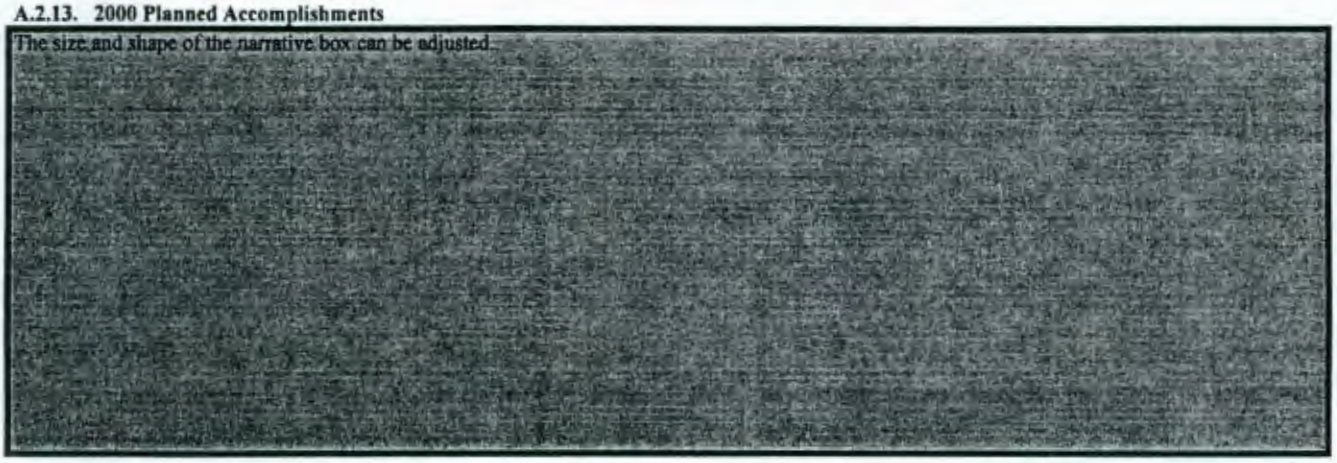


A.2.12. 1999 Planned Accomplishments



Revised 2006 Plan PBS: Technical and Scope Narratives

A.2.13. 2000 Planned Accomplishments



Revised 2006 Plan PBS: Baseline Costs

A.2.14. Baseline Cost Summary
(Section A.2.1. in the 2/28/97 PBS)

1997-2006:	0	Post 2006:	0	Total Project Cost:	0

A.2.15. Baseline Costs
(Section A.2.2. in the 2/28/97 PBS)

All dollars in thousands.	Date Submitted	1997-2006 Total	2007-Completion Total	Grand Total	1997		1998	1999	2000
					Planned	Actual			
Original	2/28/97	0	0	0		Empty			
Current Cost Baseline		0	0	0					
Escalation Rate							0.00%	2.70%	2.70%
Cost Baseline in Constant FY 1998 Dollars					0	0	0	0	0

Category	1997-2006 Total	2007-Completion Total	Grand Total	1997		1998	1999	2000
				Planned	Actual			
Storage	0	0	0					
Assessment	0	0	0					
Cleanup	0	0	0					
S&M	0	0	0					
TOTAL (Sum of Categories)	0	0	0	0	0	0	0	0

(Section A.2.3. in the 2/28/97 PBS has been removed.)
(Section A.2.4. in the 2/28/97 PBS has been removed.)
(Section A.2.5. in the 2/28/97 PBS has been moved to Section A.2.9.)
(Section A.2.6. in the 2/28/97 PBS has been moved to Section A.2.13.)

Revised 2006 Plan PBS: Baseline Costs

A.2.14. Baseline Cost Summary
(Section A.2.1. in the 2/28/97 PBS)

A.2.15. Baseline Costs
(Section A.2.2. in the 2/28/97 PBS)

All dollars in thousands.	Date Submitted	2001	2002	2003	2004	2005	2006	2007	2008	2009
Original	2/28/97									
Current Cost Baseline										
Escalation Rate		2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
Cost Baseline in Constant FY 1998 Dollars		0	0	0	0	0	0	0	0	0

Category	2001	2002	2003	2004	2005	2006	2007	2008	2009
Storage									
Assessment									
Cleanup									
S&M									
TOTAL (Sum of Categories)	0	0	0	0	0	0	0	0	0

(Section A.2.3. in the 2/28/97 PBS has been removed.)
(Section A.2.4. in the 2/28/97 PBS has been removed.)
(Section A.2.5. in the 2/28/97 PBS has been moved to Section A.2.9.)
(Section A.2.6. in the 2/28/97 PBS has been moved to Section A.2.13.)

Revised 2006 Plan PBS: Baseline Costs

A.2.14. Baseline Cost Summary
(Section A.2.1. in the 2/28/97 PBS)

A.2.15. Baseline Costs
(Section A.2.2. in the 2/28/97 PBS)

All dollars in thousands.	Date Submitted	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Original	2/28/97									
Current Cost Baseline										
Escalation Rate		2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
Cost Baseline in Constant FY 1998 Dollars		0	0	0	0	0	0	0	0	0

Category	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Storage									
Assessment									
Cleanup									
S&M									
TOTAL (Sum of Categories)	0	0	0	0	0	0	0	0	0

(Section A.2.3. in the 2/28/97 PBS has been removed.)
(Section A.2.4. in the 2/28/97 PBS has been removed.)
(Section A.2.5. in the 2/28/97 PBS has been moved to Section A.2.9.)
(Section A.2.6. in the 2/28/97 PBS has been moved to Section A.2.13.)

Revised 2006 Plan PBS: Baseline Costs

A.2.14. Baseline Cost Summary
(Section A.2.1. in the 2/28/97 PBS)

A.2.15. Baseline Costs
(Section A.2.2. in the 2/28/97 PBS)

All dollars in thousands.	Date Submitted	2051-2055	2056-2060	2061-2065	2066-2070
Original	2/28/97				
Current Cost Baseline					
Escalation Rate		2.70%	2.70%	2.70%	2.70%
Cost Baseline in Constant FY 1998 Dollars		0	0	0	0

Category	2051-2055	2056-2060	2061-2065	2066-2070
Storage				
Assessment				
Cleanup				
S&M				
TOTAL (Sum of Categories)	0	0	0	0

(Section A.2.3. in the 2/28/97 PBS has been removed.)
(Section A.2.4. in the 2/28/97 PBS has been removed.)
(Section A.2.5. in the 2/28/97 PBS has been moved to Section A.2.9.)
(Section A.2.6. in the 2/28/97 PBS has been moved to Section A.2.13.)

Revised 2006 Plan PBS: Cost

A.2.16. Non-EM Costs Included in the Cost Baseline (Section A.2.6. in the 2/28/97 PBS) (All dollars in thousands)

	Organization	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
% EM	EM	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
EM Dollars (Calculated)		0	0	0	0	0	0	0	0	0	0
% Non-EM 1											
% Non-EM 2											
% Non-EM 3											
Total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

	Organization	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040
% EM	EM	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
EM Dollars (Calculated)		0	0	0	0	0	0	0	0	0	0
% Non-EM 1											
% Non-EM 2											
% Non-EM 3											
Total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

	Organization	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
% EM	EM	100%	100%	100%	100%	100%	100%
EM Dollars (Calculated)		0	0	0	0	0	0
% Non-EM 1							
% Non-EM 2							
% Non-EM 3							
Total		100%	100%	100%	100%	100%	100%

Revised 2006 Plan PBS: Cost

A.2.17. Related Projects at the Same Site or Operations/Field Office (Section A.1.9. in the 2/28/97 PBS)

How many projects are related to this project at the same site or Operations/Field Office?

1-20 21-35

Unique Site-Designated Project ID and Project Name	Relation to this Project

Revised 2006 Plan PBS: Cost

A.2.18. Operations/Field Offices with Activities Related to this Project (Section A.1.10. in the 2/28/97 PBS)

Operations/Field Office Name	Unique Site-Designated Project ID	Relation to this Project

A.2.19. Drivers (Section A.1.11. in the 2/28/97 PBS)

	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
Select all applicable Drivers								

A.2.20. Is this project A-106 (FEDPLAN) compliant?

(Section D.2.1. in the FY 1999 Budget Update)

Revised 2006 Plan PBS: Milestone Information

A.3. Milestones

How many milestone rows do you need for this project?

Choose one (Note: Any data in rows beyond your selected range will be deleted)

1-26 | 27-57 | 58-87 | 88-117

Milestone/Activity	Field Milestone Code	Planned Date Month/Year	Forecast Date Month/Year	Actual Date Month/Year	Status Indicator	EA (Y/N)	DNFSB (Y/N)	EM-1 or S-1 (Y/N)	Intersite (Y/N)	HQ Change Control (Y/N)	Management Commitments (Y/N)	Key Decision (Y/N)
Project Start (If after 9/1/96)												
Project Mission Complete												
LT S&M Completion (If applicable)												

Revised 2006 Plan PBS: Performance Measure Metrics

A.4. Performance Measure Metrics
(Section A.4.a. in the 2/28/97 PBS; Attachment 2 in the 1997 Mid-year Performance Measures Update; Section C.1. in the FY 1999 Budget Update)

	Units	Prior to 1997	1997 Total Planned	1997 1st Half Planned	1997 2nd Half Planned	1997 1st Half Actual	1997 2nd Half Actual
WASTE							
I. High Level Waste							
A. Storage - Inventory	M3		0				
B. Long-term Storage (Disposal Ready)	M3		0				
C. New Waste	M3		0				
D. Treatment	M3		0				
F. Disposal - Shipped to DOE Site	M3		0				
G. Volume Reduced	M3		0				
II. Transuranic Waste							
A. Storage - Inventory	M3		0				
B. Long-term Storage (Disposal Ready)	M3		0				
C. New Waste	M3		0				
D. Treatment	M3		0				
E. Disposal - On-site, Commercial	M3		0				
F. Disposal - Shipped to DOE Site	M3		0				
G. Volume Reduced	M3		0				
III. Mixed Low Level Waste							
A. Storage - Total Inventory	M3		0				
C. New Waste	M3		0				
D. Treatment	M3		0				
E. Disposal - On-site, Commercial	M3		0				
F. Disposal - Shipped to DOE Site	M3		0				
G. Volume Reduced	M3		0				

Revised 2006 Plan PBS: Performance Measure Metrics

A.4. Performance Measure Metrics
(Section A.4.a. in the 2/28/97 PBS; Attachment 2 in the 1997 Mid-year Performance Measures Update; Section C.1. in the FY 1999 Budget Update)

	Units	1998 Planned	1999 Planned	2000 Planned	2001 Planned	2002 Planned	2003 Planned	2004 Planned
WASTE								
I. High Level Waste								
A. Storage - Inventory	M3							
B. Long-term Storage (Disposal Ready)	M3							
C. New Waste	M3							
D. Treatment	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							
II. Transuranic Waste								
A. Storage - Inventory	M3							
B. Long-term Storage (Disposal Ready)	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							
III. Mixed Low Level Waste								
A. Storage - Total Inventory	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							

Revised 2006 Plan PBS: Performance Measure Metrics

A.4. Performance Measure Metrics
(Section A.4.a. in the 2/28/97 PBS; Attachment 2 in the 1997 Mid-year Performance Measures Update; Section C.1. in the FY 1999 Budget Update)

	Units	2005 Planned	2006 Planned	2007 Planned	2008 Planned	2009 Planned	2010 Planned	2011-2015 Planned
WASTE								
I. High Level Waste								
A. Storage - Inventory	M3							
B. Long-term Storage (Disposal Ready)	M3							
C. New Waste	M3							
D. Treatment	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							
II. Transuranic Waste								
A. Storage - Inventory	M3							
B. Long-term Storage (Disposal Ready)	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							
III. Mixed Low Level Waste								
A. Storage - Total Inventory	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							

Revised 2006 Plan PBS: Performance Measure Metrics

A.4. Performance Measure Metrics
(Section A.4.a. in the 2/28/97 PBS; Attachment 2 in the 1997 Mid-year Performance Measures Update; Section C.1. in the FY 1999 Budget Update)

	Units	2016-2020 Planned	2021-2025 Planned	2026-2030 Planned	2031-2035 Planned	2036-2040 Planned	2041-2045 Planned	2046-2050 Planned
WASTE								
I. High Level Waste								
A. Storage - Inventory	M3							
B. Long-term Storage (Disposal Ready)	M3							
C. New Waste	M3							
D. Treatment	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							
II. Transuranic Waste								
A. Storage - Inventory	M3							
B. Long-term Storage (Disposal Ready)	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							
III. Mixed Low Level Waste								
A. Storage - Total Inventory	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							

Revised 2006 Plan PBS: Performance Measure Metrics

A.4. Performance Measure Metrics
(Section A.4.a. in the 2/28/97 PBS; Attachment 2 in the 1997 Mid-year Performance Measures Update; Section C.1. in the FY 1999 Budget Update)

	Units	2051-2055 Planned	2056-2060 Planned	2061-2065 Planned	2066-2070 Planned	Date Issues
WASTE						
I. High Level Waste						
A. Storage - Inventory	M3					
B. Long-term Storage (Disposal Ready)	M3					
C. New Waste	M3					
D. Treatment	M3					
F. Disposal - Shipped to DOE Site	M3					
G. Volume Reduced	M3					
II. Transuranic Waste						
A. Storage - Inventory	M3					
B. Long-term Storage (Disposal Ready)	M3					
C. New Waste	M3					
D. Treatment	M3					
E. Disposal - On-site, Commercial	M3					
F. Disposal - Shipped to DOE Site	M3					
G. Volume Reduced	M3					
III. Mixed Low Level Waste						
A. Storage - Total Inventory	M3					
C. New Waste	M3					
D. Treatment	M3					
E. Disposal - On-site, Commercial	M3					
F. Disposal - Shipped to DOE Site	M3					
G. Volume Reduced	M3					

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	Prior to 1997	1997 Total Planned	1997 1st Half Planned	1997 2nd Half Planned	1997 1st Half Actual	1997 2nd Half Actual
IV. Low Level Waste							
A. Storage - Total Inventory	M3		0				
C. New Waste	M3		0				
D. Treatment	M3		0				
E. Disposal - On-site, Commercial	M3		0				
F. Disposal - Shipped to DOE Site	M3		0				
G. Volume Reduced	M3		0				
V. Hazardous Waste							
A. Storage - Total Inventory	M3		0				
C. New Waste	M3		0				
D. Treatment	M3		0				
E. Disposal - On-site, Commercial	M3		0				
G. Volume Reduced	M3		0				
VI. Sanitary Waste							
C. New Waste	M3		0				
E. Disposal - On-site, Commercial	M3		0				
VII. Special Case Waste							
THIS CATEGORY IS NO LONGER APPLICABLE							
VIII. 11e(2) Byproduct Waste							
A. Storage - Total Inventory	M3		0				
B. Long-term Storage (Disposal Ready)	M3		0				
C. New Waste	M3		0				
D. Treatment	M3		0				
E. Disposal - On-site, Commercial	M3		0				
F. Disposal - Shipped to DOE Site	M3		0				
G. Volume Reduced	M3		0				

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	1998 Planned	1999 Planned	2000 Planned	2001 Planned	2002 Planned	2003 Planned	2004 Planned
IV. Low Level Waste								
A. Storage - Total Inventory	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							
V. Hazardous Waste								
A. Storage - Total Inventory	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
G. Volume Reduced	M3							
VI. Sanitary Waste								
C. New Waste	M3							
E. Disposal - On-site, Commercial	M3							
VII. Special Case Waste								
THIS CATEGORY IS NO LONGER APPLICABLE								
VIII. 11e(2) Byproduct Waste								
A. Storage - Total Inventory	M3							
B. Long-term Storage (Disposal Ready)	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	2005 Planned	2006 Planned	2007 Planned	2008 Planned	2009 Planned	2010 Planned	2011-2015 Planned
IV. Low Level Waste								
A. Storage - Total Inventory	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							
V. Hazardous Waste								
A. Storage - Total Inventory	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
G. Volume Reduced	M3							
VI. Sanitary Waste								
C. New Waste	M3							
E. Disposal - On-site, Commercial	M3							
VII. Special Case Waste								
THIS CATEGORY IS NO LONGER APPLICABLE								
VIII. 11e(2) Byproduct Waste								
A. Storage - Total Inventory	M3							
B. Long-term Storage (Disposal Ready)	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	2016-2020 Planned	2021-2025 Planned	2026-2030 Planned	2031-2035 Planned	2036-2040 Planned	2041-2045 Planned	2046-2050 Planned
IV. Low Level Waste								
A. Storage - Total Inventory	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							
V. Hazardous Waste								
A. Storage - Total Inventory	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
G. Volume Reduced	M3							
VI. Sanitary Waste								
C. New Waste	M3							
E. Disposal - On-site, Commercial	M3							
VII. Special Case Waste								
THIS CATEGORY IS NO LONGER APPLICABLE								
VIII. 11e(2) Byproduct Waste								
A. Storage - Total Inventory	M3							
B. Long-term Storage (Disposal Ready)	M3							
C. New Waste	M3							
D. Treatment	M3							
E. Disposal - On-site, Commercial	M3							
F. Disposal - Shipped to DOE Site	M3							
G. Volume Reduced	M3							

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	2051-2055 Planned	2056-2060 Planned	2061-2065 Planned	2066-2070 Planned	Date Issues
IV. Low Level Waste						
A. Storage - Total Inventory	M3					
C. New Waste	M3					
D. Treatment	M3					
E. Disposal - On-site, Commercial	M3					
F. Disposal - Shipped to DOE Site	M3					
G. Volume Reduced	M3					
V. Hazardous Waste						
A. Storage - Total Inventory	M3					
C. New Waste	M3					
D. Treatment	M3					
E. Disposal - On-site, Commercial	M3					
G. Volume Reduced	M3					
VI. Sanitary Waste						
C. New Waste	M3					
E. Disposal - On-site, Commercial	M3					
VII. Special Case Waste						
THIS CATEGORY IS NO LONGER APPLICABLE						
VIII. 11e(2) Byproduct Waste						
A. Storage - Total Inventory	M3					
B. Long-term Storage (Disposal Ready)	M3					
C. New Waste	M3					
D. Treatment	M3					
E. Disposal - On-site, Commercial	M3					
F. Disposal - Shipped to DOE Site	M3					
G. Volume Reduced	M3					

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	Prior to 1997	1997 Total Planned	1997 1st Half Planned	1997 2nd Half Planned	1997 1st Half Actual	1997 2nd Half Actual
IX. Waste Water							
H. Discharged (Clean Water Act)	M3						
X. Waste Management Construction Costs							
NOT APPLICABLE FOR QUANTITY METRICS							
RELEASE SITES							
XI. Remedial Action							
A. Completed Assessments of Release Sites (count each release site)	NR	0	0			0	0
B. Completed Release Sites (count each release site)	NR		0			0	0
FACILITIES							
XII. Facilities Deactivation							
Mission Accomplishments							
A. Buildings Deactivated During Period	NB		0				
Ending Inventory							
B. Buildings Not Yet Deactivated	NB						
C. Buildings in Post-Deactivation Monitoring	NB						
XIII. Facilities Decommissioning							
A. Completed Assessments of Facilities (count each facility)	NF	0	0			0	0
B. Final Completion of Decommissioning (count each facility)	NF		0			0	0

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	1998 Planned	1999 Planned	2000 Planned	2001 Planned	2002 Planned	2003 Planned	2004 Planned
IX. Waste Water								
H. Discharged (Clean Water Act)	M3							
X. Waste Management Construction Costs								
NOT APPLICABLE FOR QUANTITY METRICS								
RELEASE SITES								
XI. Remedial Action								
A. Completed Assessments of Release Sites (count each release site)	NR	0	0	0	0	0	0	0
B. Completed Release Sites (count each release site)	NR	0	0	0	0	0	0	0
FACILITIES								
XII. Facilities Deactivation								
Mission Accomplishments								
A. Buildings Deactivated During Period	NB							
Ending Inventory								
B. Buildings Not Yet Deactivated	NB							
C. Buildings in Post-Deactivation Monitoring	NB							
XIII. Facilities Decommissioning								
A. Completed Assessments of Facilities (count each facility)	NF	0	0	0	0	0	0	0
B. Final Completion of Decommissioning (count each facility)	NF	0	0	0	0	0	0	0

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	2005 Planned	2006 Planned	2007 Planned	2008 Planned	2009 Planned	2010 Planned	2011-2015 Planned
IX. Waste Water								
H. Discharged (Clean Water Act)	M3							
X. Waste Management Construction Costs								
NOT APPLICABLE FOR QUANTITY METRICS								
RELEASE SITES								
XI. Remedial Action								
A. Completed Assessments of Release Sites (count each release site)	NR	0	0	0	0	0	0	0
B. Completed Release Sites (count each release site)	NR	0	0	0	0	0	0	0
FACILITIES								
XII. Facilities Deactivation								
Mission Accomplishments								
A. Buildings Deactivated During Period	NB							
Ending Inventory								
B. Buildings Not Yet Deactivated	NB							
C. Buildings in Post-Deactivation Monitoring	NB							
XIII. Facilities Decommissioning								
A. Completed Assessments of Facilities (count each facility)	NF	0	0	0	0	0	0	0
B. Final Completion of Decommissioning (count each facility)	NF	0	0	0	0	0	0	0

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	2016-2020 Planned	2021-2025 Planned	2026-2030 Planned	2031-2035 Planned	2036-2040 Planned	2041-2045 Planned	2046-2050 Planned
IX. Waste Water								
H. Discharged (Clean Water Act)	M3							
X. Waste Management Construction Costs								
NOT APPLICABLE FOR QUANTITY METRICS								
RELEASE SITES								
XI. Remedial Action								
A. Completed Assessments of Release Sites (count each release site)	NR	0	0	0	0	0	0	0
B. Completed Release Sites (count each release site)	NR	0	0	0	0	0	0	0
FACILITIES								
XII. Facilities Deactivation								
Mission Accomplishments								
A. Buildings Deactivated During Period	NB							
Ending Inventory								
B. Buildings Not Yet Deactivated	NB							
C. Buildings in Post-Deactivation Monitoring	NB							
XIII. Facilities Decommissioning								
A. Completed Assessments of Facilities (count each facility)	NF	0	0	0	0	0	0	0
B. Final Completion of Decommissioning (count each facility)	NF	0	0	0	0	0	0	0

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	2051-2055 Planned	2056-2060 Planned	2061-2065 Planned	2066-2070 Planned	Date Issues
IX. Waste Water						
H. Discharged (Clean Water Act)	M3					
X. Waste Management Construction Costs						
NOT APPLICABLE FOR QUANTITY METRICS						
RELEASE SITES						
XI. Remedial Action						
A. Completed Assessments of Release Sites (count each release site)	NR	0	0	0	0	0
B. Completed Release Sites (count each release site)	NR	0	0	0	0	0
FACILITIES						
XII. Facilities Deactivation						
Mission Accomplishments						
A. Buildings Deactivated During Period	NB					
Ending Inventory						
B. Buildings Not Yet Deactivated	NB					
C. Buildings in Post-Deactivation Monitoring	NB					
XIII. Facilities Decommissioning						
A. Completed Assessments of Facilities (count each facility)	NF	0	0	0	0	0
B. Final Completion of Decommissioning (count each facility)	NF	0	0	0	0	0

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	Prior to 1997	1997 Total Planned	1997 1st Half Planned	1997 2nd Half Planned	1997 1st Half Actual	1997 2nd Half Actual
MATERIALS							
XIV. Nuclear Materials							
Mission Accomplishments							
A. Material Stabilized During Period							
1. Plutonium			0				
2. Uranium			0				
3. Other Nuclear Material			0				
B. Material Made Disposition Ready During Period							
1. Plutonium			0				
2. Uranium			0				
3. Other Nuclear Material			0				
Ending Inventory							
C. Material in Stabilization Process, but Not Yet Stabilized							
1. Plutonium							
2. Uranium							
3. Other Nuclear Material							
D. Stable Material, Not Disposition Ready							
1. Plutonium							
2. Uranium							
3. Other Nuclear Material							
E. Material in Disposition Ready Storage							
1. Plutonium							
2. Uranium							
3. Other Nuclear Material							

Revised 2006 Plan PBS: Performance Measure Metrics

Units	1998 Planned	1999 Planned	2000 Planned	2001 Planned	2002 Planned	2003 Planned	2004 Planned

MATERIALS

XIV. Nuclear Materials

Mission Accomplishments

A. Material Stabilized During Period

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

B. Material Made Disposition Ready During Period

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

Ending Inventory

C. Material in Stabilization Process, but Not Yet Stabilized

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

D. Stable Material, Not Disposition Ready

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

E. Material in Disposition Ready Storage

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

Revised 2006 Plan PBS: Performance Measure Metrics

Units	2005 Planned	2006 Planned	2007 Planned	2008 Planned	2009 Planned	2010 Planned	2011-2015 Planned

MATERIALS

XIV. Nuclear Materials

Mission Accomplishments

A. Material Stabilized During Period

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

B. Material Made Disposition Ready During Period

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

Ending Inventory

C. Material in Stabilization Process, but Not Yet Stabilized

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

D. Stable Material, Not Disposition Ready

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

E. Material in Disposition Ready Storage

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

Revised 2006 Plan PBS: Performance Measure Metrics

Units	2016-2020 Planned	2021-2025 Planned	2026-2030 Planned	2031-2035 Planned	2036-2040 Planned	2041-2045 Planned	2046-2050 Planned

MATERIALS

XIV. Nuclear Materials

Mission Accomplishments

A. Material Stabilized During Period

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

B. Material Made Disposition Ready During Period

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

Ending Inventory

C. Material in Stabilization Process, but Not Yet Stabilized

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

D. Stable Material, Not Disposition Ready

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

E. Material in Disposition Ready Storage

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	2051-2055 Planned	2056-2060 Planned	2061-2065 Planned	2066-2070 Planned	Date Issues

MATERIALS

XIV. Nuclear Materials

Mission Accomplishments

A. Material Stabilized During Period

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

B. Material Made Disposition Ready During Period

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

Ending Inventory

C. Material in Stabilization Process, but Not Yet Stabilized

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

D. Stable Material, Not Disposition Ready

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

E. Material in Disposition Ready Storage

1. Plutonium	
2. Uranium	
3. Other Nuclear Material	

Revised 2006 Plan PBS: Performance Measure Metrics

	Units	Prior to 1997	1997 Total Planned	1997 1st Half Planned	1997 2nd Half Planned	1997 1st Half Actual	1997 2nd Half Actual
XV. Spent Nuclear Fuel							
Mission Accomplishments							
A. Fuel Stabilized During Period							
1. Metric Tons of Heavy Metal (MTHM)	MTHM		0				
2. Cubic Meters	M3		0				
B. Fuel Made Disposition Ready During Period							
1. Metric Tons of Heavy Metal	MTHM		0				
2. Cubic Meters	M3		0				
Ending Inventory							
C. Fuel in Stabilization Process, but Not Yet Stabilized							
1. Metric Tons of Heavy Metal	MTHM						
2. Cubic Meters	M3						
D. Stable Fuel, Not Disposition Ready							
1. Metric Tons of Heavy Metal	MTHM						
2. Cubic Meters	M3						
E. Fuel in Disposition Ready Storage							
1. Metric Tons of Heavy Metal	MTHM						
2. Cubic Meters	M3						

Revised 2006 Plan PBS: Performance Measure Metrics

Units	1998 Planned	1999 Planned	2000 Planned	2001 Planned	2002 Planned	2003 Planned	2004 Planned

XV. Spent Nuclear Fuel

Mission Accomplishments

A. Fuel Stabilized During Period

1. Metric Tons of Heavy Metal (MTHM)	MTHM
2. Cubic Meters	M3

B. Fuel Made Disposition Ready During Period

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

Ending Inventory

C. Fuel in Stabilization Process, but Not Yet Stabilized

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

D. Stable Fuel, Not Disposition Ready

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

E. Fuel in Disposition Ready Storage

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

Revised 2006 Plan PBS: Performance Measure Metrics

Units	2005 Planned	2006 Planned	2007 Planned	2008 Planned	2009 Planned	2010 Planned	2011-2015 Planned

XV. Spent Nuclear Fuel

Mission Accomplishments

A. Fuel Stabilized During Period

1. Metric Tons of Heavy Metal (MTHM)	MTHM
2. Cubic Meters	M3

B. Fuel Made Disposition Ready During Period

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

Ending Inventory

C. Fuel in Stabilization Process, but Not Yet Stabilized

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

D. Stable Fuel, Not Disposition Ready

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

E. Fuel in Disposition Ready Storage

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

Revised 2006 Plan PBS: Performance Measure Metrics

Units	2016-2020 Planned	2021-2025 Planned	2026-2030 Planned	2031-2035 Planned	2036-2040 Planned	2041-2045 Planned	2046-2050 Planned

XV. Spent Nuclear Fuel

Mission Accomplishments

A. Fuel Stabilized During Period

1. Metric Tons of Heavy Metal (MTHM)	MTHM
2. Cubic Meters	M3

B. Fuel Made Disposition Ready During Period

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

Ending Inventory

C. Fuel in Stabilization Process, but Not Yet Stabilized

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

D. Stable Fuel, Not Disposition Ready

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

E. Fuel in Disposition Ready Storage

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

Revised 2006 Plan PBS: Performance Measure Metrics

Units	2051-2055 Planned	2056-2060 Planned	2061-2065 Planned	2066-2070 Planned	Date Issues

XV. Spent Nuclear Fuel

Mission Accomplishments

A. Fuel Stabilized During Period

1. Metric Tons of Heavy Metal (MTHM)	MTHM
2. Cubic Meters	M3

B. Fuel Made Disposition Ready During Period

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

Ending Inventory

C. Fuel in Stabilization Process, but Not Yet Stabilized

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

D. Stable Fuel, Not Disposition Ready

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

E. Fuel in Disposition Ready Storage

1. Metric Tons of Heavy Metal	MTHM
2. Cubic Meters	M3

Revised 2006 Plan PBS: Release Sites and Facilities

A.5. Release Sites and Facilities

How many release site/facility rows do you need for this project?

Choose one (Note: Any data in rows beyond your selected range will be deleted)

1-42 | 43-111 | 112-249 | 250-502 | 503-755 | 756-1,000

Required Format: {R or F}

Geographic Site Code	RS ID	Change Flag	Release Site or Facility?	Field Code	Description

Revised 2006 Plan PBS: Release Sites and Facilities

A.5. Release Sites and Facilities

Geographic Site Code	RS ID	Planned Assessment Date Required Format: {example - 1999}	Actual Assessment Date Required Format: {example - 11/5/96}	Planned Completion Date Required Format: {example - 1999}	Actual Completion Date Required Format: {example - 11/5/96}	Assessment Date Issue	Completion Date Issue	No Action (Y/N)

Revised 2006 Plan PBS: Release Sites and Facilities

A.5. Release Sites and Facilities

Geographic Site Code	RS ID	Completion Status	Comments

Revised 2006 Plan PBS: Release Sites and Facilities

Required Format:
{R or F}

Geographic Site Code	RS ID	Change Flag	Release Site or Facility?	Field Code	Description

Revised 2006 Plan PBS: Release Sites and Facilities

Geographic Site Code	RS ID	Planned Assessment Date	Actual Assessment Date	Planned Completion Date	Actual Completion Date	Assessment Date Issue	Completion Date Issue	No Action (Y/N)
		Required Format: {example - 1999}	Required Format: {example - 11/5/96}	Required Format: {example - 1999}	Required Format: {example - 11/5/96}			

Revised 2006 Plan PBS: Release Sites and Facilities

Geographic Site Code	RS ID	Completion Status	Comments

Revised 2006 Plan PBS: Validation

A.6. Validation (Section C.2. in the 2/28/97 PBS)

A.6.1. Project Validated? (Y/ N)

A.6.2. Date Validated:

A.6.3. Validation Method:

The size and shape of the narrative box can be adjusted.

A.6.4. Technical Approach Reference Documents:

The size and shape of the narrative box can be adjusted.

A.6.5. Current Status of your Project Baseline:

The size and shape of the narrative box can be adjusted.

Revised 2006 Plan PBS: Validation

A.6.6. Is this PBS Consistent with your Site Baseline? (Y/ N)

A.6.7. If A.6.6. was answered No, why not?

The size and shape of the narrative box can be adjusted.

A.6.8. Future Validation Plans and Schedule

The size and shape of the narrative box can be adjusted.

A.6.9. Site Baseline Consistency

How consistent is the Site Baseline(s) with this PBS? Check the appropriate box.

	100% - PBS Fully Supported by Site Baseline(s)
	75% - PBS Well Supported by Site Baseline(s)
	50% - PBS Mostly Supported by Site Baseline(s)
	25% or less- PBS Not Well Supported by Site Baseline(s)

A.6.10. Project End State Definition

How certain is the Project End State for this PBS? Check the appropriate box.

	100% - Agreement with Stakeholders
	75% - Project End State is Well Defined
	50% - Project End State is Mostly Defined
	25% or less- PBS Not Well Supported by Site Baseline(s)

Revised 2006 Plan PBS: Validation

A.7. - Project Assumptions (Section C.3. in the 2/28/97 PBS)

How many assumptions apply to this project?

1-14 15-30

Number	Assumption
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	

B.1. Budget by Appropriations Account (in thousands)

Appropriations Account	1997 BA	1998 BA	1999 BA	2000 BA
Defense Environmental Management				
Energy Supply, Research and Development				
Uranium Enrichment Decontamination and Decommissioning Fund				
Total	0	0	0	0

Revised 2006 Plan PBS: Risk

C.1. Risk (Section E.1. in the FY 1999 Budget Update)

C.1.1. Risk Data

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Public										
Worker										
Environment										

	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040
Public										
Worker										
Environment										

	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
Public						
Worker						
Environment						

C.1.2. Choose either the public, worker, or the environment as the End-State Risk driver: (P, W, or E):

C.1.3. Choose either the public, worker, or the environment as the Interim Risk driver: (P, W, or E):

C.1.4. If upon completion of this project, another project manages its hazards, indicate that project ID:

C.1.5. Has the risk evaluation been internally peer reviewed by ES&H professionals? (Y/N)

C.1.6. Has the risk evaluation been externally peer reviewed? (Y/N)

C.1.7. Have regulators, stakeholders, & Tribal Nations been involved in validating the project risk evaluations? (Y/N)

Direct Safety & Health and Risk Narratives

D.1. - Direct Safety & Health and Risk Narratives

(Indirect Safety & Health Narratives are located in the Site Summary Level)
(Section D.1.1. in the FY 1999 Budget Update has been replaced by narratives below and in the Site Summary Level and is no longer maintained.)

D.1.2. Direct S&H Narrative - Hazards:

The size and shape of the narrative box can be adjusted.

D.1.3. Direct S&H Narrative - Controls:

The size and shape of the narrative box can be adjusted.

D.1.4. Direct S&H Narrative - Work Performance:

The size and shape of the narrative box can be adjusted.

Direct Safety & Health and Risk Narratives

).1.5. Direct S&H Narrative - Feedback and Continuous Improvement:

The size and shape of the narrative box can be adjusted.

D.1.6. Risk Evaluation Narrative (Indicate incremental risk reduction metric and references to supporting risk and review information):

The size and shape of the narrative box can be adjusted.

FY 1999 Budget Update: Safety & Health Direct Cost and FTE Data

D.2. - Safety and Health Direct Data

(Section D.2.1. in the FY 1999 Budget Update has been moved to Section A.2.17.)

D.2.2. Safety and Health Cost Reporting - Direct Costs (All dollars in thousands)

	1997	1998	1999	2000
A. Emergency Preparedness				
B. Fire Protection				
C. Industrial Hygiene				
D. Industrial Safety				
E. Occupational Medicine				
F. Nuclear Safety				
G. Radiation Protection				
H. Transportation Safety				
I. Management Oversight				
Total S&H Direct Costs	0	0	0	0
Total Baseline Costs (from A.2.15.)	0	0	0	0
% S&H Direct Costs (calculated)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

(Section D.2.3. in the FY 1999 Budget Update has been moved to the Site Summary Level)
(Section D.2.4. in the FY 1999 Budget Update has been removed)

D.2.5. Safety and Health FTE Reporting - Direct Contractor FTEs

	1997	1998	1999	2000
A. Emergency Preparedness				
B. Fire Protection				
C. Industrial Hygiene				
D. Industrial Safety				
E. Occupational Medicine				
F. Nuclear Safety				
G. Radiation Protection				
H. Transportation Safety				
I. Management Oversight				
Total Direct Contractor FTEs	0.00	0.00	0.00	0.00

(Section D.2.6. in the FY 1999 Budget Update has been moved to the Site Summary Level)

Revised 2006 Plan PBS: Enhanced Performance Measures

Enhanced Performance Measures

E.1. Project Estimates (All dollars in thousands)

E.1.1. Current Estimated Lifecycle Cost of Project: 0

E.1.2. Previously Estimated Lifecycle Cost of Project: 0

E.1.3. Projected Cost for FY 97: 0

E.1.4. Projected % Work Completed by End of FY 98: [Assuming 0% was complete on 10/1/96]

E.1.5. Current Projected End Date of Project: Jan-00 ["Jan-00" is default value if the planned project completion milestone date is blank]

E.1.6. Previously Projected End Date of Project:

E.2. Performance for FY 1997 (All dollars in thousands)

E.2.1. Actual Cost for FY 97: 0

E.2.2. Actual % Work Completed to Date: [Assuming 0% was complete on 10/1/96]

E.3. Comparing Baseline to the Actuals (All dollars in thousands)

.1. Cost Deltas

	Change	% Difference
Diff. Between Actual and Projected Cost for FY 97:	0	#DIV/0!
Change in Estimated Lifecycle Cost of Project:	0	#DIV/0!

E.3.2. Change in % Work Completed: [Empty until end of FY 1998]

E.4. Enhanced Performance Categorization Process

	FY 1997		Lifecycle	
Change Type	Applicable? (Y/N)	If Yes, Why?	Applicable? (Y/N)	If Yes, Why?
End State				
Scope				
End Date (Acceleration/Deferral)				

Revised 2006 Plan PBS: Enhanced Performance Measures

5. Categorizing Sources of Enhanced Performance

If enhanced performance (cost avoidance, scope deletion, or accelerated schedule) was indicated in E.4., provide the % of total change in cost next to the categories that best represent the sources of enhanced performance:

	FY 1997	Lifecycle
Use of new technologies or techniques		
Streamlined process		
Resequencing of projects (mortgage reduction)		
Privatization		
Innovative contracting		
Pollution prevention		
Site activity integration		
Site support cost changes		
Total % (calculated)	0%	0%

E.6. Total Calculated Enhanced Performance (All dollars in thousands)

FY 1997: [ ]

Lifecycle Projected: [ ]

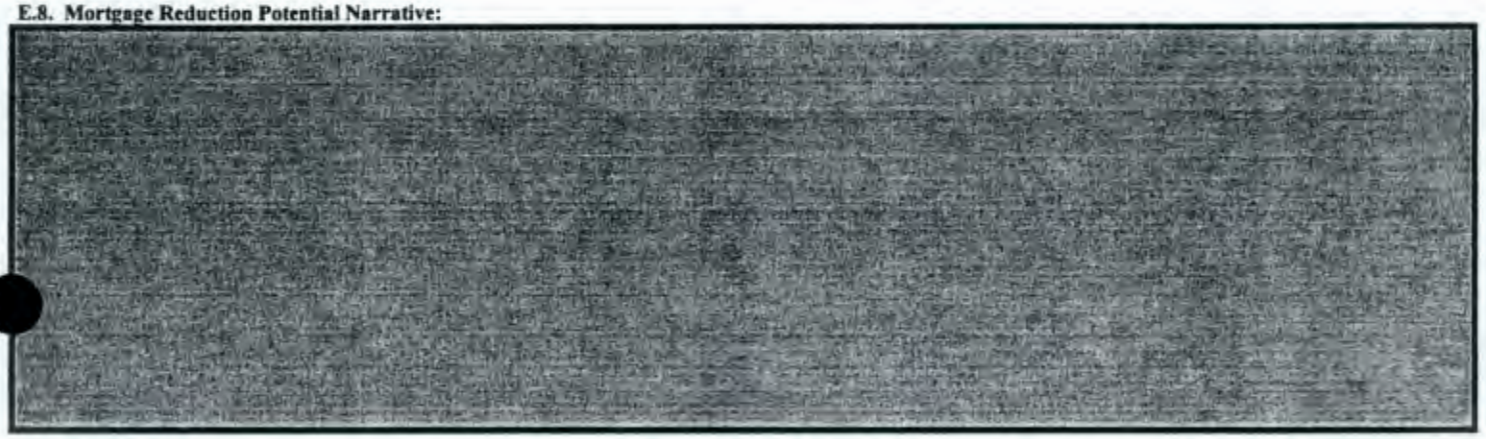
E.7. Enhanced Performance Narratives

E.7.1. Cost Avoidance Narrative (if applicable):

E.7.2. Scope Deletion Narrative (if applicable):

E.3. Accelerated Schedule Narrative (if applicable):

E.8. Mortgage Reduction Potential Narrative:



A.1. PBS - Project Identification/Header Information

The Project Identification/Header Information provides basic project information used for data management and tracking. This information is used to maintain an official project list and provide for accountability.

A.1.1. Project Title

Provide the formal project title used by the site.

Example:

Deactivation of Building #44

A.1.2. Unique Site-Designated Project ID

Provide an identification number for the project in a format that includes identification of the Operations/Field Office and the project identification code used by the site.

Example:

ID-HLW-001

A.1.3. Site/Group of Sites (LOCKED)

This locked field identifies all of the sites involved with the project and does not require any updates. Please verify the information provided. Appropriate abbreviations for individual sites and Operations/Field Offices are provided in Attachment C. For projects at the Operations/Field Office level use the 2-letter Operations/Field Office code followed by an "OO." The following example identifies a project involving Los Alamos National Laboratory and Fernald:

Example:

LANL, FEMP

A.1.4. Operations/Field Office (LOCKED)

This locked field identifies the Operations/Field Office retaining overall responsibility for the project and does not require any data updates. Please review the information provided.

Example:

RLOO

A.1.5. DOE Project Manager

Provide the name of the DOE federal employee actually assigned as the Project Manager. This should not be the site manager.

Example:

John Doe

A.1.6. DOE Project Manager Phone Number
Provide the phone number for the DOE Project Manager.

Example:

803-725-5590

A.1.7. DOE Project Manager FAX Number
Provide the FAX number of the DOE Project Manager:

Example:

803-725-2016

A.1.8. DOE Project Manager e-mail Address (Internet Format)
Provide the e-mail address of the DOE Project Manager. Use the Internet format.

Example:

john.doe@doe.gov

A.1.9. Contractor Project Manager
Provide the name of the contractor Project Manager.

Example:

John Doe

A.1.10. Contractor Project Manager Phone Number
Provide the phone number for the contractor Project Manager.

Example:

803-725-5590

A.1.11. Contractor Project Manager FAX Number
Provide the FAX number of the contractor Project Manager:

Example:

803-725-2016

A.1.12. Contractor Project Manager e-mail Address (Internet Format)
Provide the e-mail address of the contractor Project Manager. Use the Internet format.

Example:

john.doe@doe.gov

A.1.13. Unique Project ID (LOCKED)
This cell contains the unique project identification code used by Headquarters to track projects. This field is locked and should not be modified.

Example:

ID-HLW-001

A.1.14. Program Element (LOCKED)
Each PBS is denoted as belonging to one program element; either Waste Management (WM), Environmental Restoration (ER), Technology Development (TD), Nuclear Materials (NM), Site Operations (SO), Headquarters (HQ) or Program Direction (PD). This field has been seeded and locked at Headquarters and requires no data entry.

A.1.15. Is this a Pure, Operational, or Privatization Project?
Click field and select most appropriate identification, **pure (P), operational (O),** or **privatization (R)** from the pick list. Typically, pure projects are specialized with respect to nature and duration (e.g., a highly specialized Environmental Restoration project), while operational projects involve treatment or processing activities in which work is repeated year after year (e.g., a level of effort storage or treatment activity). Default value equals **P**.

A.1.16. Is this a High Visibility Project (Y/N)?
Indicate whether the project is a high visibility project by choosing either **Y**, for yes, or **N**, for no, from the pick list. A list of high visibility projects is provided in Attachment I. Default value equals **N**.

A.1.17. DOE Project Manager's Signature/Date
The DOE project manager is requested to print the first page of the PBS and sign it.

A.1.18. Contractor Project Manager's Signature/Date
The contractor project manager is requested to sign the same page that the DOE project manager printed and signed and return it to Headquarters.

A.2. Technical and Scope Narratives

The Technical and Scope Narratives section provides an opportunity to discuss the project focusing on specific elements where more detailed information is needed for further project planning and to ensure compliance with certain regulations. All of the fields provide scope baseline and information needed for planning and budgeting. Information in this section will be used to prepare the budget.

The narrative appropriate for each topic should be entered into the appropriate text box.

A.2.1. Purpose of Project

Provide a short, timeless description of the project that explains what the project is intended to do, why the project is being undertaken, and what stakeholder and Tribal Nations concerns are being addressed. This should include a discussion of any significant safety & health vulnerabilities which will be eliminated by this project or any significant vulnerabilities which may be incurred in order to complete this project. If this is a follow-on EM project, indicate the name and number of the preceding project.

Example:

Predecessor Project: None

During the cold war period, Building #44 was used as a machine shop to fabricate plutonium metal stock into various shapes needed to support the nuclear weapons complex. This process produced significant amounts of plutonium contaminated lubricants, shavings, and secondary residues that were temporarily stored in containers and recycled periodically back into the plutonium fabrication process. When the production process was halted in 1988, Building #44 was shut down and all contaminated materials remained in the temporary locations and containers. Many of these containers were not designed for long-term storage of plutonium materials.

Deactivation of Building #44 will decrease human and environmental risk by repackaging plutonium residue into appropriate containers and decontaminating the building to levels of radioactive contamination consistent with its intended long-term deactivation status. The project has four major objectives:

a. Repackage all plutonium contaminated residue materials into long-term containers suitable for transportation and storage at the Waste Isolation Pilot Plant (WIPP).
b. Store the residue containers in Special Materials Vault #4 in a road ready condition until shipment to WIPP can occur.
c. Decontaminate the internal spaces of Building #44 to levels consistent with the building's intended long-term deactivation status.
d. Deactivate all systems except those required for monitoring the isolated building during its long-term deactivation condition.

This project will be followed by a decontamination and dismantlement project and a land remediation project summarized in Section A.2.6.

A.2.2. Definition of Scope

Provide a description of the overall scope of the project. The objective of this section is to identify the key work scope activities on which the dollars are being spent. The information in this field should complement, not duplicate, the information in the technical approach (Section A.2.3.) and should be consistent with the information presented in the Performance Metrics (Section A.4.).

Example:

> The deactivation of Building #44 project will involve:
>
> a. Repackaging 3,000 containers of plutonium-contaminated solid residue.
> b. Stabilizing 2,000 gallons of plutonium-contaminated lubricants (i.e., machine oil used when turning material on a lathe).
> c. Decontaminating approximately 15,000 square feet of floor space contaminated with plutonium residue.
> d. Deactivating approximately 2,500 feet of contaminated piping.

A.2.3. Technical Approach

Briefly describe the technical approach for the project. For example, if the project involves waste/material treatment, storage, or disposal, identify the treatment, storage, or disposal technology to be employed (e.g., incineration, stabilization, shallow land burial, container, tank, etc.). For projects involving remediation or deactivation, describe the overall approach. Where possible, identify any STCG Needs (Title and ID #) associated with this PBS, and any opportunities for the deployment of emerging technologies, regardless of the source of the technology. STCG Need and technology deployment information should be consistent with data provided in Tables O.9.1 and O.9.2. Also identify any interdependency with other national programs (e.g., transportation).

Example:

> Repackaging Plutonium Residue: X-ray processing will be used to verify the contents of the existing temporary storage containers. If no unexpected material is identified, the container will remain closed and will be inserted into a WIPP certified container. If the X-ray results identify unexpected items, the temporary container will be opened and the contents will be surveyed. Individual items will be repackaged into WIPP certified containers.
>
> Significant cost reduction and worker risk reduction can be achieved if the robotics technology technical development project is successfully completed prior to June 1998.
>
> Deactivation of Building #44: Individual fluid systems will be drained, flushed, and isolated. Use of the site's Lock and Tag system coupled with the installation of blank flanges at key places in the system will prevent unauthorized operation of isolated piping, electrical, and ventilation systems. Decontamination of exterior vertical and horizontal surfaces will be accomplished with high efficiency vacuuming and water flushing. Areas with contamination remaining will be isolated from personnel access, or a surface fixative (e.g., paint) will be applied to prevent the spread of contamination.

A.2.4. Project Status in FY 2006

Identify the key work scope activities from Section A.2.2 anticipated to be accomplished by the end of FY 2006.

Example:

> The Deactivation of Building #44 project will be completed in July 2009; therefore, the project end state will not be achieved prior to FY 2006. Work to be completed by 2006 will include:
>
> a. All plutonium residue will be packaged in a WIPP road ready condition in containers that meet WIPP acceptance criteria.
> b. Building #44 will be decontaminated to a contamination level that is consistent with a long-term deactivation status.

A.2.5. Post 2006 Project Scope

Identify the key work scope activities from Section A.2.2 that are scheduled to occur after FY 2006.

Example:

> Building #44 systems will be deactivated except those systems required for long-term, remote monitoring of the deactivated facility. When deactivation is complete in 2007, Building #44 will require worker entry once every three months to verify the operational integrity of all remote monitoring systems and instrumentation. This quarterly post-deactivation monitoring will be conducted until the decommissioning project begins in FY 2009.

A.2.6. Project End State

Identify whether additional projects will be required to meet the EM site end state. Provide links to other projects and brief information on sequencing. This field must address end states for all activities performed in the project, including land, groundwater, facilities, waste, nuclear materials, spent fuel, and high level waste.

The following are guidelines for defining end states for activities performed in a project. Some PBS projects address more than one type of activity. The PBS must address end states for all activities performed in the project:

- Land - Identify pertinent information including, but not limited to: a) whether contamination is contained, removed, or consolidated; b) cleanup levels; c) remaining treatment, storage, or disposal facilities; and d) planned land use (e.g., greenfield, reindustrialization). If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements.

- Groundwater - Identify cleanup levels, long-term active remediation assumptions, restrictions (if applicable), and the length of time that long-term monitoring will be required.

- Facilities - Describe the final end state for legacy facilities and EM storage/treatment/disposal facilities. Closure requirements for storage and disposal facilities and ongoing LTS&M requirements need to be stated. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements. For legacy facilities identify pertinent information including, but not limited to: a) the planned end states of buildings/facilities which compose the project [entombment (either permanent or temporary), decontaminated, demolished, reused (indicate EM, DOE, or other reuse intended), etc.]; b) the condition and location of facilities upon transfer; and c) types, amounts, and location of treatment, storage, and disposal of residuals. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements.

For the following categories, it is assumed that the end state is consistent with the definition of "complete" in Section 3.0. Consistent with that definition, elaborate further on the status of waste, materials, and spent fuel as discussed below:

- Waste - Identify the type, quantity, and resulting location of waste that is generated, stored, treated, and/or disposed. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements. If this is not the ultimate end state, identify when and/or where it will be transferred for treatment, disposal, etc.

- Nuclear Materials - Identify pertinent information including, but not limited to: a) type of material; b) whether stabilized materials will be ready for disposal or transferred to on-site/off-site long-term storage; and c) the condition and location of materials upon transfer. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements. If this is not the ultimate end state, identify when and/or where it will be transferred for stabilization, treatment, disposal, etc.

- Spent Fuel - Identify pertinent information including, but not limited to: a) whether SNF will be ready for disposal or transferred to on-site/off-site long-term storage; and b) the condition and location of materials upon transfer. If applicable, identify the length of time that monitoring and S&M will be required in addition to any special requirements. If this is not the ultimate end state, identify when and/or where it will be transferred for stabilization, treatment, disposal, etc.

- High Level Waste - Identify assumptions with respect to tank residuals and cleanup levels. Discuss whether tanks are closed in place or removed.

It is expected that for a limited number of projects, the ultimate end state of a parcel of land, a facility, a material, or a waste may be currently unknown. If this is the case, the assumptions concerning any work scope performed beyond surveillance and maintenance should be documented. If the end state has not been agreed to with regulators and stakeholders and Tribal Nations, describe the process that will be used to establish an agreed to end state and include the target date for end-state agreement.

Example:

> This project (PBS #XX) is composed of two phases and is a follow on to PBS #WW which resulted in the deactivation of Building #44 with TRU waste packaged and stored (in Building #10) for shipment to the WIPP. Building #44 will meet the EM site end state for reindustrialization after the two additional phases are accomplished. Project #XX- Phase 1 will fully decontaminate and dismantle the building. The resulting mixed and low-level waste will be packaged and shipped to Site AA for disposal. Salvageable metal will be shipped to Company BB for recycle. Building rubble will be hauled to the local industrial landfill for disposal. PBS #XX - Phase 2 will remediate the associated land (about 2.5 acres) in the immediate vicinity of Building #44 to meet the land-use classification standard of "Industrial With Unrestricted Access." In accomplishing Phase 2, about 50% of the contaminated soil will be removed and disposed of at Site AA, approximately 25% of the soil will be treated on site via soil washing with waste residuals disposed at Site AA and the treated soil placed back on site, and the remaining 25% of contaminated soil will be left in place because the level of contamination is acceptable for industrial land use. The remediated land will be transferred/sold to the state and local governments. No post-remedial action institutional controls will be required. This end state has been agreed to with the local regulator, stakeholders, and Tribal Nations.

A.2.7. General Narrative

Provide any additional key information relevant to the project that is not covered in other narratives. The narrative field should be limited to 10 lines.

Example:

> The deactivation of Building #44 is a highly visible project with the South Carolina state government. This will be the first building to be fully decontaminated and dismantled at the Savannah River Site. Discussions with the state government have placed high interest in the final remediation of the building site and the eventual construction of an industrial park for future commercial use. The Governor and Senator Thurmond have made public statements about the future jobs that will be available at this industrial complex to the citizens of South Carolina and have already proposed naming the future site the "Strom Thurmond Industrial Park."

A.2.8. Cost Baseline Narrative

This section is provided to allow for any explanation needed for baseline cost estimates. It should also include information about major assumptions which affect the cost estimate, such as amounts for contingency.

Example:

> Contingency of 10% was used. The cost estimate is based upon Activity-Based Cost Estimating (ABC).

A.2.9. Discuss How NEPA will be or has been Addressed

For each activity encompassed by the project, discuss the strategy for ensuring adequate and timely compliance with NEPA. In developing your NEPA strategy, you should consult with your NEPA Compliance Officer and the Office of Chief Counsel. For unusual circumstances, you should also consult with the EM NEPA Compliance Officer and/or the Office of Environment, Safety and Health of NEPA Policy and Assistance. For definite, near-term proposals, you should identify whether these proposals have already been reviewed under NEPA and, if so, whether these reviews are sufficient for the proposal to be implemented.

A.2.10. 1997 Actual Accomplishments

This narrative should focus specifically on FY 1997 accomplishments and how they are directly related to end-state achievement. The information should be consistent with that reported in the year-end Quarterly Management Review.

A.2.11. 1998 Planned Accomplishments

Describe projected FY 1998 accomplishments as accurately as possible. This section should clearly identify the progress that will be made toward the 2006 Plan end state during this budget year. This field will be updated on March 15, 1998 if budget targets in late December differ significantly from targets used to formulate data submitted on November 26, 1997.

A.2.12. 1999 Planned Accomplishments

Assuming FY 1998 projected accomplishments are executed as planned, identify specific FY 1999 planned accomplishments. Also, Project Managers should clarify which FY 1999 accomplishments are directly tied to, or contingent upon the completion of FY 1998 Accomplishments as stated in A.2.11. This

section should clearly identify the progress that will be made toward the 2006 Plan end state during this budget year. This field will be updated on March 15, 1998 if budget targets in late December differ significantly from targets used to formulate data submitted on November 26, 1997.

A.2.13. 2000 Planned Accomplishments

Assuming FY 1998 and FY 1999 projected accomplishments are executed as planned, identify specific FY 2000 planned accomplishments. Also, Project Managers should clarify which FY 2000 accomplishments are directly tied to, or contingent upon the completion of FY 1999 Accomplishments as stated in A.2.11. This section should clearly identify the progress that will be made toward the 2006 Plan end state during this budget year. This field will be updated on March 15, 1998 if budget targets in late December differ significantly from targets used to formulate data submitted on November 26, 1997.

Baseline and Life-cycle Costs

This section provides the total baseline costs for the project and life-cycle costs by function. This information is needed to perform high-level analyses of project costs over time relative to baseline estimates. It is also the basis for measuring enhanced performance

A.2.14. Baseline Cost Summary

These are calculated fields. Do not enter data. Costs are automatically summarized from Section A.2.15, indicating the total project cost subtotal for FY 1997 through FY 2006, the project cost subtotal for FY 2007 through completion; and the Total Project Cost (TPC) for FY 1997 through completion.

A.2.15. Baseline Costs

This table collects baseline cost data for the project for the life cycle of the project. Baselines should be constrained by the likely funding targets. Report all planned dollars in thousands. Please complete the table in accordance with the following instructions:

Original and Current Cost Baseline:

Date Submitted

Under "Date Submitted" for Current Cost Baseline, enter the date that this PBS is to be submitted to Headquarters. Dates should be entered with two digits each for the month and day, and a four-digit year. The year will display as a two-digit number in the spreadsheet, but in order to ensure accurate reporting, please enter the year as a four-digit number (i.e., "1997")

Example:

Current Cost Baseline	01/08/1996

Baseline Cost Data

The "Original" baseline figures are seeded from the original data submission of February 28, 1997 and are locked. The row for "Current Baseline Cost" should be filled out with the current annual site baseline for this project, developed in accordance with Section 7.0 of the front section of this guidance. Each column should be completed in the following way:

1997-2006 Total

This is a calculated field comprised of the 1997 planned cost and the annual estimates through FY 2006. Do not enter data.

2007 - Completion Total

This is a calculated field comprised of the annual estimates for FY 2007 through project completion. Do not enter data.

Grand Total

This is a calculated field comprised of the total cost of the project from FY 1997 through completion. Do not enter data.

1997 Planned and Actual Cost

For FY 1997, provide the planned and **actual costs** for the current cost baseline. The planned costs should not deviate significantly from those provided on February 28, 1997.

1998 - 2010 Annual Estimates

Enter the estimated future baseline costs of the project on an annual basis from 1998 through 2010. Costs should be in current year dollars assuming an annual escalation rate of 2.7%.

Example:

1998	1999	2000	2001	2002	2003	2004	2005	2006
2872	2034	930	1062	1638	2454	1923	1544	1264

2007	2008	2009	2010
2324	2234	139	1442

Post-2010 Estimates

Enter the estimated projected costs of the project for the years 2011 and beyond in five-year blocs, as provided, until project completion. Costs should be in current year dollars assuming an annual escalation rate of 2.7%.

At the bottom of this table, the spreadsheet will automatically calculate for each year (using the assumed escalation rate of 2.7%) the annual baseline cost in current year dollars. Do not enter any data into this row as it is locked and calculated. De-escalation for five year blocks will assume that costs are equally distributed over the five year period.

The next section of Table A.2.15. requires an annual baseline cost breakout of Storage, S&M, Assessment, and Cleanup costs. These costs should be entered in thousands of current year dollars as a subset of the annual baseline cost entered above for the project, **not considered additive to the baseline**. Within this table, provide the total estimated costs of accomplishing the work scope associated with each data element: Storage, Assessment, Cleanup, and S&M, in accordance with the instructions for each column provided above. Definitions for these four categories are provided below and are fully clarified in Attachment H:

Storage: Include the following cost categories when calculating storage (See Attachment H for complete definitions):

- high-level waste storage
- transuranic waste storage
- mixed low-level waste storage
- low-level waste storage

Assessment: Assessment refers to the assessment of release sites prior to remediation and the assessment of facilities prior to decommissioning. See Attachment H for complete definitions.

Cleanup: Cleanup refers to the remediation of release sites and the decommissioning of facilities. See Attachment H for a complete definition.

S&M: This category encompasses ALL S&M activities performed at a site. Include the following categories when calculating S&M (see Attachment H for complete definitions):

- pre-decommissioning S&M
- facilities deactivation S&M
- nuclear materials stabilization S&M
- spent nuclear fuel stabilization S&M
- long-term monitoring (nuclear materials, spent nuclear fuel, facilities)
- post-remediation long-term S&M

A.2.16. Non-EM Costs Included in the Cost Baseline

There are cases where a cost baseline may include costs that are not EM costs. These may include situations where costs will be transferred back to the generator but are still in the baseline (e.g., newly generated waste costs) or another party shares a portion of the overall baseline cost (like the U.S. Army or a State).

This section should be used to indicate any non-EM costs in the cost baseline (Section A.2.15.). Please enter the fraction of EM and non-EM costs, if any, for each year (or multi-year bloc) in this table. The number entered will appear as a percentage (e.g., 45% should be entered as .45). A default value of 100% for EM costs has already been entered in the table. This value can be changed if non-EM costs are applicable. The total for each year (or multi-year block) is automatically calculated and should always equal 100%. Up to three non-EM organizations can be selected from the pick list for a given project. These can be other DOE organizations (e.g., Defense Program, Nuclear Energy) or non-DOE organizations (e.g., U.S. Army, State).

A.2.17. Related Projects at the Same Site or Operations/Field Office

How many projects are related to this project at the same site or Operations/Field Office?

Select from the options listed the number of rows needed to record the project information. Choose only one. Any additional rows without data will be deleted. Data in rows beyond selected range will be deleted.

Unique Site-Designated Project ID – Relation to this Project

Identify any related projects at this or other sites within your Operations/Field Office and describe the relationship. Identify the related project via unique site-designated project ID selected from the pick list.

Example:

Unique Site-Designated Project ID	Relation to this Project
SR-001-13	Follow-on project
SR-008-17	Follow-on project

A.2.18. Operations/Field Offices with Activities Related to this Project

Identify any needs from sites under other Operations/Field Offices that are key to successful execution of the project and describe, if applicable, the benefits this project may provide to other sites. Both the Operations/Field Office and the unique site designated project ID should be chosen from the respective pick lists.

Example:

Operations/Field Office Name	Unique Site Designated Project ID	Relation to this Project
RF		RF is using the Storage Container X-Ray Machine and is scheduled to transfer the unit to SR in March 1997.

A.2.19. Drivers

For each driver that applies to the project, put an X in the appropriate box. Multiple drivers may be selected.

Example:

CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
X						X	

A.2.20. Is this project A-106 compliant? (Y/N)

Select **Y**, for yes, or **N**, for no, from the pick list to indicate whether this project is a FEDPLAN (formerly A-106 Plan) activity. The annual FEDPLAN Report is required by Executive Order 12088 (formerly known as A-106); reporting requirements are defined by the Office of Management and Budget (OMB). Generally, Core and Compliance environmental activities are likely to be FEDPLAN items. Default value equals **Y**.

A.3. Schedule Milestones

The Schedule Milestones section provides an opportunity to identify critical project milestones, forecast and record their completion, and provide explanatory comments regarding their status. This information is needed to perform critical path and sequencing analyses, monitor enforceable agreement milestones, and to generate a means of tracking project performance relative to established milestones.

Milestones, in this case, are defined as those high-level life-cycle project events whose critical nature requires visibility at all levels of EM management. Milestones from compliance or other agreements should be identified. Milestones should accurately identify projected points in time that coincide with the completion of incremental steps or parts of the work until the overall project is completed. **All projects must, as a minimum, have a start project milestone, a complete project milestone, and a LTS&M completion milestone (if applicable), and all significant Enforceable Agreement (EA) (e.g., submit draft ROD, start construction, etc.) and DNFSB milestones must be included.** You are not required to report minor milestones, such as routine reporting requirements and release site/facility completion dates, even though the activity may be an enforceable provision in a compliance agreement.

How many milestone rows do you need for this project?
Select from the options listed the number of rows needed to record milestone information. Choose only one. Any additional rows without data will be deleted. Data in rows beyond selected range will be deleted.

Milestone/Activity
Provide a short, descriptive title for each milestone. Typically, these should begin with an action verb (e.g., start, begin, complete, submit, etc.).

Example:

Start Building #44 Deactivation

Field Milestone Code
Provide a milestone identifier; generally this should be the project identifier followed by a dash and a sequential number within the project.

Example:

AL-003-13

Planned Month and Year
Provide the current baselined milestone completion date (i.e., month and year) of planned completion. Enter the year as a 4-digit number, i.e., 01/1997 for January 1997.

Example:

01/1997

Forecast Month and Year
Not required at this time. [In the future you will be asked to provide the expected milestone completion date, which may differ from the baseline planned date.]

Actual Month and Year
Not required at this time. [In the future you will provide the actual milestone completion date.]

Status Indicator
If the milestone has been canceled, enter C. Otherwise, leave this box blank.

Example:

C

EA (Y/N)
Enter **Y** or **N** to indicate whether the milestone is part of an enforceable agreement. It is not necessary to identify minor milestones, such as routine reporting requirements and release site/facility completion dates, even though the activity may be an enforceable provision in a compliance agreement.

Example:

Y

DNFSB (Y/N)
Enter **Y** or **N** along with the recommendation number, if the milestone is a DNFSB requirement (e.g., Y 94-1 would be the entry for milestones required by DNFSB recommendation 94-1).

Example:

Y94-1

EM-1 or S-1 (Y/N)
Enter **Y** or **N** to indicate whether an EM-1 or S-1 decision is required.

Intersite (Y/N)
Enter **Y** or **N** to indicate whether this milestone is a decision that affects other sites.

HQ Change Control (Y/N)
Enter **Y** if this is a milestone within a high visibility project (see Attachment I) that will be subject to Headquarters change approval if the date changes by + or - one year.

Management Commitments (Y/N)
Enter **Y** if this milestone is being proposed as an FY 1998 Management Commitment. These are subject to Headquarters/Field concurrence. The FY 1998 EM Management Commitments will be derived primarily from the High Visibility Projects (see Attachment I). Management Commitments can also be selected milestones from other projects. Further explanation of Management Commitments can be found in Section 9.4 of the front section of the Draft National 2006 Plan guidance.

Key Decision (Y/N)
Enter **Y** if this milestone reflects a major decision point for the project (e.g., Record of Decision, NEPA decision, selection of technology, decision on end state, etc.)

A.4. Performance Measure Metrics

> The information in this section provides data needed for performance measurement for many high-visibility projects (budget, Strategic Plan, GPRA, etc.). The data are also useful for long-term planning and for interim evaluations of project performance. This general progress tracking will enable improved project planning to ensure the attainment of life-cycle goals.

This section includes instructions for reporting life-cycle planned quantities for the data elements that support EM's corporate performance measures. EM's corporate measures focus on the program's mission and goals, and will enable EM to clearly show the value of its program in objective, quantifiable terms.

- Waste quantities and nuclear materials quantities will be maintained in this table for FY 1997, but will be derived at Headquarters from the consolidated PBS quantities table for FY 1998 through the remainder of the life -cycle.
- Release sites and facilities performance measures data will be collected in Table A.5 (see below) and presented as locked, calculated fields in Table A.4.
- Facility deactivation quantities will be collected in this table for the life cycle.

FOR ALL PERFORMANCE MEASURE CATEGORIES (except release sites and facility decommissioning):

Units
This field is locked for all categories other than Materials. For Materials choose either KG (kilograms), % (percentage), or NI (number of items) from the pick list to indicate the measurement form of the reported data.

Prior to 1997
Field completed only for selected metrics.

- For the Facilities Deactivation measures, enter the FY 1996 Ending Inventory amounts against Subcategories B. Buildings Not Yet Deactivated and C. Buildings in Post-Deactivation Monitoring (see definition list below);
- For the Nuclear Materials measures, enter the FY 1996 Ending Inventory amounts against the material types listed under C. Materials in Stabilization Process, but Not Yet Stabilized; D. Stable Material Not Disposition Ready; and E. Material in Disposition Ready Storage (see definition list below); and
- For Spent Nuclear Fuel, enter the FY 1996 Ending Inventory amounts against the fuel types listed under C. Fuel in Stabilization Process, but Not Yet Stabilized, D. Stable Fuel, Not Disposition Ready, and E. Fuel in Disposition Ready Storage (see definition list below).

1997 Total Planned
Do not enter data. Automatically calculated from data provided for half year periods.

1997 1st Half Planned
This field has been seeded and locked at Headquarters. Do not update this field.

1997 2nd Half Planned
This field has been seeded and locked at Headquarters. Do not update this field.

1997 1st Half Actual
This field has been seeded and locked at Headquarters. Do not update this field.

1997 2nd Half Actual
Enter the quantities actually met for each data element by the end of the second 6 months of the fiscal year.

FOR DEACTIVATION OF FACILITIES ONLY:

1998 Planned - 2010 Planned
Enter the annual performance goals for each data element for FYs 1998 through FY 2010.

2011 Planned - 2070 Planned
Enter the performance goals in five-year blocs for each data element for FYs 2011 through FY 2070.

FOR RELEASE SITES AND FACILITIES:

Date Issues
This field reports any noted anomalies in the date information provided in Table A.5 for Release Sites and Facilities for Planned/Completed Assessment and Release Dates. The total number of release sites and the total number of facilities with errors will be reported in this field which will be updated as corrections are made to Table A.5.

DEFINITIONS

The following definitions are presented for the data elements that require updates for the above years. Release site and facility definitions are provided in Section A.5.

Waste
This section includes waste types (i.e., High Level, Transuranic, Mixed Low Level, Low Level, Hazardous, Sanitary, Special Case, and 11e(2) Byproduct Wastes, as well as Waste Water) categorized by applicable function (i.e., Storage -- Total Inventory; Long-term Storage (Disposal Ready); New Waste; Treatment; Disposal -- On site, Commercial; and Disposal -- Shipped to DOE Site). These instructions only apply for FY 1997 Year End Actuals, after which waste performance measures information will be derived from the consolidated PBS quantities tables to be provided with this submittal.

Instructions

For each of the waste types specified in Categories I -- IX on Table A.4, provide the planned amount of waste to be managed under each of the subcategories (i.e., A. -- F.) defined below, as applicable, in accordance with the waste type definitions included in this guidance. Please note that not all subcategories apply to each waste type. For consistency between planned and actual data: (1) Enter volumes in cubic meters, except Hazardous Waste, which should be reported in metric tons; (2) Ensure that the volumes reported represent all EM waste that is treated or disposed by Waste Management (i.e., EM-30). This includes waste from other DOE programs and secondary waste streams resulting from an initial restoration response. However, the volumes should not include volumes from restoration activities which are directly disposed either on site or commercially; (3) Note that waste water volumes are not to be included in the planning values. Waste water data will be collected as actuals only. In the future, disposition maps will allow all waste volumes to be reported.

Subcategories A. – G. Waste Functions Definitions:

A./B. ***Storage*** is defined as the retention and monitoring of waste in a retrievable manner pending final disposal. [DOE 5820.2A]

A. ***Storage - Total Inventory:*** The planning value for storage represents the total amount of waste in inventory at the end of the year or half-year, as applicable. Total inventory includes untreated waste a site has in storage, plus treated wastes awaiting disposal, with the exception of HLW and TRU. For HLW and TRU, enter only waste that is not disposal ready in this subcategory. Break out treated waste awaiting disposal into Subcategory B, Long-term Storage, as described below.

B. ***Long-term Storage (Disposal Ready):*** Certified waste that meets current waste acceptance criteria (WAC) for disposal or repository emplacement, but remains in EM's inventory because a permanent repository is not available. This subcategory applies only to HLW and TRU. Do <u>not</u> enter quantities in this subcategory for any other waste. NOTE: Total inventory for HLW and TRU is the sum of A. Storage - Total Inventory and B. Long-term Storage (Disposal Ready).

C. ***New Waste***: Newly generated waste, including secondary wastes resulting from treatment, waste received from other DOE programs and sites, or waste that has changed waste category as a result of reclassification. New Waste also includes waste received from non-DOE programs that is paid for by DOE, i.e., included in the EM budget. Wastes generated or received and immediately disposed in the same year are counted as both "New Waste" and "Disposed," whether or not the wastes officially pass through storage. However, the volumes should not include volumes from restoration activities which are directly disposed either on site or commercially. New Waste that is received for storage is also included in the end of year planned storage volume (Subcategory A).

D. ***Treatment:*** Any activity that alters the chemical or physical nature of waste to reduce its toxicity, volume, mobility, or render it suitable for transport, storage, or disposal. [Paraphrase of 5820.2A definition] Treatment represents the quantity of waste going into treatment. This includes volumes that are treated on site in DOE facilities or sent off site for treatment at commercial facilities and then returned to the originating DOE site. Waste that is shipped to a commercial facility for *both* treatment and disposal should be reported as a single volume under the Disposal measure (Category E). Treatment volumes are counted only by the site performing the treatment.

Note: Hazardous Waste treatment should include only DOE on-site treatment. Commercial treatment and disposal should be combined under the Disposal measure.

E./F. ***Disposal:*** Waste emplacement designed to ensure isolation of waste from the biosphere, with no intention of retrieval for the foreseeable future, and requiring deliberate action to regain access to the waste. [DOE 5820.2A] To prevent double counting, Disposal is subdivided into two subcategories: a) On-site or commercial disposal; and b) Shipped to DOE site for disposal.

E. ***Disposal - On-site, Commercial:*** Enter the volume of waste disposed in on-site facilities or shipped off site for disposal at non-DOE facilities. However, the volumes should not include volumes from restoration activities which are directly disposed either on site or commercially. Do not include waste shipped to another EM site for disposal or it will be double counted. HLW and TRU waste cannot be reported as waste disposed (see Long-term Storage subcategory). For TRU this subcategory is completed only by Carlsbad (CAO) for waste disposal at WIPP.

F. ***Disposal - Shipped to DOE Site:*** Enter the volume of waste transferred to another DOE site for storage or disposal. However, the volumes should not include volumes from restoration activities which are directly disposed either on site or commercially. This subcategory is designed to prevent double counting of the same waste by both generating and disposing sites.

Note: For Mixed Low Level Waste disposal, please include both commercial treatment and disposal as a single volume.

G. ***Volume Reduced:*** This subcategory is designed to capture actual volumes of waste reduced through treatment or pretreatment (e.g., evaporation, compaction), and reductions in inventory due to reclassification of waste, or other inventory reductions.

Categories I – IX – Waste Type Definitions:

The major DOE waste types that are common in current law, environmental regulations, and DOE Orders are High Level Waste (HLW), Transuranic Waste (TRU), Low Level Waste (LLW), Mixed Low Level Waste (MLLW), Hazardous Waste (HAZ), Sanitary Waste (SAN), and Special Case Waste (SCW).

I. ***High Level Waste:*** The highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid waste derived from the liquid that contains a combination of Transuranic Waste and fission products in concentrations requiring permanent isolation. [DOE Order 5820.2A; Attach. 2, No. 18]

II. ***Transuranic Waste:*** Waste that is contaminated with alpha-emitting transuranium radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of the assay, without regard to source or form. Mixed Transuranic Waste is also included in this definition. Heads of Field Elements can determine that other alpha contaminated wastes, peculiar to a specific site, must be managed as transuranic wastes. [DOE Order 5820.2A; Attach. 2, No. 39] For the purposes of this guidance, non-certifiable and non-defense TRU, and TRU sealed sources, are included in Transuranic Waste.

III. ***Mixed Low Level Waste:*** Waste that radiologically meets the definition for LLW and that is also

defined as hazardous under RCRA. (EM-30 BEMR Data Collection System User's Guide, Version 1.0, Appendix A.) For purposes of this guidance, LLW regulated under TSCA for PCBs is included in Mixed Low Level Waste.

IV. ***Low Level Waste:*** Waste that contains radioactivity and is not classified as High Level Waste, Transuranic Waste, Spent Nuclear Fuel or 11e(2) Byproduct material as defined [in DOE Order 5820.2A]. Test specimens of fissionable material irradiated for research and development only, and not for the production of power or plutonium, may be classified as Low Level Waste, provided the concentration of transuranic is less than 100 nCi/g. [DOE Order 5820.1A; Attach. 2, No. 20] Included as LLW is alpha-emitting Transuranic Waste in concentrations equal to or less than 100 nCi/g. [EM-30 BEMR Data Collection System User's Guide, Version 1.0, Appendix A] For the purposes of this guidance, Greater than Class C (GTCC) waste, Specific Performance Assessment Required (SPAR) waste, GTCC sealed sources, and medical isotope targets are included in Low Level Waste.

V. ***Hazardous Waste:*** Material defined as Hazardous Waste in 40CFR 261.3 or material defined as hazardous by a State. [DOE Order 5400.3 4(a) and (e); and DOE Order 5820.2A, Attach. 2, No. 17] For purposes of this guidance, waste regulated under TSCA for PCSs is included in Hazardous Waste.

VI. ***Sanitary Waste:*** Waste generated as a result of routine operations of a facility and that is not considered hazardous or radioactive. Sanitary Waste can be solid or liquid. Recycled materials, gaseous emissions, radioactive wastes, and hazardous wastes are specifically excluded. [EM-30 BEMR Data Collection System User's Guide, Version 1.0, Appendix A]

VII. **This category is no longer applicable.**

VIII. ***11e(2) Byproduct Waste:*** is defined by Section 11e(2) of the Atomic Energy Act as the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

IX. ***Waste Water:*** Waste treated in a waste water treatment facility and discharged under Clean Water Act permits to the environment. These wastes can have hazardous, radioactive, or mixed constituents which are separated out in treatment, but the bulk of which is discharged as clean water.

X. Waste Management Construction

No metrics. This category is not applicable for quantity metrics.

Release Sites

This section contains calculated data. See Section A.5 of the PBS.

XI. Release Sites

This section captures: A. Completed Assessments of Release Sites, and B. Completed Release Sites. For both A and B, each release site should be counted.

Facilities

This section reflects those physical accomplishments relating to the deactivation and decommissioning of facilities.

XII. Facilities Deactivation

This section captures: A. Buildings Deactivated During Period, B. Buildings Not Yet Deactivated, and C. Buildings in Post-Deactivation Monitoring.

General Instructions:

Mission accomplishment measures identify the number of buildings deactivated during the reporting period. Mission accomplishments are the basis for which the site's performance will be measured. Using a combination of the accomplishments and inventory data, an understanding of the site's overall mission scope and successful completion of that scope can be generated.

Ending inventory measures identify the quantity of buildings on hand within the project at the end of the reporting period. These measures indicate the quantity still requiring deactivation and the quantity of disposition-ready buildings in storage or monitoring. Buildings that have been transferred in or out of the project will cause a discrepancy between reporting periods, and therefore should be included as a comment on the form. Report physical inventory, not book inventory -- book inventory is physical inventory plus any inventory that is being shown as controlled by a site, but is actually being held elsewhere (e.g., inventory at a university).

Facility: For the purposes of performance measurement, "facility" refers to a building or walled structure; its functional, systemized equipment; and other fixed systems and equipment installed therein. "Facility" refers to a single building and not to a group of buildings. Facilities can include stand-alone tanks if the tanks service several buildings; require significant deactivation/ decommissioning efforts; and/or are being managed as a deactivation/ decommissioning effort separate from nearby facilities. A facility may be a portion of a building (e.g., vault area, storage pool, fuel washing room, etc.) if that is the only section of the building to be deactivated/ decommissioned. A building with several sections requiring deactivation/ decommissioning should be counted as one facility.

Specific Instructions/Definitions:

A. Buildings Deactivated During Period:

Enter the number of buildings deactivated within the reporting period specified on the form in accordance with the following definition.

> Deactivation encompasses activities where the intent is to minimize the risks, hazards, and associated costs at facilities and to make those facilities available for potential re-use or eventual decontamination and decommissioning. While these activities can include material handling and movement activities similar to stabilization (but not processing), the intent of such activity is not to achieve an end point (or interim end point) for the material, but to remove the material with the goal of readying the facility/system for the preferred end state. Deactivation includes removal of fuel, draining, reconfiguring and/or de-energizing of nonessential systems such as HVAC, electrical, monitoring, water, heating, and steam, removal of surplus supplies, chemicals, classified equipment and documents, limited decontamination, and removal of hazardous, mixed, and radioactive wastes. In specific cases, in order to further reduce costs or utilize specialized expertise, deactivation may not lead to long-term monitoring but move directly into facility decontamination and decommissioning. Specific activities funded within this subcategory include:
>
> - Development of deactivation endpoints for each individual facility
> - Flushing, isolating, and blanking of process or subprocess system (e.g., Canyon vessel

flushing)

- Facility ancillary building deactivation (e.g., PUREX Ammonia Off Gas Building)
- Surplus facility conversion programs
- Removal of radioactive, hazardous or mixed wastes
- Classified material removal activities
- Deactivation project planning and design efforts
- Deactivation related activities specifically undertaken in response to binding commitments (including compliance orders, court decisions or consent agreements) with federal, state, and local authorities
- General facility surveillance and maintenance directly associated with deactivation activities
- Maintenance of fire, safety and other support systems specific to an activity
- Facility security
- Maintenance of vital safety systems which are specific to a facility
- Facility-specific environmental monitoring (e.g., air emission, waste water discharges)
- Facility-specific environmental compliance activities (e.g., per DOE Order 5400.1)
- Radiation protection requirements
- Federal Facility Compliance Agreement (FFCA)/Interagency Agreement requirement
- Compliance with national electric and fire codes
- OSHA compliance activities
- General facility surveillance and maintenance directly associated with pre-deactivation monitoring activities

B. Buildings Not Yet Deactivated:

Enter the number of buildings that have not been deactivated by the end of the reporting period in accordance with the following definition.

This inventory will include buildings for which deactivation plans have not been initiated but for which EM has deactivation responsibility. It will also include all buildings in various stages of deactivation as defined above. Buildings will no longer be counted here once deactivation has been completed.

***C. Buildings in Post-Deactivation Monitoring*:**

Enter the number of buildings that are in long-term monitoring after deactivation at the end of the reporting period in accordance with the following definition.

The intent is to conduct minimum surveillance and maintenance to support facility caretaking while awaiting decontamination and decommissioning or final disposition. These activities include establishing and maintaining minimum surveillance and maintenance requirements to ensure general facility safety, structural integrity, fire safety, facility access controls, minimum security and utilities. Examples of these include, but are not limited to the following:

- Periodic facility access and inspections
- Upgrades to ensure facility integrity and safety (e.g., roof replacement and maintenance)
- Minimum environmental sampling and controls
- Maintenance of fire safety
- General OSHA compliance activities

XIII. Facilities Decommissioning

This field contains calculated data. See Section A.5 of the PBS.

Materials

Materials performance information will only be maintained/collected in this table for FY 1997 through FY 1999. Performance measures for FY 2000 through the life cycle will be derived from the consolidated PBS quantities table provided as part of this submittal

General Instructions:

Mission accomplishment measures identify the quantity of materials and fuels that are stabilized for the reporting period. Mission accomplishments are the basis for which the site's performance will be measured. Using a combination of the accomplishments and inventory data, an understanding of the site's overall mission scope and successful completion of that scope can be created. Inventory measures identify the quantity of materials and fuels at the end of the reporting period. These measures indicate the quantity still requiring stabilization; quantity of materials or fuels stabilized but not yet disposition ready, and the quantity of disposition ready materials and fuel in storage or monitoring. Report physical inventory, not book inventory -- book inventory is physical inventory plus any inventory that is shown as controlled by a site, but is actually being held elsewhere (e.g., inventory at a university). "Ending inventory" refers to the nuclear material or fuels on hand within the project at the end of the reporting period. Material or fuel that has been transferred into or out of the project will cause a discrepancy between reporting periods and therefore should be included as a comment on the form.

Ending inventory measures identify the quantity of materials and fuels on hand within the project at the end of the reporting period. These measures indicate the quantity of materials and fuels in the stabilization process, stabilized, and disposition ready in storage. Report physical inventory, not book inventory -- book inventory is physical inventory plus any inventory that is being shown as controlled by a site, but is actually being held elsewhere (e.g., inventory at a university).

XIV. Nuclear Materials

Nuclear Materials include Plutonium (Pu), Uranium (U), and other nuclear materials. The table below delineates nuclear materials included in these measures.

Plutonium includes:	Other nuclear material includes:
• Pu in solution	• Pu 242
• Pu in metals	• Pu 238
• Pu in oxides (>50% assay)	• U 233
• Pu in residues and mixed oxides (<50% assay)	• Am-Cm
	• Np
	• Cs

Uranium includes:	• Sr
• U in solution	• MK-31
• U in other forms	• MK-16/22
	• Failed TTR
	• Failed EBRII

The only Cs and Sr that should be included is that which is in powder form or housed in defective capsules or otherwise not considered stable.

Do not double report. If an oxide or other form of material contains more than one type of nuclear material (e.g., Pu and U in a mixed oxide), choose the major type of nuclear material as a means to classify the item (i.e., Is the item being managed as Pu or U?). Kg measurements are of element weight versus bulk material weight.

Materials should be reported in their pre-stabilization form which means that if during stabilization the material changes to another form listed, only report it as its pre-stabilization form. This allows for accurate reporting of performance measurement data. (e.g., If a material starts the stabilization process as Pu in solution, keep the reporting in that category even if after stabilization the Pu is in oxide form.)

Select either Percentage (**%**), Kilograms (**Kgs**), or Number of Items (**NI**) from the pick list to indicate the form of measurement.

Specific Instructions/Definitions:

A. Material Stabilized During Period

Enter the quantity of kilograms (Kgs), percentage (%), or number of items (NI) stabilized within the reporting period in accordance with the following definition:

Stabilization encompasses activities where the intent is to convert nuclear material to a stable form suitable for storage, either safe interim or long-term, depending upon the programmatic plans for the material. This would include staging, preparation, and operations actions. These actions are taken to both manage and reduce risks, and would include movement or consolidation of nuclear material (without conversion) to a safer location, processing of material to a form suitable for safe interim and long-term storage, repackaging of nuclear materials to meet storage standards and criteria if this packaging effort included some type of stabilization activity such as "metal brushing," etc., and repackaging, preparation or treatment of nuclear materials for disposal as waste.

Specific examples of stabilization activities include:

- Maintaining and storing nuclear materials (Pu, U, other nuclear materials) prior to stabilization (e.g., Pu residues in Bldg 371 and PFP etc.)
- General facility/material surveillance and maintenance directly associated with pre-stabilization storage activities
- Activities directed by the 94-1 Implementation Plan
- Actions taken to address the vulnerabilities identified in the DOE Plutonium

Vulnerability Assessment

- Conducting NEPA analyses to support stabilization activities
- Start-up and operation of facilities/processes to perform stabilization activities (e.g., F-Canyon, PFP Vertical Calciner)
- Design and procurement of stabilization equipment (e.g., PuSAP)
- Repackaging of nuclear and non-nuclear materials to meet storage standards and criteria
- Research and technology development to support stabilization activities
- Processing of material to form suitable for safe interim and long-term storage
- Stabilization of material prior to long-term storage (e.g., drum venting)
- Movement or consolidation of nuclear material (without conversion) to a safer location
- Process or facility upgrades to support stabilization activities (e.g., Am/Cm vitrification facility at F-Canyon)
- Repackaging, preparation or treatment of materials for disposal as waste
- General facility/process surveillance and maintenance directly associated with stabilization activities

B. Material Made Disposition Ready During Period

Enter the quantity of kilograms (Kgs), percentage (%), or number of items (NI) of material made disposition ready within the reporting period specified on the form in accordance with the following definition.

> "Disposition-ready" materials are prepared for transportation, long-term storage, or final disposition. In cases where material is stabilized and packaged in a single short-term process, credit for meeting both stabilization and "disposition-ready" performance measures will be taken during the same reporting period.
>
> Activities under "disposition-ready" may include: repackaging materials in a can to meet DOE 3013 Standards. The comments section of your PBS of the Draft National 2006 Plan data submission should contain some narrative to describe the state being designated as disposition ready. This will be material specific (e.g., Pu oxide repackaged to a DOE 3013 can).

C. Material in Stabilization Process, but Not Yet Stabilized

Enter the quantity of kilograms (Kgs), percentage (%), or number of items (NI) of nuclear material that still requires stabilization at the end of the reporting period in accordance with the following definition.

> This subcategory represents the quantity of nuclear material that has been determined to need, or is assumed to need, further stabilization and packaging prior to its being suitable for storage while it awaits disposition. If material is in stable form and only needs to be repackaged, it would be not shown in this subcategory but in Subcategory D. Similarly, if it only needs to be moved to its final storage location, but does not need to be stabilized or repackaged, it would not be shown here, but in Subcategory D.

D. Stable Material, Not Disposition Ready

Enter the quantity of kilograms (Kgs), percentage (%), or number of items (NI) of nuclear material which has completed stabilization, but still requires additional activity before it is in its final form for disposition in accordance with the following definition. (i.e., The material may not be in the final packaging required

for transportation or long-term storage particularly if the packaging or destination acceptance criteria will not be ready/known for a period of time.)

The intent is to identify the quantity of nuclear material that is stable and still requires packaging into the final configuration needed for disposition ready storage.

Nuclear materials in this inventory have not been prepared to allow for transportation, long-term storage, or final disposition. Further stabilization of this material would not be required, but packaging and subsequent movement to accommodate storage in other locations would be allowed for material in this subcategory.

E. Material in Disposition Ready Storage

Enter the quantity of kilograms (Kgs), percentage (%), or number of items (NI) of nuclear material in disposition ready storage at the end of the reporting period in accordance with the following definition:

The intent is to maintain stabilized and disposition ready nuclear materials in a safe and stable configuration pending final disposition. Examples of this activity include:

- Safeguards and security
- Material inventory activities
- Storage facility construction or upgrades (e.g., SRS APSF or Rocky Flats Bldg 371 upgrades)
- Storage facility operations
- General facility surveillance and maintenance directly associated with long-term storage activities

XV. Spent Nuclear Fuel

Spent nuclear fuel performance information will only be maintained/collected in this table for FY 1997 Actuals. Performance measures for FY 1998 through the life cycle will be derived from the consolidated PBS quantities table provided as part of this submittal

Spent Nuclear Fuel (SNF) includes fuel, targets (does not include medical isotope targets, which are Low Level Waste) and slugs, and sludge. SNF will be measured in two units, Metric Tons of Heavy Metal (MTHM) and Cubic Meters (M^3). Do not double count spent fuel inventories by putting the same fuel in multiple fuel type subcategories.

A. Fuel Stabilized During Period

Enter the total amount (MTHM and M^3) of spent nuclear fuel stabilized within the reporting period specified on the form in accordance with the following definition:

Spent fuel stabilization encompasses activities where the intent is to treat, where necessary, spent nuclear fuel to a safe, stable state to a point where it can be made disposition ready including all staging and preparation actions. These actions are taken to both manage and reduce risks. Included in this subcategory are activities directed toward stabilizing vulnerable spent nuclear fuel by treating spent fuel in accordance with the implementation plan for DNFSB Recommendation 94-1, the Foreign Research Reactor EIS Record of Decision, IMNM EIS Record of Decision and other directives related to interim and long-term storage of spent nuclear fuel. Specific examples of spent fuel stabilization activities include:

- Maintaining spent fuel in reactor basins awaiting stabilization (e.g., K-Basin, K&L Reactor basins)
- Maintenance of vital safety systems (e.g., basin/storage pool cooling water systems)
- Facility-specific environmental monitoring (e.g., air emission, wastewater discharges)
- Process specific monitoring and sampling (e.g., spent fuel pool water chemistry controls)
- General facility/material surveillance and maintenance directly associated with pre-stabilization storage activities
- Spent fuel activities directed by the 94-1 Implementation Plan
- Spent nuclear fuel technology development for stabilization and interim storage
- Construction and/or operation of facilities to perform stabilization activities
- Design and procurement of stabilization equipment
- Movement of spent nuclear fuel (without conversion) to a safer location (e.g, CPP-603 fuel shipments to CPP-666)
- General facility/process surveillance and maintenance directly associated with spent fuel stabilization activities

B. Fuel Made Disposition Ready During Period

Enter the total amount (MTHM and M^3) of Spent Nuclear Fuel which has been made disposition ready within the reporting period.

SNF is prepared as best as known practices will allow for transportation, long-term storage, or final disposal. In some cases, stabilization will constitute "disposition-ready." However for the purposes of performance measures, "credit" can be taken under both steps of mission accomplishment, stabilization and disposition ready. Inventory will move from in-process or pre-stabilization storage directly to disposition ready. Activities under disposition ready may include:

- Repackaging/movement of stabilized SNF from wet to dry storage
- Technology development for disposal
- Repackaging of spent nuclear fuel to meet storage standards and criteria

C. Fuel In Stabilization Process, but Not Yet Stabilized

Enter the spent nuclear fuel (MTHM and M^3) that still requires stabilization at the end of the reporting period in accordance with the following definition:

This subcategory represents the quantity of spent nuclear fuel that has been determined to need, or is assumed to need, further stabilization and packaging prior to it being suitable for storage while it awaits disposition. If fuel is in stable form and only needs to be repackaged, it would be not shown in this subcategory but in Subcategory D. Similarly, if it only needed to be moved to its final storage location, but did not need to be stabilized or repackaged, it would not be shown here but in Subcategory D.

D. Stable Fuel, Not Disposition Ready

Enter the spent nuclear fuel (MTHM and M^3) which has completed stabilization but still requires additional activity before it is in its final form for disposition. (i.e., The SNF may not be in the final packaging required for transportation or long-term storage particularly if the packaging or destination acceptance criteria will not be ready/known for a period of time.)

The intent is to identify the quantity of spent nuclear fuel that is stable and still requires packaging

or moved into the final configuration needed for disposition ready storage.

Fuels in this inventory have not been prepared to allow for transportation, long-term storage, or final disposition. Further stabilization of this fuel would not be required, but packaging and subsequent movement to accommodate storage in other locations would be allowed for fuel in this subcategory.

E. Fuel in Disposition Ready Storage

Enter the spent nuclear fuel (MTHM and M^3) in disposition ready storage at the end of the reporting period in accordance with the following definition:

The intent is to maintain stabilized and disposition ready spent nuclear fuel in a safe and stable configuration pending final disposition. Examples of these activities include:

- Design and construction of dry storage facilities
- Maintenance and operation of spent fuel dry storage facilities
- Storing spent fuel in a final form prior to ultimate disposition
- Applicable safeguards and security
- Fuel inventory activities
- General facility surveillance and maintenance directly associated with long-term storage activities

A.5. Release Sites and Facilities

Performance measures data for FY 1997 through FY 2070 for release sites and facilities will be developed in this table. Data provided here will automatically feed the performance metrics in Section A.4. The data will be presented in Section A.4. Any updates to the release sites and facilities data contained in Section A.4 must, therefore, be made through this section. This is one of the first steps toward integrating programmatic databases (EM-40 Core Database) into the Integrated Planning, Accountability, and Budgeting System (IPABS).

Since the release sites and facilities list represents documented physical program scope this list is expected to remain relatively stable during the integration with IPABS. Stability is a must since a list of release sites and facilities, including completion status, has been widely reported to external stakeholders, Congress, and the Office of Management and Budget. To maintain program credibility the release sites and facilities list needs to maintain its common reporting level (i.e., release site and facility). The release sites and facilities list cannot regress to the most convenient reporting level for a particular site (i.e., combining multiple release sites and facilities into one larger unit for convenience of reporting). The definitions for release sites and facilities should be strictly adhered to. Significant changes to the list of release sites and facilities should be reviewed with the appropriate Headquarters program managers.

Reference Tables

Two additional reference tables have been developed to help with the integration process. The Pre-FY 1997 Completions Table is a list of release sites and facilities completed through FY 1996. This list is being provided at the Site Summary Level and includes the Unique Site Designated Project ID, when available. Since the table consists of only Pre-FY 1997 release site and facility completions, the data fields are locked.

The Unassigned Release Sites and Facilities Table contains the list of release sites and facilities that must be crosswalked to a PBS. This list is being provided at the Site Summary Level. The individual release site and facility records must be copied from this table and pasted into the appropriate Section A.5. table for a particular PBS. All records from the Unassigned Release Sites and FacilitiesTable must be copied to the appropriate Section A.5. table based on their associated PBS unless the scope was removed from the EM program. In that case the release site or facility should be marked for "Removal" (see Change Flag below). A record from the Unassigned Release Sites and Facilities Table can only be associated with one Section A.5. table. For instructions on copying the individual release site and facility records to the appropriate Section A.5. table see the Change Flag description below.

Instructions for Completing Section A.5.

This table has been seeded with release sites and facilities data from the EM-40 Core Database. Please complete this table according to the following instructions:

How many release site/facility rows do you need for this project?

Select from the options listed the number of rows needed to record the release site/facility information for this project. Choose only one. This step is included in order to reduce the overall size of the Excel File. Any rows with or without data beyond your selection will be deleted. **Please ensure that your selection is large enough so that the seeded data is not mistakenly deleted.**

Geographic Site Code

This field should contain the appropriate four letter geographic site code for the geographic site where the release site or facility is located. Please choose the appropriate four letter code from the valid list of geographic site codes found in Attachment C. This field is locked for seeded data.

RS ID

This is a four digit number that identifies each unique release site or facility at a particular geographic site. This field is locked for seeded data.

Change Flag

This field is meant to identify release site and facility records that have undergone a significant change. As noted in the introduction to Section A.5. it is assumed that the release site and facility list that has been provided will remain relatively stable. This field should be used primarily to annotate the release sites and facilities that are being removed from the data set, moved to a different table, or added to the table. Every record must be copied/moved (i.e., M) from the Unassigned Release Sites and Facilities Table to an appropriate Section A.5. table unless the scope was removed from the EM program. In that case the record should be marked for removal (i.e., R) from the system. This field is also to be used to identify new scope being added (i.e., A) to the system, as well as describe valid adjustments made to disaggregate or combine release sites or facilities. Any time a release site or facility is removed, moved, or added a complete explanation must be included in the comment field. The following table explains in detail how to appropriately treat each "Change Type".

Change Type	Description	Change Flag Code	RS_ID Change
Movement of a record from the Unassigned Release Sites and Facilities Table to an A.5. table.	Entire records should be copied out of the Unassigned Release Sites and Facilities Table and pasted into the appropriate A.5. table based on the PBS.	An "M" should be entered in Unassigned Release Sites and Facilities Table to note that the record has been moved to the appropriate PBS. An "A" should be entered in the A.5. table to indicate that this record was added. Records marked with an "M" will not be counted in the A.4. table Performance Measure rollups.	None
Movement of a record from one A.5. table to another A.5. table so it is contained within the appropriate PBS.	The entire record should be copied from the source A.5. table and pasted into the correct destination A.5. table based on the PBS.	In the source A.5. table an "M" should be entered to note that the record was moved. In the destination A.5. table an "A" should be entered to note the record was added to the PBS. Records marked with an "M" will not be counted in the A.4. table Performance Measures rollups.	None

Change Type	Description	Change Flag Code	RS_ID Change
Entirely new scope.	New records can be added to the bottom of the appropriate A.5. table. All of the fields must be completed.	In the A.5. table an "A" should be entered to note the record is new to the PBS.	Add the next sequential number for table A.5. starting with 1, 2, 3, . . .
Marking Non-EM scope for removal.	In the Unassigned Release Sites and Facilities and A.5. tables the records that were deleted from the EM program should be marked for removal from the system.	In the Unassigned Release Sites and Facilities or A.5. table an "R" should be entered to annotate that the record is not valid EM scope. Records marked with an "R" will not be counted in the A.4. table Performance Measure rollups.	None
Aggregation of multiple release sites or facilities into one record. (note: this is usually inappropriate)	The new aggregated record should be added to the bottom of the appropriate A.5. table. All of the fields must be completed.	In the A.5. table the original records should be marked with an "R" to indicate that they are not valid scope. The new record representing the aggregated scope should be marked with an "A" to indicate that it has been added. Records marked with an "R" will not be counted in the A.4. table Performance Measure rollups.	Add the next sequential number for table A.5. starting with 1, 2, 3, . . .
Splitting a single release site or facility into multiple new records. (note: this is usually inappropriate)	The new records that have been broken out should be added to the bottom of the appropriate A.5. table. All of the fields must be completed for the new records.	In table A.5. the original record should be marked with an "R" to indicate that it is no longer valid scope. The new records should be marked with an "A" to indicate that they represent newly added scope. Records marked with an "R" will not be counted in the A.4. table Performance Measure rollups.	Add the next sequential number for table A.5. starting with 1, 2, 3, . . .

Release Site or Facility?

Please indicate whether this entry is a release site or a facility. **Enter "R" if the entry is a release site or "F" if it is a facility.** The following definitions should be used:

Release Site: Release sites should be defined exactly the same way they have been defined in developing the Environmental Restoration Release Sites and Facilities Database. A "release site" is generally defined as a unique location where a hazardous, radioactive, or mixed waste release has occurred or is suspected to have occurred. It is usually associated with an area where wastes or substances contaminated with wastes have been disposed of, treated, stored, and/or used. Under CERCLA, sites include both source areas and areas of migration where hazardous substances have come to be located. A site typically includes the actual geographic area covered by a source and

the extent of associated contamination as delineated during the characterization. It may include areas in very close proximity to the contamination that will be impacted in implementing a response action.

This definition may include: Corrective Action Units (CAU's), Solid Waste Management Units (SWMU's), Areas of Concern (AOC's), or other RCRA or CERCLA categorizations. Within this definition, installations should try to adopt their own installation-specific counting methods.

Each FUSRAP site should count as one release site. An UMTRA site is counted as two (2) release sites, one for the surface component and one for the groundwater component.

Facility: For the purposes of performance measurement, "facility" refers to a building or walled structure; its functional, systemized equipment; and other fixed systems and equipment installed therein. "Facility" refers to a single building and not to a group of buildings. Facilities can include stand-alone tanks if the tanks service several buildings; require significant deactivation/ decommissioning efforts; and/or are being managed as a deactivation/ decommissioning effort separate from nearby facilities. A facility may be a portion of a building (e.g., vault area, storage pool, fuel washing room, etc.) if that is the only section of the building to be deactivated/ decommissioned. A building with several sections requiring deactivation/ decommissioning should be counted as one facility.

Field Code

This field contains the release site and facility code used by the Field, if applicable.

Description

This field contains the descriptive release site/facility name. A name or description is preferable to a code (e.g., "Low Level Rad Tank X-103" instead of "X-103"; or "C-16-018 holding pond" instead of "C-16-018").

Planned Assessment Date/Actual Assessment Date

These fields will be used to set performance targets and measure progress.

Assessment of a release site is completed in the year in which the release site moves from the Study Phase (Code 1) to any of the other statuses (Codes 2-6), as shown in the table on the following page.

Assessment of a facility is completed in the year in which the facility moves from the surveillance and maintenance/study phase (Code 7) to any of the other statuses (Codes 8-12), as shown in the table on the following page.

Planned assessment date and actual assessment date use the same criteria for determination.

Planned Assessment Date

For sites that have completed their assessment, the actual fiscal year that the assessment was completed as defined above needs to be entered. For sites that have not completed their assessment, best professional judgment should be used to forecast the probable fiscal year of assessment. Note this field requires the year to be entered as a four digit number (i.e., 1993, etc.)

Actual Assessment Date

If the assessment has been completed or when it is completed, the month, day, and year should be entered (i.e., 09/30/93 or 02/01/95, etc.). The actual assessment date will be updated periodically and should not be filled in unless the assessment has been completed.

Planned Completion Date/Actual Completion Date

These fields will be used to set performance targets and measure progress. Each release site and facility completion date is not necessarily a milestone in Section A.3. The release site is completed overall in the year in which the release site moves from either the Assessment Phase (Code 1) or the Cleanup Phase (Code 2) to any of the Complete Phases (Codes 3-6), as shown in the table below.

The facility is completed overall in the year in which the facility moves from either the S&M/Study Phase (Code 7) or the Cleanup Phase (Code 8) to any of the Complete Phases (Codes 9-12), as shown in the table below.

Planned Completion Date

For completed sites, the actual fiscal year that the response was complete as defined above needs to be entered. For sites that are not completed, best professional judgment should be used to forecast the probable fiscal year of completion. Note this field requires the year be entered as a four digit number (i.e., 1993, etc.)

Actual Completion Date

If the remediation has been completed or when it is completed, the month, day, and year should be entered (i.e., 09/30/93 or 02/01/95, etc.). The actual completion date will be updated periodically and should not be filled in unless the remediation has been completed or a no action determination has been made.

Code	Description of Status
1	Assessment Phase - As of the indicated date, this site is/was in the preliminary assessment or assessment phase. Documents have not been submitted to the regulator for either a remedial action or a no action decision.
2	Cleanup/Remedial Action Phase - As of the indicated date, the site was in the design or cleanup phase. This phase includes all cleanup work until documentation has been submitted to the proper authorities for approval.
3	Cleanup Response Complete - Physical remediation has been finished and the appropriate documentation has been submitted but has not yet been approved.
4	No Action Response Complete - Documents have been submitted but are not yet approved indicating that no action is required.

Code	Description of Status
5	Cleanup Final Approval - Final documentation has been approved for the cleanup action and the proper authorities have approved the site as complete.
6	No Action Final Approval - Final documentation has been approved for no action and the proper authorities have approved the site as complete.
7	Surveillance and Maintenance/Study Phase - As of the indicated date, the facility was in the surveillance and maintenance phase and/or was being characterized for decommissioning. A facility is in this phase until a Field decommissioning plan has been submitted for approval and decommissioning activities commence.
8	Decommissioning Phase - As of the indicated date, design or construction activities are/were underway to decommission the facility. A facility is in this phase until documentation has been submitted for approval indicating that decommissioning is complete.
9	Decommissioning Response Complete - Physical decommissioning activities have been completed and the appropriate documentation has been submitted but has not yet been approved.
10	No Action Response Complete - Documents have been submitted but are not yet approved indicating that no action is required.
11	Decommissioning Final Approval - Final documentation has been approved for the decommissioning action and the proper authorities have approved the facility as complete.
12	No Action Final Approval - Final documentation has been approved for the no action and the proper authorities have approved the facility as complete.

Note: A "no action" decision results in both an assessment completion and an overall completion.

Assessment Date Issue/Completion Date Issue

These error fields identify with an "X" the records that cannot be included in the Section A.4 completion profile (FY 1997 to 2070) because of problems with the planned/actual assessment date(s) or the planned/actual completion date(s). The records are counted in the Date Issues column of Section A.4. By correcting the date error in the Section A.5 table the records automatically will be included in the completion profile of the Section A.4 table. **After correcting the dates and pushing the *Refresh Counts*, button the error flags will be removed**. The basic problem types are summarized in the following table:

Problem	Solution
Past due planned date (i.e., prior to FY 1998) with no actual date.	Enter a valid future planned date and/or a valid actual completion date.
No planned date and no actual completion date.	Enter a valid future planned date and/or a valid actual completion date.

A future actual completion date (i.e., greater than 9/30/97).	Enter a valid future planned date and remove the invalid actual completion date or enter a valid actual completion date. **Note that actual FY 1998 completions will be counted as irreconcilable dates until the first 2006 Plan status update for FY 1998.**

No Action Decision

This yes/no field indicates whether the completed site underwent physical remediation or had a "No Further Action" decision rendered after the assessment.

Completion Status

Essentially, response is considered completed once a "no action" decision has been made and the documentation has been sent to the regulators, or, physical cleanup has been completed and the documentation has been submitted to the regulators. This field tracks whether documentation has been "approved" by the regulator or is "pending". For completed sites, please enter the appropriate descriptor, "approved" or "pending".

Comments

Please discuss any issues or comments that you may have pertaining to this release site or facility. Any time a release site or facility is removed, moved, or added a complete explanation must be included in this field.

A.6. Validation

This section provides information about the validation status of the project as requested by Congress. This information is needed to ensure that the PBS is an accurate reflection of underlying site baselines, and establishes credibility in the reported project plan.

Validation is an independent review and critical assessment of the planned project, its scope, cost, schedule and technical approach. Independent, in this case, means another group, other than the project advocate, with expert knowledge of the project area and objectives. See Attachment J of this guidance for validation attributes.

A.6.1 Project Validated? (Y/N)

Indicate if a project validation has occurred by choosing **Y** for Yes or **N** for No from the pick list. Default value equals **N**.

A.6.2. Date Validated:

Indicate the date of validation using 2-digit numbers for the month and day and 4-digit numbers for the year, e.g., 01/31/1996.

A.6.3 Validation Method:

Describe the validation method employed by the Project Manager to critically assess the project. See the request for information from the EM Office of Science and Technology in C.4. Supporting Documents.

Example:

> On September 1995, the National Academy of Sciences National Research Council was requested to perform a peer review of the project. A committee was formed by NAS which conducted an exhaustive document review of the project baseline as well as comprehensive interviews with key members of the project team. Their generally favorable report was published on January 31, 1996. The relatively minor recommendations have been included in routine project baseline changes.

A.6.4. Technical Approach Reference Documents

Identify the name and identification number (if applicable) of reference documents that describe the technical approaches for the subprojects comprising this PBS. This list should identify reference documents that describe baseline technologies and innovative technologies under consideration for treatment, storage, disposal, remediation, or deactivation subprojects.

A.6.5. Current Status of your Project Baseline

Describe the current status of your Project Baseline including information pertaining to technical scope requirements, regulatory requirements, schedule, cost estimates, performance measures, and end state.

A.6.6. Is this PBS consistent with your Site Baseline? (Y/N)

Indicate whether the PBS is consistent with the Site Baseline by selecting **Yes** or **No** from the pick list.

A.6.7. If A.6.6 was answered No, why not?

Explain any inconsistencies between the PBS and Site Baseline.

A.6.8. Future Validation Plans and Schedule

Describe future validation plans and the proposed schedule for their implementation.

A.6.9. Site Baseline Consistency

Select one response from the provided fields which most accurately reflects the extent to which the PBS is consistent with the Site Baseline(s).

A.6.10. Project End-State Definition

Indicate the degree of certainty in the Project End State by selecting one response from the provided fields.

A.7. Project Assumptions

The identification of underlying assumptions in this section provides for an understanding of the project basis including components essential to its completion in line with the planned schedule. This information is needed so that these assumptions can be readily articulated along with the corresponding impacts on the project in terms of scope, cost, and schedule.

Identify major project-specific assumptions, which, if not proven valid, will have an adverse impact on the project's success, or which form a significant part of the basis for a schedule or cost estimate. Site level assumptions should not be repeated here (see Attachment E, Section S.3.). These assumptions may include such items as stakeholder and Tribal Nations concerns, modifications to compliance agreements, DOE orders, the regulatory framework, technology basis, cleanup standards, the escalation rates applied to the costs, and the amount/percentage of contingency and management reserve applied to the project. Space is provided for 15 project related assumptions. If more room is needed, contact the PBS Data Base Administrator identified at the end of this section.

Number	Assumption
1	The Waste Isolation Pilot Project will open and accept material in June 1998.
2	
3	

B.1. BA by Appropriations Account

BA collected at the PBS level should NOT be broken out by B&R code. For each PBS, please break out BA by Appropriations Account (i.e., Defense, Energy Supply (Non-Defense), Uranium Enrichment D&D) ONLY for FY 1997, FY 1998, FY 1999, and FY 2000. The sum of all BA by PBS at an Operations/Field Office must equal the allocation tables provided in Section 3.0 of the front section of the guidance.

Note: BA by B&R code will be collected at the Site Summary Level (SSL). The B&R code structure is essentially the same as it was for the August 1, 1997, Limited Update to the PBSs.

C.1. Risk

> Risk reduction is a programmatic priority. Trending risk reduction over time will demonstrate progress. The information provided in this section provides the specific data needed to prepare the Corporate Performance Measures and the Secretary's Strategic Plan.

Risk is an integral part of setting priorities, sequencing project work, measuring progress, and showing that the Department is reducing the most serious risks first. Past analysis has shown that the majority of compliance activities do address significant risk.

Building on existing risk information applicable to each project (including Risk Data Sheets and the FY 1999 Integrated Priority Lists) the Project Manager will establish, in the format shown, the relative risks to workers, the public, and the environment for the project. Information generated as a result of compliance documentation for a number of ES&H requirements (e.g., DOE Orders, etc.) may also be used to support risk based decisions. It is anticipated that all risk information generated for projects or program specific activities will be used to the extent possible in support of these decisions. In evaluating projects, Project Managers should consider the results of the peer review of risk data collected for the FY 1998 budget process (*http://jupiter.wpi.org/doe/em/cresp/nrp.html*).

Each project should include an evaluation of the associated risk (e.g., risks associated with the hazard, risks created during the execution of the project, etc.) for each year up to 2010, and in five year intervals from 2011 to 2070. This evaluation should address risks to workers, the public, and the environment. Risk should be evaluated for each project having risk reduction benefits or impacts and documented in the PBS.

To focus efforts where they are needed most, a project screening evaluation should be conducted to determine the need and appropriate level of detail for risk evaluations. The following project categories are exempted: program direction, program management, grants and external support, technology development and National Programs (i.e., characterization management, transportation management, pollution prevention, emergency management, and science and risk policy). Project Managers may be granted other specific project exemptions if:

- There are no risk reduction benefits or impacts associated with project activities.
- Project risks due to the hazard and due to project implementation are no higher than "Low" for all of the three evaluation categories (public, worker, and environment).

Tracking risk information will demonstrate how dollars spent on cleanup efforts work to reduce overall risk and further the mission of EM. Any changes in risk should be linked to measurable events (e.g., subproject completions) as recorded in the milestones section of the PBS.

A project's risk evaluation should build upon past risk evaluations and address the interests and concerns of regulators, stakeholders, and Tribal Nations. To improve the consistency of the application of the evaluation process used at the site and to improve technical credibility both internally and externally to DOE, the sites should document the information to ensure transparency of the data used and have the results of the evaluations peer reviewed periodically.

C.1.1. Risk Data

When evaluating the overall project risk over the duration of the National 2006 Plan, the risks of the hazard as well as the risks created during project implementation need to be considered. For each fiscal year, the value of the highest risk (i.e., the risk posed by the existing hazard if the project was stopped or the hazard caused by project implementation) should be entered into Table C.1.1. For risk evaluation purposes and consistency with previous risk evaluation guidance for FISCAL YEAR 1998, a "stopped project" means not continuing the project in the future. The impact of increased risk due to project implementation should be explained in the Risk Evaluation Narrative.

For each applicable risk category (public, worker, and environment), the level of risk is defined by the intersection of impact and likelihood in table A.1. (below). Entries in Table C.1.1. should be the level of impact (*1, 2, 3, or 4*) and likelihood of occurrence (*A, B, C, or D*) from Table A.1., along with the corresponding level of risk (*Urgent, High, Medium, Low, or N/A*). A few examples of correct entries include *1A-Urgent, 2B-High, 2C-Medium,* and *4B-N/A*.

Once the project has reached the desired end state and land/facilities are available for final use, risk values should be followed by a "C" indicating that the project is complete (e.g., *3C-Low-C, 4B-N/A-C,* etc.).

Table A.1

		A	B	C	D
LIKELIHOOD - defined as either:	*Probability that event (i.e., exposure) occurs within a year, leading to adverse impacts; or*	1	< 1; > 0.1	<= 0.1; > 0.01	<= 0.01
	Time until event (i.e., exposure) leading to adverse impacts is expected to occur	< 1 year	>= 1 yr; < 10 yrs	>= 10 yrs; < 100 yrs	>=100 yrs
IMPACTS - Public Safety and Health					
1	*Death or injuries/illnesses involving permanent, irreversible effects such as permanent total disability or chronic diseases. Extreme overexposures*	Urgent (1A)	High (1B)	Medium (1C)	Medium (1D)
2	*Injuries/Illnesses involving permanent partial disability or temporary total disability > 3 months, or overexposure*	High (2A)	Medium (2B)	Medium (2C)	Low (2D)
3	*Injuries/illness that result in temporary, reversible impacts. Disability may be total but of < 3 months duration or small or small over exposure exceedence*	Medium (3A)	Low (3B)	Low (3C)	Low (3D)
4	*Injuries/illness that result in partial or temporary reversible impacts or exposures at or below regulatory levels*	Low (4A)	N/A*	N/A	N/A
IMPACTS - Worker Safety and Health					

1	*Death or injuries or illnesses resulting in permanent total disability, chronic or irreversible illnesses, or extreme overexposure*	Urgent (1A)	High (1B)	Medium (1C)	Medium (1D)
2	*Injuries or illnesses resulting in permanent partial disability or temporary total disability > 3 months, or serious overexposure*	High (2A)	High (2B)	Medium (2C)	Low (2D)
3	*Injuries or illnesses resulting in hospitalization, temporary, reversible illnesses with a variable but limited period of disability of < 3 months, or overexposure*	Mediu m (3A)	Medium (3B)	Low (3C)	Low (3D)
4	*Injuries or illnesses not resulting in hospitalization, temporary reversible illnesses requiring minor supportive treatment or cumulative exposures above limits that have no lasting effect*	N/A	N/A	N/A	N/A
IMPACTS - Environmental Health					
1	*Catastrophic damage (irreversible loss of unique or sensitive environment, or very poor biological condition, or a wide geographic impact or > 20 years to recovery)*	Urgent (1A)	High (1B)	High (1C)	High (1D)
2	*Significant damage (poor biological condition, or intermediate geographic impact or 5-20 years to recovery)*	High (2A)	High (2B)	Medium (2C)	Medium (2D)
3	*Moderate Damage (fair biological condition, or small geographic impact or 2-5 years to recovery)*	Mediu m (3A)	Medium (3B)	Low (3C)	Low (3D)
4	*Minor damage (good biological condition, and negligible geographic impact or < 2 years to recovery)*	N/A	N/A	N/A	N/A

* While "N/A" is used in this table to indicate risk levels near background, it may also be used to designate projects unrelated to risk reduction, such as administration, management, or research.

For each area of interest (worker, public, and environment), make the appropriate number/letter entry, as well as the level of risk (U, H, M, L, or NA), for each of the years listed.

Example:

	1997	1998	1999
Public	3C-L	3C-L	3C-L
Worker	2B-H	2C-M	2C-M
Environment	1A-U	1B-H	1B-H

C.1.2. What is the End-State Risk Driver? (P/W/E)

From the pick list, select the most important risk driver of the hazards associated with ***not continuing or not completing*** a project. Choose either the public (**P**), worker (**W**) or the environment (**E**).

C.1.3. What is the Interim Risk Driver? (P/W/E)

From the pick list, select the most important risk driver of the hazards associated with implementing the project. Choose either the public (**P**), worker (**W**) or the environment (**E**).

C.1.4. What is the Post-Completion Managing Project ID?

From the pick list, select the project ID for another project, if one exists, that will manage this project's hazards once it is completed.

C.1.5. Has the risk evaluation been internally peer reviewed by ES&H professionals? (Y/N)

From the pick list, select, by entering **Y**, for Yes, or **N**, for No, whether the determinations of likelihood and impacts, along with supporting data, have been reviewed by ES&H professionals. Default value equals **N**.

C.1.6. Has the risk evaluation been externally peer reviewed? (Y/N)

From the pick list, select, by entering **Y**, for Yes, or **N**, for No, whether the determinations of likelihood and impacts, along with supporting data, have been periodically externally peer reviewed. Discuss the type of external peer review and who performed it in the Risk Evaluation Narrative. Default value equals **N**.

C.1.7. Have regulators, stakeholders, and Tribal Nations been involved in validating the project risk evaluation? (Y/N)

From the pick list, select, by entering **Y**, for Yes, or **N**, for No, whether the relative risks of the project have been discussed with regulators, stakeholders, and Tribal Nations. Discuss the method of stakeholder and Tribal Nations involvement in the Risk Evaluation Narrative. Default value equals **N**.

Safety & Health

This data will be used to satisfy ES&H ADS requirements. Information on Safety & Health activities is needed to ensure that the major S&H issues within a project have been addressed, and to identify resources employed and/or needed to accomplish S&H objectives.

D.1. Direct Safety & Health and Risk Narratives

Descriptions of Safety & Health activities are to be provided in the following narratives separated under the category headings of hazards, controls, work performance, and feedback and continuous improvement. Additionally, a narrative indicating incremental risk reduction metrics is to be provided.

D.1.2. Direct S&H Narrative - Hazards

Identify categories of significant S&H hazards, (e.g., radiological, chemical, industrial, construction, fire/explosion, etc.) that could impact workers, the public, or the environment. Describe activities associated with this project that have been or will be conducted to identify and analyze the hazards associated with the Scope of Work. Include reference to existing documentation (by specific facility or site document number and name) or to specific hazard documentation which is planned and budgeted in this PBS. The hazards identification needs to cover the entire project life cycle (i.e., in addition to current hazards, describe specific future hazards; for example if the project is expected to progress to remediation, or when full characterization takes place, the new hazards need to be described.) Specify the end-state hazards, if any.

Example:

The project is currently in the Facility Landlord phase which contains the S&H functions necessary to maintain a safe, compliant and operable building in compliance with the authorization basis, surveillances, compensatory measures, and maintenance and calibration of vital safety systems. The principle hazards in the Building 771/774 cluster closure project are currently the large quantities of SNM some of which is currently in an unstable form for long-term storage, quantities of hazardous chemicals, and aging equipment and infrastructure. The SNM poses a radiological hazard to workers, and chemicals could result in potential chemical contamination. In addition, there are safety concerns associated with the aging process equipment containing actinide solutions and holdup in ventilation, gloveboxes and other equipment which could result in chemical explosion or exposure. As the project progresses, workers may encounter electrical hazards due to normal age related deterioration of these buildings. In addition, workers can be expected to encounter normal occupational hazards, e.g. lifting, tripping, or falls, in each building in this cluster . These hazards will persist throughout the landlord, SNM removal and deactivation phases. In the decommissioning and cluster closure/IHSS phase of the project, the principle hazards will involve normal occupational safety hazards related to building deconstruction and soil remediation.

D.1.3. Direct S&H Narrative - Controls

Describe the significant S&H controls that have been planned and budgeted to mitigate the above

identified hazards based upon the formally-established and agreed-upon standards/requirements that establish the authorization basis or safety envelope for this project. Include a description of the standards/requirements with specific reference to existing documentation (by specific facility or site document number and name) which establishes the authorization basis or safety envelope for this project (i.e., SAR, HASP, documented Safety Management System, set of approved work smart standards, etc.). Also describe any documentation that is planned and budgeted whose purpose is to establish or change the authorization basis or safety envelope for this project.

Example:

> The current authorization basis for this project (during the landlord phase) includes the existing site infrastructure programs, the Building 771 FSAR (1987)/ OSR(6/87), the Building 774 FSAR (1987)/OSR(6/87), and existing JCOs and USQDs for these buildings. To protect workers from the principle hazard, radiological exposure, the principles of the RADCON manual will be followed in all buildings in the cluster including limiting time of exposure, proper PPE, anti-C clothing, and area monitoring. The Building 771 FSAR is scheduled to be replaced by B771 BFO when implementation is completed in 12/97. The Building 774 FSAR is scheduled to be replaced by a Building 774 BIO. The authorization basis for Building 771 and Building 774 will be updated again during the deactivation phase to reflect the changes in the facility activity in preparation for decommissioning. In addition, during the decommissioning phase, the RFCA will require development of a specific Decommissioning Project Plan (DPP) and a HASP. In addition, Buildings 771 and 774 will require a Decommissioning Operations Plan (DOP) as defined in the RFCA and the DPP.

D.1.4. Direct S&H Narrative - Work Performance

Describe the activities and checkpoints (e.g., Operational Readiness Reviews (ORRs), Unresolved Safety Question (USQ) Process, Stop Work Procedures, training, etc.) needed to ensure readiness prior to start of work, monitor adequacy of safety controls, and mechanisms that will be used to identify unforeseen S&H project hazards and manage major project changes or modifications (change control). Also describe the S&H resources for the project (allocated by Functional Category) necessary for work to be performed in a manner that protects the environment, worker and public health and safety (i.e., the work can be performed safely). Resource descriptions should show that the resources (including both costs and skill mix) are adequate to support the identified controls, including establishing safety and health management systems. Specify the assumed cost per FTE by functional category. Changes that may occur between resource allocation (by Functional Category) over the life cycle of the project should also be discussed. This discussion should be consistent with the resource allocation (by Functional Category) provided in this PBS. It should also highlight any unfunded S&H resource requirements.

Example:

> The resources necessary to accomplish the work safely are provided through the Authorization Basis, the site Health and Safety Program requirements, and through the resources allocated to the site's integrated safety management system in the following functional categories: 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. S&H resources are planned and allocated into these categories by cost centers through the work breakdown structure and resource loaded into the project for each fiscal year. The average cost per FTE assumed (burdened rate) is $88K/year for RCTs, $95K/year for Rad Engineers, $98K/year for Fire Protection Engineers, and $88K /year for Industrial Hygienists. Since, the activities being performed in Building 771/774 are currently in operation, no restart reviews are currently anticipated. The S&H resources necessary to accomplish the Building 771/774 cluster landlord functions include: fire protection personnel to conduct biweekly fire system safety checks, monthly safeguard and accountability reviews of emergency procedures, periodic (bimonthly) industrial hygiene surveys, and radiological control technicians to conduct daily radiological monitoring and release workforce from the buildings. No appreciable change in S&H resource requirements is anticipated for these landlord activities until completion of SNM consolidation, and conduct of physical deactivation of the facility commences. S&H resources necessary to support the SNM consolidation activity will include additional radiological monitoring and surveys, and nuclear criticality safety determinations, and are described in PBS 06. As the physical deactivation activity progresses, some landlord S&H resource reductions in fire safety and radiation protection can be made as segments of the buildings are closed off and vital safety systems, no longer considered necessary, disconnected. Completion of deactivation is reflected in the decreased S&H funding shown in FY 2003. Upon transition to decommissioning, the S&H resources will shift to industrial hazard safety assessment and industrial hygiene activities related to construction and occupational safety hazards, radiological survey of removed material treated as low level waste, compliance management activities. These resources are reflected in FY2004 through cluster closure. There are no unfunded or underfunded S&H resource requirements in this PBS.

D.1.5. Direct S&H Narrative - Feedback and Continuous Improvement

Describe the activities and mechanisms necessary to collect feedback information; identify and implement opportunities for improvement; and ensure oversight (e.g., self- assessment, lessons learned, corrective actions, external assessments, enforcement, accident/incident investigation, etc.). Ensure that these activities are sufficiently planned and budgeted.

Example:

> Compliance with the authorization basis will be verified by surveillances and maintenance of compensatory measures. ESH&Q Oversight assessments will be conducted, as well as performance monitoring to determine if the project is implemented effectively and efficiently The resources necessary to conduct these assessments are provided in PBS 30.

D.1.6. Risk Evaluation Narrative

Discuss incremental risk reduction metric and references to supporting risk and review information.

The Project Manager should develop a metric that appropriately measures incremental risk reduction. This measure could equal one or more of the EM performance measures, and/or alternative measure(s) selected

by the Project Manager (e.g., kilograms of nuclear material stabilized, cubic meters of waste treated, etc.) The purpose is to demonstrate annual reductions in risk and the years in which a high risk project becomes a medium risk and when a medium risk becomes low, etc. Indicate the metric(s) used to demonstrate annual changes in the level of risk; explain the basis/method of regulator and stakeholder participation, and external peer review.

D.2. Safety and Health Direct Data

All major Safety & Health costs from FY 1997 to FY 2000 are to be captured under nine major headings based on cost category, and according to functional category as further explained below. All cost figures are to be reported in thousands of dollars. Numbers in the "Total" rows will be calculated automatically as cost data is entered.

Safety and Health Functional Categories

The S&H components of site work can be costed out in various ways. Generally these can be classified as direct costed or indirect costed. To ensure that all necessary S&H resources are available to support the safe completion of 2006 Plan projects, both need to be identified. For the purposes of this guidance, direct costed S&H resources will refer to those that are directly funded through a PBS. Indirect costed S&H resources will refer to those which are funded through an allocable cost pool and are indirectly funded through all PBSs as a "burden" or "tax" to all of the direct funded resources. The following are types of S&H resources with a discussion of various funding methodologies.

1) Safety and Health functions that are necessary and integral to conduct EM programmatic activities safely, e.g., the S&H personnel and funding resources at the elemental work unit level necessary to conduct the specific activity, such as radiation monitoring for SNM stabilization. This also includes direct mission activities whose primary driver is safety and health in nature, e.g. a line item to upgrade the fire protection equipment. Surveillance and Maintenance activities for the project should reflect the S&H requirements appropriate to the current mission of the facility. This does not include those activities that are the primary focus of the EM mission, even if some secondary S&H benefits can be attributed to theses activities, e.g. actual cleanup activities. These S&H resources are considered direct costed and should be identified in the PBS through which they are funded. They are to include the same "burden" applied to any other direct costed programmatic funding.

2) Sitewide safety and health activities that are necessary for the operation of the site, regardless of the EM programmatic work, e.g., sitewide fire protection and emergency services, and occupational medical services that are necessary as a landlord function, and/or program management and S&H training functions that are integral to the conduct of S&H activities at the site. Some sites may have "projectized" these activities, in which case they are considered direct costed, however generally these are considered indirect costed S&H activities. Do NOT attempt to allocate indirect costed S&H resources to each PBS as the "burden" to that PBS. An allocation methodology is described in the SSL.

3) S&H initiatives pursued for cost effectiveness or continuous improvement of the site safety and health posture, e.g., pursuit of VPP star status, or the implementation of behavior based safety initiatives to bring about a fundamental change in the safety culture of the workforce. Some sites may have "projectized" these activities, in which case they are considered direct costed, however generally these are considered indirect costed S&H activities. Do NOT attempt to allocate indirect costed S&H resources to each PBS as the "burden" to that PBS. An allocation methodology is described in the SSL.

Nine Safety and Health Functional Categories have been established to assist planners in understanding and communicating the major S&H issues, activities, and resources associated with a project or site-wide S&H program. The functional category definitions provided below describe the programmatic activities that should be included for that particular functional category. These definitions are consistent with the ES&H Management Planning Process.

A. **Emergency Preparedness** - The Emergency Preparedness functional category includes activities that are intended to provide the final barrier for ensuring the safety and health of workers and the public, and for protecting property and the environment in the event of an emergency. Activities in this functional category include maintenance/inspection of emergency facilities and equipment; emergency response team personnel training, drills and exercises; maintaining/updating current emergency plan based on site-specific hazards; coordination with State and Local authorities and Federal agencies. Hazard assessment provides the technical basis to establish the resources necessary for the site emergency management programs.

B. **Fire Protection** - The Fire Protection functional category includes all activities intended to prevent, minimize, detect, and suppress fires. This functional category includes fire prevention; fire detection; fire suppression systems; fire fighting and HAZMAT response; loss prevention; operation of ambulances and fire fighting equipment; life safety testing and inspection of fire detection and suppression equipment and alarm systems; enforcement of flammable and explosive material control; training/systems to meet OSHA, National Fire Protection Association (NFPA), state and local fire protection requirements; review of designs/plans/specifications for compliance with regulations, codes, and standards, and inspection of construction activities for potential fire hazards; and mutual aid agreements with local authorities. This functional category excludes fire protection activities and/or systems that are solely for the benefit or protection of nuclear systems (e.g., glove box inerting systems). These excluded activities are to be included in the Nuclear Safety functional category.

C. **Industrial Hygiene** - The Industrial Hygiene functional category includes all activities intended to provide protection to workers from chemical, biological, physical, and physiological hazards. Activities in this functional category include anticipation, recognition, evaluation, and control of health hazards (including physiological stress, such as noise, heat, cold, and non-ionizing radiation); redesign of equipment and tasks; ventilation; substitution of less hazardous materials; written and verbal communication of real and perceived hazards; personnel protection; and laser safety. This functional category does not include medical surveillance, employee medical records, and exposure of workers to ionizing radiation.

D. **Industrial Safety** - The Industrial Safety functional category includes all activities intended for the protection of workers from physical trauma. This functional category includes electrical safety; machinery and machine guarding; personnel protection; accident investigation; compressed gas and pressure system safety; hoisting, rigging, and material handling; lock-out/tag-out; confined space controls; platform, man-lift and scaffolding usage; ensuring safe surfaces for walking and working; cutting, welding and brazing safety; hand and portable power tool safety; explosives and hazardous material handling, storage and use; construction safety; firearms safety; and facility egress.

E. **Occupational Medicine** - The Occupational Medical Services functional category includes all activities intended to provide a comprehensive occupational medical program. This functional category includes employee health examinations such as pre-placement and qualification, return to work, fitness for duty, and termination examinations; diagnosis and treatment of occupational illnesses

and injuries; employee health counseling (employee assistance program and wellness); maintenance of medical records; emergency medical treatment and triage; specialized medical equipment; and immunization programs.

F. **Nuclear Safety** - The Nuclear Safety functional category includes activities that maintain or improve the level of safety associated with radioactive and/or fissionable materials that exist in such form and quantity that a nuclear hazard potentially exists to the employees or the general public. Included are activities involving critical safety or nuclear operations safety associated with the following 2006 Plan operations:

- Production, processing, or storage of radioactive liquid or solid waste, fissionable materials or tritium;
- Nuclear material separations operations;
- Irradiated materials inspection, fuel fabrication, decontamination or recovery operations;
- Fuel enrichment operations;
- Environmental remediation or waste management activities involving radioactive materials.
- Radioactive source production and source materials
- Nuclear Safety Analyses

It is not intended that the programmatic aspects of nuclear operations be captured and reported in this functional category; only those activities designed to enhance or maintain the safety and health performance of the line programs should be categorized as nuclear safety. The physical systems, personnel, and programs to provide nuclear material accountability, safeguards, and security are not included.

G. **Radiation Protection** - The Radiation Protection functional category includes activities intended to control worker and public exposure to radioactivity. This functional category includes control equipment and procedures for radiation sources; interlocks, instrumentation and shielding for radiation-generating devices; equipment and procedures used to minimize or mitigate external exposure; personnel dosimetry, bioassay program, and `ALARA programs; control of paths for inhalation/ingestion/skin penetration of radioactive material; radiation-exposure records; fixed and portable instrumentation for radiation detection and measurement; and contamination control.

H. **Transportation Safety** - The Transportation Safety functional category includes activities that ensure safe packaging and transportation. This functional category includes packaging certification; coordination of intra-building and on-site movements and transfers; off-site and international shipments; transportation (including marking and labeling) of hazardous material; inspection/maintenance of transportation equipment; testing and technology of transportation hardware; certification and training of transportation operators; aviation safety; motor vehicle safety; watercraft safety; and rail safety.

I. **Management Oversight** - The Management and Oversight functional category includes activities that coordinate, direct, integrate and control S&H activities across multiple functional categories. If the oversight is limited to only one functional category, include that oversight activity in the corresponding functional category. This category includes S&H documentation and document control activities; configuration management; S&H performance trending, analyses, and lessons learned feedback; corrective action tracking; S&H self-assessment activities; dedicated internal S&H personnel;

coordination and communication with DOE, state, and local authorities; internal audits and surveillance; external S&H program reviews; operational readiness reviews; and voluntary protection program. Nuclear safety analyses are included in the Nuclear Safety functional category.

D.2.2. Safety and Health Cost Reporting - Direct Costs

Enter all major **direct costed** (including contractors, any subcontractors, and non-labor resources) S&H support for each year, from FY 1997 through FY 2000 (Note: The direct costs for Federal S&H staff are to be captured in the Program Direction PBS, not the individual project baseline summaries.) The total baseline costs from this PBS will be included in the table as seeded numbers. All cost figures are to be reported in thousands of dollars. Numbers in the totals rows and the percentage of this baseline total which the total S&H Direct costs comprise will be automatically calculated.

Note: Direct funded Safety and Health resources identified are to include the same burden applied to any other programmatic direct funding. In the Safety and Health Narrative, specify your assumed cost per FTE.

D.2.3. Safety and Health FTE Reporting - Direct Contractor FTEs

Enter all major direct costed S&H support FTEs (including only contractors or subcontractors) for each year from FY 1997 through FY 2000. (Note: Report All FTEs as Average FTEs.)

Average FTEs - Average FTEs reflect an estimate of the average for the number of site management contract, subcontracted within site management contract, and "other" FTEs over the course of each fiscal year. It is assumed this average will remain the same throughout the project life cycle unless you indicate otherwise.

NOTE: ONLY EM PROGRAM S&H COSTS and FTEs UNDER THIS PBS should be included in these Tables. Activities funded by other Programs at the site (i.e., DP, NE, FE, etc.) should be reported in accordance with Department-wide and Program-specific guidance for reporting these costs and FTEs. Currently, departmental budget guidance requires capturing non-EM ES&H costs and FTEs through the use of ES&H Activity Data Sheets produced in the Departmental ES&H Management Planning Information System (and consolidated by EH).

Enhanced performance (doing more with less) is the key to life-cycle cost reduction and improvements in productivity must be given the highest priority if EM is to achieve its goals. Enhanced performance measures are used ensure that the performance credits given to sites are defensible to Congress.

E. Enhanced Performance Measures

EM will track Enhanced Performance by comparing baseline cost estimates to fiscal year actuals, and by monitoring changes in life-cycle costs and end dates over time. The basis for measuring EM's enhanced performance goals (life-cycle cost reductions and accelerated cleanup) in the short and long term is percentage of work completed. **Percentage of work completed assumes that 0 percent of the project was completed as of 10/1/96.** Site management is responsible for developing and documenting the methodology used to measure the percentage of work completed for each PBS. This methodology must be rigorous and defensible. All cost data derived in this section is reported in thousands of current year dollars.

E.1. Project Estimates (All dollars in thousands)

Estimated project costs for the upcoming fiscal year will be made by the project manager to ensure that the enhanced performance credits earned by the site are defensible to Congress. This data is derived from Section A.2.15 of the PBS.

E.1.1. Current Estimated Life-cycle Cost of Project

The project's life-cycle cost estimate is derived from Section A.2.15 of this PBS. No data entry is required.

E.1.2. Previously Estimated Life-cycle Cost of Project

The life-cycle cost estimate made at the conclusion of the previous fiscal year is derived from the February 28, 1997, PBS. No data entry is required.

E.1.3. Project Cost for FY 1997

The estimated project cost for FY 1997 is derived from A.2.15 of the most current PBS. No data entry is required.

E.1.4. Projected Percentage of Work Completed by End of FY 1998

Enter the cumulative percentage of project work that is scheduled to be completed by the end of the fiscal year. This percentage begins at zero at the beginning of FY 1997, and is cumulative in following years. The percentage of work completed assumes that 0 percent of the project was completed as of 10/1/96.

E.1.5. Current Projected End Date of Project

The current projected end date of the project is derived from Section A.3 (Schedule Milestones) of the

most current PBS. No data entry is required.

E.1.6. Previously Projected End Date of Project

The previously projected end date of the projects is derived from the February 28, 1997, PBS. No data entry is required.

E.2. Performance for FY 1997

Includes actual project costs for FY 1997 and actual percentage of project work completed to date.

E.2.1. Actual Cost for FY 1997

The actual project cost for FY 1997 is derived from A.2.15 of the most current PBS. No data entry is required.

E.2.2. Actual Percentage of Work Completed to Date

Enter the project's total percentage of work completed to date. The percentage of work completed assumes that 0 percent of the project was completed as of 10/1/96.

E.3. Comparing Baseline to the Actuals (All dollars in thousands)

The fields under this heading are all calculated fields, comparing baseline estimates in the FY 1996 PBS to actual performance reported in the most recent PBS.

E.3.1. Cost Deltas

These fields calculate:

- The difference (if any) between actual and projected project cost for FY 1997.
- The change (if any) in the project's life-cycle cost estimate since the previous PBS submittal

E.3.2. Change in Percentage of Work Completed

This field records the difference in planned scope (in terms of percentage of work completed) and scope achieved. This field will not be calculated until the end of FY 1998. The change in percentage of work completed assumes that 0 percent of the project was completed as of 10/1/96.

E.4. Enhanced Performance Categorization Process

Differences calculated in Section E.3 need to be categorized to give sites credit for improvements achieved through enhanced performance. These differences must be categorized for FY 1997 project costs and for estimated life-cycle costs. The differences should be put into one and only one of the following "bins":

- **Change in End State (Y/N)**
  Indicate if the end state changed over the course of the previous fiscal year. Choose **Y** from the pick list for Yes, or **N** for No.

  If "Y" is selected, then choose from the following pick list to determine if the change were a result of:
  a. Cost Avoidance, or
  b. Newly Incurred Cost.

  Cost Avoidance is defined as project savings that were accrued through a change in outcome (or, end

state) that was approved by all regulators, stakeholders, and Tribal Nations.
Newly Incurred Cost is an increase in project costs as a result of scope increases (end state to be "more clean").

- **Change in Scope (Y/N)**
  Indicate if project scope changed over the course of the previous fiscal year. Choose **Y** from the pick list for Yes, or **N** for No.

  If "Y" is selected, then choose from the following pick list to determine if the change were a result of:
  a. Scope Deletion, or
  b. Scope Addition.

  Scope deletion is defined as the achievement of cost savings without changing the outcome (i.e., end state remains constant).
  Scope addition is an increase in costs without a change in outcome.

- **Change in End Date (Y/N)**
  Indicate if the end date changed over the course if the previous fiscal year. Choose **Y** from the pick list for Yes, or **N** for No.

  If "Y" is selected, then choose from the following pick list to determine if the change were a result of:
  a. Accelerated Schedule, or
  b. Scope Deferral.

  Accelerated schedule occurs when scope from an outyear is moved forward to the current year.
  Scope deferral is the opposite of accelerated schedule; scope from the current year is rescheduled for completion in an outyear.

E.5 Categorizing Sources of Enhanced Performance.
This section is for categorizing the sources of enhanced performance identified in Section E.4. (cost avoidance, scope deletion, or accelerated schedule). Using the categories provided, determine what the sources of enhanced performance were for actual cost savings in FY 1997, and for reductions in the projected life-cycle cost.

The provided categories are: use of new technologies or techniques, streamlined process, resequencing of projects (mortgage reduction), privatization, innovative contracting, pollution prevention, site activity integration, and site support cost changes. For each category that applies, enter the percentage of the savings (for FY 1997 or life cycle) that occurred through that category. The total percentage is calculated from the amounts entered, and should sum to 100%.

E.6. Total Calculated Enhanced Performance (All dollars in thousands)
If the differences calculated in E.3.1 are determined to be the result of enhance performance (cost avoidance, scope deletion, or accelerated schedule) these differences are entered automatically in this field to give the enhanced performance total for this project. All PBS totals will be "rolled up" at the site level to determine if the Operations/Field Office has reached its enhanced performance goals.

E.7. Enhanced Performance Narratives

The following narrative sections are to be filled out to describe what was done to achieve enhanced performance. This information may be used by other Operations/Field Offices and other projects to help achieve the DOE-EM mission of minimizing costs.

E.7.1. Cost Avoidance Narrative

Please use the space provided to describe methods that were undertaken to achieve cost avoidance.

E.7.2. Scope Deletion Narrative

Please use the space provided to describe methods that were undertaken to achieve scope deletion.

E.7.3. Accelerated Schedule Narrative

Please use the space provided to describe methods that were undertaken to accelerate schedule.

E.8. Mortgage Reduction Potential Narrative

Use this narrative to discuss the mortgage reduction potential of this project or subproject contained within this project. Specifically, discuss activities (subprojects) that have an internal rate of return (IRR) potential of 10 percent or more. For these projects, discuss the benefits of incremental funding for this project.

Attachment E. Site Summary Level Format and Instructions

This section contains guidance for completion of the Site Summary Level. One Site Summary Level needs to be completed for each EM site with remaining activities/funding (i.e., for every EM site that is not complete). If all activities at the site are completed and no more funding is going to the site then a Site Summary Level is not required for this submission (however, it may be required in the future). An outline of the data collected in the SSL and the page numbers corresponding to each section follow.

SSL Overview

PART C

Site Summary Level - Part A: Site Summary Narratives

S. - Site Summary Level - Part A

S.1. Site Summary Name:

S.2. Site Summary Narratives

S.2.1. What is the name of the Word or WordPerfect file that contains your "General Site Narrative?"

S.2.2. Additional Opportunities Addressed (Section S.8. in the 2/28/97 SBS)

The size and shape of the narrative box can be adjusted.

S.2.3. Stakeholder and Tribal Nations Involvement (Section S.9. in the 2/28/97 SBS)

The size and shape of the narrative box can be adjusted.

Site Summary Level - Part A: Site Summary Assumptions

S.3. Site Summary Assumptions (Section S.7. in the 2/28/97 SBS)

Assumption #	Assumption	Project ID #'s Affected

Site Summary Level - Part A: Site Summary Assumptions

Assumption #	Assumption	Project ID #'s Affected

Site Summary Level - Part A: Site Summary Assumptions

Assumption #	Assumption	Project ID #'s Affected

Site Summary Level - Part A: Site Summary Assumptions

Assumption #	Assumption	Project ID #'s Affected

Site Summary Level - Part A: Geographic Site Narratives

S.4. Geographic Site Name:

S.5. Geographic Site Narratives

S.5.1. EM Site End State (Section S.3. in the 2/28/97 SBS)

The size and shape of the narrative box can be adjusted.

S.5.2. Future Site Stewardship (Section S.4. in the 2/28/97 SBS)

The size and shape of the narrative box can be adjusted.

Site Summary Level - Part A: Geographic Site Completion Dates and Land Use

S.6. Geographic Site Name:

S.7. Completion Dates

	Release Sites	Waste	Materials	Facilities	Overall
Planned Completion Date:					
Estimated Completion Date with Full Enhanced Performance:					
Actual Completion Date:					

S.8. Internal Land Use Performance Measures

	Units	Total	Prior to 1997	1997	1998	1999	2000	2001	2002	2003
Total EM-encumbered Land	acres									
Land Available for Alternative Future Use	acres	0.0								
Historical Land Released for Alternative Use	acres	0.0								
Historical Land Released for Public Use	acres	0.0								
Land Intended to be Released for Public Use	acres	0.0								
EM-encumbered Land Remaining	acres	0.0								

S.9. External Land Use Performance Measures

Geographic Area	Total Acres	Applicable Use	Medium Type	Residual Contamination

Site Summary Level - Part A: Geographic Site Completion Dates and Land Use

S.8. Internal Land Use Performance Measures

	2004	2005	2006	2007	2008	2009	2010	2011-2070
Total EM-encumbered Land								
Land Available for Alternative Future Use								
Historical Land Released for Alternative Use								
Historical Land Released for Public Use								
Land Intended to be Released for Public Use								
EM-encumbered Land Remaining								

S.9. External Land Use Performance Measures

	Long-Term Institutional Control Needs		
Geographic Area	Start Date	Action	Responsible Entity

Site Summary Level - Part A: Geographic Site Completion Dates and Land Use

S.8. Internal Land Use Performance Measures

Total EM-encumbered Land
Land Available for Alternative Future Use
Historical Land Released for Alternative Use
Historical Land Released for Public Use
Land Intended to be Released for Public Use
EM-encumbered Land Remaining

S.9. External Land Use Performance Measures

Geographic Area	Comments

Site Summary Level - Part A: Geographic Site Completion Dates and Land Use

Geographic Area	Total Acres	Applicable Use	Medium Type	Residual Contamination

Site Summary Level - Part A: Geographic Site Completion Dates and Land Use

	Long-Term Institutional Control Needs		
Geographic Area	Start Date	Action	Responsible Entity

Site Summary Level - Part A: Geographic Site Completion Dates and Land Use

Geographic Area	Comments

Site Summary Level - Part A: Geographic Site-2 Narratives

S.4. Geographic Site Name:

S.5. Geographic Site Narratives

S.5.1. EM Site End State (Section S.3. in the 2/28/97 SBS)

The size and shape of the narrative box can be adjusted.

S.5.2. Future Site Stewardship (Section S.4. in the 2/28/97 SBS)

The size and shape of the narrative box can be adjusted.

Site Summary Level - Part A: Geographic Site-2 Completion Dates and Land Use

S.6. Geographic Site Name:

S.7. Completion Dates

	Release Sites	Waste	Materials	Facilities	Overall
Planned Completion Date:					
Estimated Completion Date with Full Enhanced Performance:					
Actual Completion Date:					

S.8. Internal Land Use Performance Measures

	Units	Total	Prior to 1997	1997	1998	1999	2000	2001	2002	2003
Total EM-encumbered Land	acres									
Land Available for Alternative Future Use	acres	0.0								
Historical Land Released for Alternative Use	acres	0.0								
Historical Land Released for Public Use	acres	0.0								
Land Intended to be Released for Public Use	acres	0.0								
EM-encumbered Land Remaining	acres	0.0								

S.9. External Land Use Performance Measures

Geographic Area	Total Acres	Applicable Use	Medium Type	Residual Contamination

Site Summary Level - Part A: Geographic Site-2 Completion Dates and Land Use

S.8. Internal Land Use Performance Measures

	2004	2005	2006	2007	2008	2009	2010	2011-2070
Total EM-encumbered Land								
Land Available for Alternative Future Use								
Historical Land Released for Alternative Use								
Historical Land Released for Public Use								
Land Intended to be Released for Public Use								
EM-encumbered Land Remaining								

S.9. External Land Use Performance Measures

	Long-Term Institutional Control Needs		
Geographic Area	Start Date	Action	Responsible Entity

Site Summary Level - Part A: Geographic Site-2 Completion Dates and Land Use

S.8. Internal Land Use Performance Measures

Total EM-encumbered Land
Land Available for Alternative Future Use
Historical Land Released for Alternative Use
Historical Land Released for Public Use
Land Intended to be Released for Public Use
EM-encumbered Land Remaining

S.9. External Land Use Performance Measures

Geographic Area	Comments

Site Summary Level - Part A: Geographic Site-2 Completion Dates and Land Use

Geographic Area	Total Acres	Applicable Use	Medium Type	Residual Contamination

Site Summary Level - Part A: Geographic Site-2 Completion Dates and Land Use

	Long-Term Institutional Control Needs		
Geographic Area	Start Date	Action	Responsible Entity

Site Summary Level - Part A: Geographic Site-2 Completion Dates and Land Use

Geographic Area	Comments

Site Summary Level - Part B: Site Summary Costs

S. - Site Summary Level - Part B

S.1. Site Summary Name:

S.10. Site Summary Costs (All dollars in thousands)
(Section A.4.b. in the 2/28/97 PBS)

Category	1997-2006 Total	2007-Completion Total	Grand Total	1997 Planned	1998	1999	2000	2001	2002	2003	2004	2005
I. High Level Waste												
A. Storage	0	0	0									
B. Treatment	0	0	0									
C. Disposal Ready Storage	0	0	0									
II. Transuranic Waste												
A. Storage	0	0	0									
B. Treatment	0	0	0									
C. Disposal	0	0	0									
III. Mixed Low Level Waste												
A. Storage	0	0	0									
B. Treatment	0	0	0									
C. Disposal	0	0	0									
IV. Low Level Waste												
A. Storage	0	0	0									
B. Treatment	0	0	0									
C. Disposal	0	0	0									
V. Hazardous Waste	0	0	0									
VI. 11e(2) or 11e(2) Mixed Byproduct Waste	0	0	0									
VII. All Other Waste Types	0	0	0									

Site Summary Level - Part B: Site Summary Costs

S. - Site Summary Level - Part B

S.10. Site Summary Costs (All dollars in t
(Section A.4.b. in the 2/28/97 PBS)

Category	2006	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045
I. High Level Waste												
A. Storage												
B. Treatment												
C. Disposal Ready Storage												
II. Transuranic Waste												
A. Storage												
B. Treatment												
C. Disposal												
III. Mixed Low Level Waste												
A. Storage												
B. Treatment												
C. Disposal												
IV. Low Level Waste												
A. Storage												
B. Treatment												
C. Disposal												
V. Hazardous Waste												
VI. 11e(2) or 11e(2) Mixed Byproduct Waste												
VII. All Other Waste Types												

Site Summary Level - Part B: Site Summary Costs

S. - Site Summary Level - Part B

S.10. Site Summary Costs (All dollars in t
(Section A.4.b. in the 2/28/97 PBS)

Category	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
I. High Level Waste					
A. Storage					
B. Treatment					
C. Disposal Ready Storage					
II. Transuranic Waste					
A. Storage					
B. Treatment					
C. Disposal					
III. Mixed Low Level Waste					
A. Storage					
B. Treatment					
C. Disposal					
IV. Low Level Waste					
A. Storage					
B. Treatment					
C. Disposal					
V. Hazardous Waste					
VI. 11e(2) or 11e(2) Mixed Byproduct Waste					
VII. All Other Waste Types					

Site Summary Level - Part B: Site Summary Costs

Category	1997-2006 Total	2007-Completion Total	Grand Total	1997 Planned	1998	1999	2000	2001	2002	2003	2004	2005
VIII. Remedial Action												
A. Assessments (of Release Sites)	0	0	0									
B. Cleanup (of Release Sites, Excluding Assessments)	0	0	0									
IX. Facilities Deactivation												
A. S&M Prior to Completion of Deactivation	0	0	0									
B. Deactivation	0	0	0									
X. Facilities Decommissioning												
A. Assessments (of Facilities)	0	0	0									
B. Decommissioning (of Facilities, Excluding Assessments)	0	0	0									
C. Pre-Decommissioning S&M	0	0	0									
XI. Nuclear Materials												
A. S&M Prior to Comp. of Stabilization/Disposition Ready	0	0	0									
B. Stabilization and/or Made Disposition Ready	0	0	0									
XII. Spent Nuclear Fuel												
A. S&M Prior to Comp. of Stabilization/Disposition Ready	0	0	0									
B. Stabilization and/or Made Disposition Ready	0	0	0									
XIII. Long Term Monitoring												
A. Nuclear Materials	0	0	0									
B. Spent Nuclear Fuel	0	0	0									
C. Facilities	0	0	0									
D. Post-remediation Long-term S&M	0	0	0									

Site Summary Level - Part B: Site Summary Costs

Category	2006	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045
VIII. Remedial Action												
A. Assessments (of Release Sites)												
B. Cleanup (of Release Sites, Excluding Assessments)												
IX. Facilities Deactivation												
A. S&M Prior to Completion of Deactivation												
B. Deactivation												
X. Facilities Decommissioning												
A. Assessments (of Facilities)												
B. Decommissioning (of Facilities, Excluding Assessments)												
C. Pre-Decommissioning S&M												
XI. Nuclear Materials												
A. S&M Prior to Comp. of Stabilization/Disposition Ready												
B. Stabilization and/or Made Disposition Ready												
XII. Spent Nuclear Fuel												
A. S&M Prior to Comp. of Stabilization/Disposition Ready												
B. Stabilization and/or Made Disposition Ready												
XIII. Long Term Monitoring												
A. Nuclear Materials												
B. Spent Nuclear Fuel												
C. Facilities												
D. Post-remediation Long-term S&M												

Site Summary Level - Part B: Site Summary Costs

Category	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
VIII. Remedial Action					
A. Assessments (of Release Sites)					
B. Cleanup (of Release Sites, Excluding Assessments)					
IX. Facilities Deactivation					
A. S&M Prior to Completion of Deactivation					
B. Deactivation					
X. Facilities Decommissioning					
A. Assessments (of Facilities)					
B. Decommissioning (of Facilities, Excluding Assessments)					
C. Pre-Decommissioning S&M					
XI. Nuclear Materials					
A. S&M Prior to Comp. of Stabilization/Disposition Ready					
B. Stabilization and/or Made Disposition Ready					
XII. Spent Nuclear Fuel					
A. S&M Prior to Comp. of Stabilization/Disposition Ready					
B. Stabilization and/or Made Disposition Ready					
XIII. Long Term Monitoring					
A. Nuclear Materials					
B. Spent Nuclear Fuel					
C. Facilities					
D. Post-remediation Long-term S&M					

Site Summary Level - Part B: Site Summary Costs

Category	1997-2006 Total	2007-Completion Total	Grand Total	1997 Planned	1998	1999	2000	2001	2002	2003	2004	2005
XIV. National Programs												
A. Environmental/Regulatory Analysis	0	0	0									
B. Transportation and Packaging												
1. Transportation Management	0	0	0									
2. Packaging Management	0	0	0									
3. Liaison and Communications	0	0	0									
C. Emergency Management Services	0	0	0									
D. Analytical/Characterization Services	0	0	0									
E. Pollution Prevention												
1. Complex-wide Activities	0	0	0									
2. Site-wide Activities	0	0	0									
3. Facility-specific Activities	0	0	0									
F. Packaging Certification & Trans. Safety	0	0	0									
SCIENCE AND TECHNOLOGY DEVELOPMENT												
XV. Science and Technology Development												
A. Mixed Waste Focus Area	0	0	0									
B. Tank Focus Area	0	0	0									
C. Subsurface Contaminant Focus Area	0	0	0									
D. Decontamination and Decommissioning Focus Area	0	0	0									
E. Plutonium Focus Area	0	0	0									
F. Spent Fuels Focus Area	0	0	0									
OTHER												
XVI. Technology Acceptance and Deployment												
A. Technology Acceptance	0	0	0									
B. Technology Deployment	0	0	0									
XVII. Basic Science and Risk Policy Program												
A. Basic Science	0	0	0									
B. Risk Policy	0	0	0									

Site Summary Level - Part B: Site Summary Costs

Category	2006	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045
XIV. National Programs												
A. Environmental/Regulatory Analysis												
B. Transportation and Packaging												
1. Transportation Management												
2. Packaging Management												
3. Liaison and Communications												
C. Emergency Management Services												
D. Analytical/Characterization Services												
E. Pollution Prevention												
1. Complex-wide Activities												
2. Site-wide Activities												
3. Facility-specific Activities												
F. Packaging Certification & Trans. Safety												
SCIENCE AND TECHNOLOGY DEVELOPMENT												
XV. Science and Technology Development												
A. Mixed Waste Focus Area												
B. Tank Focus Area												
C. Subsurface Contaminant Focus Area												
D. Decontamination and Decommissioning Focus Area												
E. Plutonium Focus Area												
F. Spent Fuels Focus Area												
OTHER												
XVI. Technology Acceptance and Deployment												
A. Technology Acceptance												
B. Technology Deployment												
XVII. Basic Science and Risk Policy Program												
A. Basic Science												
B. Risk Policy												

Site Summary Level - Part B: Site Summary Costs

Category	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
XIV. National Programs					
A. Environmental/Regulatory Analysis					
B. Transportation and Packaging					
1. Transportation Management					
2. Packaging Management					
3. Liaison and Communications					
C. Emergency Management Services					
D. Analytical/Characterization Services					
E. Pollution Prevention					
1. Complex-wide Activities					
2. Site-wide Activities					
3. Facility-specific Activities					
F. Packaging Certification & Trans. Safety					
SCIENCE AND TECHNOLOGY DEVELOPMENT					
XV. Science and Technology Development					
A. Mixed Waste Focus Area					
B. Tank Focus Area					
C. Subsurface Contaminant Focus Area					
D. Decontamination and Decommissioning Focus Area					
E. Plutonium Focus Area					
F. Spent Fuels Focus Area					
OTHER					
XVI. Technology Acceptance and Deployment					
A. Technology Acceptance					
B. Technology Deployment					
XVII. Basic Science and Risk Policy Program					
A. Basic Science					
B. Risk Policy					

Site Summary Level - Part B: Site Summary Costs

Category	1997-2006 Total	2007-Completion Total	Grand Total	1997	1998	1999	2000	2001	2002	2003	2004	2005
				Planned								
XVIII. Program Support	0	0	0									
XIX. Landlord												
A. Site-wide Infrastructure	0	0	0									
B. Site-wide Non-infrastructure	0	0	0									
XX. All Other												
A. Intergovernmental/Stakeholder Outreach Services	0	0	0									
B. Conceptual Design Reports	0	0	0									
C. Other Project-Related Bridge Costs	0	0	0									
D. UE D&D Fund Contribution	0	0	0									
E. Uranium Leasing	0	0	0									
F. U/Th Reimbursement	0	0	0									
XXI. Program Direction	0	0	0									
TOTAL ALL CATEGORIES	0	0	0	0	0	0	0	0	0	0	0	0
Escalation Rate					0.00%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
Cost Baseline in Constant FY 1998 Dollars				0	0	0	0	0	0	0	0	0

Site Summary Level - Part B: Site Summary Costs

Category	2006	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045
XVIII. Program Support												
XIX. Landlord												
A. Site-wide Infrastructure												
B. Site-wide Non-infrastructure												
XX. All Other												
A. Intergovernmental/Stakeholder Outreach Services												
B. Conceptual Design Reports												
C. Other Project-Related Bridge Costs												
D. UE D&D Fund Contribution												
E. Uranium Leasing												
F. U/Th Reimbursement												
XXI. Program Direction												
TOTAL ALL CATEGORIES	0	0	0	0	0	0	0	0	0	0	0	0
Escalation Rate	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
Cost Baseline in Constant FY 1998 Dollars	0	0	0	0	0	0	0	0	0	0	0	0

Site Summary Level - Part B: Site Summary Costs

Category	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
XVIII. Program Support					
XIX. Landlord					
A. Site-wide Infrastructure					
B. Site-wide Non-infrastructure					
XX. All Other					
A. Intergovernmental/Stakeholder Outreach Services					
B. Conceptual Design Reports					
C. Other Project-Related Bridge Costs					
D. UE D&D Fund Contribution					
E. Uranium Leasing					
F. U/Th Reimbursement					
XXI. Program Direction					
TOTAL ALL CATEGORIES	0	0	0	0	0
Escalation Rate	2.70%	2.70%	2.70%	2.70%	2.70%
Cost-Baseline in Constant FY 1998 Dollars	0	0	0	0	0

Site Summary Level - Part B: Budget by B&R

(Section B.2. in the FY 1999 Budget Update)

S.11. - Budget Data Entry

S.11.1. Environmental Closure Fund (CL), Long-term Cleanup and Waste Management (LT), Project Completion Fund (CO)

S.11.2. Budget Table (All dollars in thousands)

Total Environmental Management

Account and Expense Type	B&R Code (Locked)	1997 BA	1998 BA	1999 BA	2000 BA	Line Item #	Line Item Name

Does this SSL contain budget items for High Level Waste? Yes No (No data is held in the hidden rows.)

I. High Level Waste

A. Storage

Site Summary Level - Part B: Budget by B&R

&R Code (Locked)	1997 BA	1998 BA	1999 BA	2000 BA	Line Item #	Line Item Name

Transuranic Waste? Yes No (No data is held in the hidden rows.)

Mixed Low Level Waste? Yes No (No data is held in the hidden rows.)

Low Level Waste? Yes No (No data is held in the hidden rows.)

Hazardous Waste? Yes No (No data is held in the hidden rows.)

Site Summary Level - Part B: Budget by B&R

&R Code (Locked)	1997 BA	1998 BA	1999 BA	2000 BA	Line Item #	Line Item Name
11e(2) Byproduct Waste?				Yes	No	(No data is held in the hidden rows.)
Other Waste Types?				Yes	No	(No data is held in the hidden rows.)
Remedial Action?				Yes	No	(No data is held in the hidden rows.)
Facility Deactivation and Decommissioning?				Yes	No	(No data is held in the hidden rows.)
Nuclear Materials Stabilization?				Yes	No	(No data is held in the hidden rows.)
Spent Nuclear Fuel Stabilization?				Yes	No	(No data is held in the hidden rows.)
Long-term Monitoring?				Yes	No	(No data is held in the hidden rows.)
National Programs?				Yes	No	(No data is held in the hidden rows.)
Technology Development?				Yes	No	(No data is held in the hidden rows.)
Technology Acceptance and Deployment, Technology Deployment subcategories?				Yes	No	(No data is held in the hidden rows.)
Basic Science and Risk Policy Program, y subcategories?				Yes	No	(No data is held in the hidden rows.)
Program Support, n Activities, and es?				Yes	No	(No data is held in the hidden rows.)

Site Summary Level - Part B: Budget by B&R

&R Code (Locked)	1997 BA	1998 BA	1999 BA	2000 BA	Line Item #	Line Item Name
Landlord, Site-wide Non-infrastructure?				Yes	No	(No data is held in the hidden rows.)
"Other," ler Outreach Services, Conceptual [Bridge] Costs, UE D&D Fund /Th Reimbursement?				Yes	No	(No data is held in the hidden rows.)
Program Direction?				Yes	No	(No data is held in the hidden rows.)
	0	0	0	0		

Site Summary Level - Part B: Privatization Budget Data

S.11.3. - Privatization Budget Data

Privatization B&R Code	1997 BA	1998 BA	1999 BA	2000 BA	Line Item #	Line Item Name
Total Privatization BA (calculated)	0	0	0	0		

Site Summary Level - Part B: Indirect Safety & Health Narratives

S.12. - Indirect Safety & Health Narratives

(Direct Safety & Health Narratives are located in the PBS)

S.12.1. Indirect S&H Narrative - Hazards:

The size and shape of the narrative box can be adjusted.

S.12.2. Indirect S&H Narrative - Controls:

The size and shape of the narrative box can be adjusted.

S.12.3. Indirect S&H Narrative - Work Performance:

The size and shape of the narrative box can be adjusted.

Site Summary Level - Part B: Indirect Safety & Health Narratives

5.12.4. Indirect S&H Narrative - Feedback and Continuous Improvement:

The size and shape of the narrative box can be adjusted.

Site Summary Level - Part B: Safety & Health Indirect Cost and FTE Data

S.13. - Safety and Health Indirect Data

(Section D.2.2. in the FY 1999 Budget Update is located in the PBS)

S.13.1. Safety and Health Cost Reporting - Indirect Costs (All dollars in thousands)

	1997	1998	1999	2000
A. Emergency Preparedness				
B. Fire Protection				
C. Industrial Hygiene				
D. Industrial Safety				
E. Occupational Medicine				
F. Nuclear Safety				
G. Radiation Protection				
H. Transportation Safety				
I. Management Oversight				
Total S&H Indirect Costs	0	0	0	0
% EM S&H Indirect Costs				
Total EM S&H Indirect Costs (calculated)	0	0	0	0

(Section D.2.4. in the FY 1999 Budget Update has been removed)
(Section D.2.5. in the FY 1999 Budget Update is located in the PBS)
(Section D.2.6. in the FY 1999 Budget Update has been removed)

S.13.2. Safety and Health FTE Reporting - Indirect Contractor FTEs

	1997	1998	1999	2000
A. Emergency Preparedness				
B. Fire Protection				
C. Industrial Hygiene				
D. Industrial Safety				
E. Occupational Medicine				
F. Nuclear Safety				
G. Radiation Protection				
H. Transportation Safety				
I. Management Oversight				
Total Indirect Contractor FTEs	0.00	0.00	0.00	0.00

Site Summary Level - Part C: Critical Closure Path and Critical Events

S. - Site Summary Level - Part C

S.1. Site Summary Name:

S.14. Critical Closure Path and Critical Events

Site Designated Project ID and Title	Short Activity Description	Activity Scheduled Start Date (month/year)	Activity Scheduled Completion Date (month/year)	Programmatic Risk Category (1 through 5)			STCG Need ID #
				Technological	Work Scope Definition	Inter-Site Dependency	
I. Critical Closure Path							

Site Summary Level - Part C: Critical Closure Path and Critical Events

Site Designated Project ID and Title	Short Activity Description	Activity Scheduled Start Date (month/year)	Activity Scheduled Completion Date (month/year)	Programmatic Risk Category (1 through 5)			STCG Need ID #
				Technological	Work Scope Definition	Inter-Site Dependency	

II. Critical Events

S. - SITE SUMMARY LEVEL - PART A

Through the Site Narratives and Assumptions, information on Completion Dates, and descriptions of Internal and External Land Use Performance Measures, needed information is provided on the scope, schedule and cost of key site activities. This information allows for thorough planning that incorporates the concerns of stakeholders and Tribal Nations, and provides a means of measuring performance relative to EM's National 2006 Plan goals.

Site Narratives

S.1. Site Name

This field will be seeded. No data entry is required.

S.2. Site Narratives

These narratives will be used to explain how the site is addressing additional opportunities and issues, and describe how stakeholders and Tribal Nations participated in plan development, and can participate in the refinement and implementation of the plan.

S.2.1. Name of the Word or WordPerfect file that contains your "General Site Narrative?"

Provide the filename of the Word or WordPerfect file that contains your "General Site Narrative." This narrative will be updated on March 15, 1998, to support FY 2000 budget formulation.

Each Operations/Field Office will submit, on November 26, 1997, site narratives that discuss the life-cycle objectives of the EM program. The narrative should also discuss closure date and high visibility project life-cycle cost, end dates, and metrics in the context of the current year (FY 2000). See Attachment I for a list of high visibility projects. These narratives will be used to support the FY 2000 budget formulation process and will reside both in the Draft Site 2006 Plans and at the Site Summary Level (SSL). These narratives will be updated on March 15, 1998. For the March 15, 1998, submittal, a separate narrative must be prepared for each Appropriations Account reported at the SSL. The narratives should include the number of projects in the Appropriations Account at the site; a description of how the projects are managed at the site; the number of high visibility projects in the Appropriations Account at the site and a description of each; a description of how metrics are derived from the PBSs (and the relationship of metrics to the PBSs); and a description of the activities in the Appropriations Account at the site by B&R code, including a discussion of FY 1997, FY 1998, and FY 1999 accomplishments. The updated site narrative should break down the discussion of the site objectives consistent with the relevant B&R code categories from Attachment H.

A template is provided in Attachment H that demonstrates how site narratives will be presented in the EM budget. Specifically, Section I of the template outlines for each Operations/Field Office the overview budget narrative that will be developed from a combination of the November 24, 1997, and the March 15, 1998, site narratives. In addition, Section III of the template provides an example of how each site should focus the discussion by B&R code that is due with the March 15, 1998, submittal. Remember that a separate narrative must be prepared for each Appropriations Account

reported at the SSL. Please note that all B&R codes are not addressed in this example. All data fields represented in the template will be developed from the data that each site provides in Tables S.11.3 and S.11.4 of the SSL, and should not be provided in the narrative.

Please complete this narrative in a WordPerfect 6.1 or Word file. Please name the file in the following manner, where **"XXXX"** is the four letter code for your SSL which can be found in Attachment E:

XXXX.wpd (if WordPerfect 6.1) OR
XXXX.doc (if Word)

S.2.2. Additional Opportunities Addressed

Indicate any additional opportunities or issues at the site and explain how these opportunities or issues are being addressed.

S.2.3. Stakeholder and Tribal Nations Involvement

Describe how stakeholders and Tribal Nations participated in the up-front development of the Draft Site 2006 Plan, and how stakeholders and Tribal Nations can participate in refinement and implementation of the Plan.

S.3. Site Assumptions

Site assumptions are used to gain a better understanding of the uncertainties associated with project scope, schedule, and cost. These assumptions are used to mitigate the potential impact of these uncertainties through the development of contingency plans. Sites should report all assumptions that could affect project completion, scheduling, and land use.

- **Assumption #.**
  Assign a unique identification number to each distinct assumption.
- **Assumption.**
  Provide a brief description of the assumption.
- **Project ID #s Affected.**
  Identify all projects potentially affected by the assumption. Enter the complete, unique site-designated project IDs corresponding to the Project Baseline Summaries (PBSs); one or multiple project IDs may be entered separated by commas. If there are any problems, please call Dave Pepson of the core team at (202) 586-1596.

S.4. Geographic Site Name

This field will be seeded for each geographic site associated with this SSL. No data entry is required.

S.5. Geographic Site Narratives

Site end state is a major driver of the scope, schedule, and cost of EM activities. Understanding confidence in assumed end states will allow EM, stakeholders, and Tribal Nations to evaluate the reliability of associated costs and schedules, and is necessary for projecting scope, duration, and cost of DOE activities *after* the site end state has been achieved. Narrative fields for Section S.5 will be provided for each geographic site associated with this SSL.

S.5.1. EM Site End State

Describe the site-wide land-use assumptions (e.g., open space, industrial/commercial, residential) currently guiding project completion standards, and how these assumptions were generated. Summarize any changes in land-use planning/end-state assumptions from previous planning efforts (e.g, Future Use Report, Baseline Environmental Management Report). Provide the rationale for these differences, if any, and what resolution is necessary to gain agreement by the stakeholders and Tribal Nations. State whether there is a site future land-use agreement, or if one is planned, and the process to reach a consensus on future land uses. If EM does not own the site, define the range of land-use decision possibilities that will be afforded by the EM cleanup strategy.

S.5.2. Future Site Stewardship

Describe whether or not DOE will maintain a presence at the site once the end state has been reached. Alternatively, define other governmental or private entities that will assume ownership (part or whole) of the site. Summarize institutional control requirements including long-term surveillance, monitoring, and maintenance responsibilities for DOE and other prospective landlords. This description should include assumed scope, duration, and annual cost.

S.6. Geographic Site Name

This field will be seeded for each geographic site associated with this SSL. No data entry is required.

S.7. Completion Dates

Each Operations/Field Office must develop and include in its Draft Site 2006 Plan the expected life-cycle cost and completion date for each project or group of projects. Information on completion dates is necessary for tracking progress toward achieving the Plan's goals and objectives. Completion does not imply that EM or DOE is leaving the site. Spreadsheets for Section S.7 will be provided for each geographic site associated with this SSL.

For each of the categories described below (i.e., Release Sites, Waste, Materials, Facilities, Overall), enter the Planned Completion Date and Estimated Completion Date with Full Enhanced Performance. Actual Completion Date must be submitted only if the project or group of projects has actually been "completed" as defined below.

- **Release Sites.**
  Fiscal year that all active release site cleanup is complete. (Long-term surveillance, monitoring, and maintenance activities can remain after the release site completion date.)
- **Waste.**
  Fiscal year that no further waste is in storage -- excluding long-term, disposal-ready storage -- and all EM responsibilities have been returned to the generator.
- **Materials.**
  Fiscal year that all nuclear materials and spent nuclear fuel will be disposition ready.
- **Facilities.**
  Fiscal year all facilities are fully decommissioned, excluding post-decommissioning long-term surveillance and monitoring.
- **Overall.**
  All EM projects are complete (i.e., latest of the above dates).

EM assumes a site is "complete" when:

- Deactivation and decommissioning of all facilities currently in the EM program have been completed, excluding any long-term surveillance and monitoring;
- All releases to the environment have been cleaned up in accordance with agreed-upon cleanup standards;
- Groundwater contamination has been contained, or long-term treatment or monitoring is in place;
- Nuclear material and spent fuel have been stabilized and/or placed in safe long-term storage; and
- "Legacy" waste (i.e., waste produced by past nuclear weapons production activities, with the exception of high-level waste) has been disposed of in an approved manner.

S.8. Internal Land-Use Performance Measures

Internal land-use performance measures are used to demonstrate progress toward accomplishing EM's 2006 Plan vision, goals, and objectives. This information is used as a determining factor in the Assistant Secretary's Performance Measures and is presented on an annual basis. Internal land categories include total EM-encumbered land, land available for alternative future use, historical land released for public and private use, land intended to be released for public use, and EM-encumbered land remaining. Spreadsheets for Section S.8 will be provided for each geographic site associated with this SSL.

Total EM-encumbered Land

In the "Total" column, record the total number of acres within a site that are subject to Environmental Management activities. This value should equal the sum of "Land Available for Alternative Future Use," "Historical Land Released for Alternative Use," "Historical Land Released for Public Use," and "Land Intended to be Released for Public Use." This number does not necessarily reflect the entire site size (i.e., number of acres subject to EM activities could be less than the total site acreage). Units should be acres.

Please use the "Total EM-encumbered Land" as the base for reporting projections, and actual data for the land available/released for alternative future use, and land released/intended to be released for public use.

Land Available for Alternative Future Use

Indicate the number of acres within site boundaries that are expected to be available for alternative future use for each fiscal year time period. Do not include land areas which have already been released (see Historical Land Released for Alternative Use below). For purposes of reporting, land available for alternative use includes land available for use by outside parties (e.g., for agricultural, recreational, or industrial purposes) or available to serve new mission needs as they arise. Sites should distinguish which parcels would be retained by DOE and which would be released to other entities (e.g., private, Department of the Interior). For all categories of land use, identify parcels where DOE would have an on-going role in inspecting, monitoring, or implementing institutional controls (e.g., physical barriers, deed restrictions). Facilities available for alternative uses should be reported as the acreage covered by their footprint. Land areas should be reported annually through 2006. The total acreage expected to be released after 2006 should be reported as a single value. The number in the "Total" column will be calculated automatically.

Historical Land Released for Alternative Use
Indicate in the "Pre-1997"column the number of acres within site boundaries that have already been released for alternative use.

Historical Land Released for Public Use
Indicate in the "Pre-1997"column the number of acres within site boundaries that have already been released for public use.

Land Intended to be Released for Public Use
Indicate the number of acres within site boundaries that are expected to be released for public use. This number will be a subset of the "Land Available for Alternative Future Use" and should include land released to entities other than the Department of the Interior. Acres for public use include real property held, sold, leased or transferred to another entity that has a land-use/future-use designation of public use. Do not include land areas that have already been released (see Historical Land Released for Public Use). Land areas should be reported annually through 2006. The total acreage expected to be released after 2006 should be reported as a single value. The number in the "Total" column will be calculated automatically.

EM Encumbered Land Remaining
Amount of land that will continue to be encumbered by EM following the site closure date (i.e., Land Available For Future Use and Land Intended to be Released for Public Use subtracted from Total EM-Encumbered Land). This field is calculated. No data entry is required.

S.9. External Land-Use Performance Measures

External performance measurement will help EM to assess the results of key site activities compared to planned goals, determine progress towards achieving the site's end state, and improve program performance at all organizational levels. This information provides end-state and land-use information using geographic and land categories familiar to regulators, stakeholders, and Tribal Nations. Life-cycle scope, schedule, and cost can be assessed using this information. Spreadsheets for Section S.9 will be provided for each geographic site associated with this SSL.

- **Geographic Area:**
  Indicate a specific Geographic Area at the site. The geographic breakout should reflect designations familiar to regulators, stakeholders, and Tribal Nations.

- **Total Acres:**
  Indicate the number of acres the geographic area covers.

- **Applicable Uses:**
  Using the pick list provided, select the likely use that applies to the specific medium type. Land-use categories may be defined as follows:

Land-use Category	Operational Definition
Agricultural	Unfenced areas where subsistence or commercial agriculture predominates without restriction on surface or groundwater use.
Residential	Unfenced areas where permanent residential use predominates. There is no restriction on surface water, but groundwater use may be restricted.
Recreational	Unfenced areas where daytime use for recreational activities (e.g., hiking, biking, sports), hunting, and some overnight camping is allowed. Fishing may be limited to catch-and-release.
Industrial	Active industrial facility where groundwater may be restricted.
Open Space	Posted areas are reserved generally as buffer or wildlife management zones. Native Americans or other authorized parties may be allowed permits for occasional surface area use. Access to or use of certain areas may be prevented by passive barriers (e.g., where soil is capped). Limited hunting or livestock grazing may be allowed.
Controlled Access	The Department maintains restricted access areas for secure storage or disposal of nuclear materials or waste. Barriers and security fences prevent access by unauthorized persons. Wildlife and plants are controlled or removed.

Medium Type:
Complete the rest of the table row for each affected medium in this geographic area. Potential categories to be considered include: facilities, surface soils (< 15 ft.), deeper soils, surface water (including sediments), and groundwater.

- **Residual Contamination:**
  Describe any residual contamination that will remain within this geographic area and medium type after the EM site end state has been reached.

- **Long-Term Institutional Control Needs**

  Start Date:
  Record the start date of any activities required after the EM site end state has been reached (month and year). You must enter a two digit month and four digit year. Therefore, a date with the month of February and a year of 2002 becomes 02/2002.

  Action:
  Describe any surveillance, monitoring, and maintenance activities required after the EM site end state has been reached.

Responsible Entity:
Select the entity responsible for the action in question from the options available in the pick list for this cell.

- **Comments**
  Provide comments, if necessary, to clarify the data entered for External Land-Use Performance Measures.

S. - SITE SUMMARY LEVEL - PART B: Site Costs

This section collects information on the life-cycle costs associated with the completion of projects at a site. This summary of costs is necessary to allow for high-level planning and serves as input to budget decision-making.

S.10. Site Costs

Within this table, provide the total estimated costs of accomplishing the work scope associated with each budget category and subcategory in accordance with the instructions below. It is recognized that formal systems may not always be in place to project costs against these performance measures data elements at this time. You should therefore use your best professional judgment and expertise in estimating these costs. Report all planned dollars in thousands. [Please note that "Program Direction" outlays, which include federal salaries, benefits, training, travel, and support contractors services only, should NOT be included in this submittal. Headquarters will complete a single program direction PBS.]

The life-cycle totals by category (i.e., storage, treatment, and disposal) associated with each project at a particular site should agree to the total costs reported for each of these categories at the project level in the PBS.

Using the instructions and definitions provided below, break out cost data into the following categories:

1997 - 2006 Total

This is a calculated field comprised of the 1997 planned costs and the annual estimates through FY 2006. Do not enter data.

2007 - Completion Total

This is a calculated field comprised of the annual estimates of costs for FY 2007 through project completion for each project at the site. Do not enter data.

Grand Total

This is a calculated field comprised of the total costs at the site from FY 1997 through project completion for each project at the site. Do not enter data.

1997 Planned Cost

For FY 1997, provide an annual cost goal for each of the data elements listed.

1998 - 2010 Annual Estimates

Enter the estimated future costs associated with each data element at the site for each year, 1998 through 2010. Costs should be reported in current year dollars including escalation.

Example:

1998	1999	2000	2001	2002	2003	2004	2005	2006
2872	2034	930	1062	1638	2454	1923	1544	1264

2007	2008	2009	2010
2324	2234	139	1442

Post-2010 Estimates

Enter the estimated projected costs at the site for the years 2011 and beyond in five-year blocks, as provided. Costs should be reported in current year dollars including escalation.

Cost Categories and Subcategories

Table S.10. contains the fields where all estimated baseline and life-cycle costs will be entered. The table explicitly outlines reporting categories at the category and subcategory level. The following descriptions represent the universe of categories and subcategories that need to be completed:

I. High Level Waste

Includes all costs for activities connected with the treatment, storage, and disposal of high-level waste, which is the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid waste derived from the liquid that contains a combination of transuranic waste and fission products in concentrations requiring permanent isolation.

A. Storage: Includes all costs for storage (defined as the retention and monitoring of waste)of High-Level Waste that is not disposal ready. Also included in the cost of storage (as applicable):

- waste documentation for, and acceptance by, storage facilities;
- on-site collection of waste from generators;
- transportation to storage facilities (including emergency truck operations), waste tracking and data recording;
- characterization of waste management generated waste and process chemicals and verification of program generated waste;
- operations, surveillance and maintenance of storage facilities such as ancillary components such as tank cooling and ventilation systems, piping, and diversion boxes and pits;
- inspections and record keeping;
- environment, safety, and health including Conduct of Operations, National Environmental Policy Act (NEPA), procedures, training, quality assurance, permits, safety analysis reports (SARS), occurrence reporting, and technical support;
- capital equipment and general plant projects to maintain storage facilities;
- and generator fees paid and received.

B. Treatment: Includes all costs for treatment of High-Level Waste, including preparation of waste going directly to treatment. Treatment is any activity that alters the chemical or physical

nature of waste to reduce its toxicity, volume, mobility or to render it amenable for transport, storage, further treatment or disposal. It includes:

- any additional characterization waste conditioning, pretreatment, actual treatment;
- laboratory analysis for pre-treatment;
- characterization and preparation required for transport to treatment activities;
- waste documentation for, and acceptance by, treatment facilities;
- transportation to treatment facilities including emergency truck operations, waste tracking and data recording;
- verification/characterization of waste before treatment or pretreatment, waste for development operations process chemicals, surveillance and maintenance (preventive and corrective) of facilities including safety support systems, outfall monitoring and sample and analysis, inspections and assessment, repackaging, spill cleanup, waste containers, record keeping, ES&H including health physics and industrial hygiene;
- Conduct of Operations, NEPA, procedures, training, Permits, SARS, ORPs, quality assurance (both in support of OCRWM requirements and to meet 10 CFR 834.120), and technical support;
- capital equipment and general plant projects to maintain treatment facilities;
- identification and evaluation of treatment options;
- treatability studies;
- and generator fees paid and received.

During the HLW treatment process, a low-activity fraction of waste is produced, which is treated and disposed. This "incidental" waste is disposed as low-level waste under a separate B&R.

C. **Disposal Ready Storage**: Disposal-ready is the final packaging and transporting for final disposal. It begins with any additional packaging required for disposal and certification so that the material meets the disposal facilities waste acceptance criteria (WAC). Disposal costs includes long-term storage of WAC-ready waste in inventory. Disposal-ready certified waste that meets current waste acceptance criteria (WAC) for disposal or repository emplacement but remains in EM's inventory because a permanent repository is not available. Also, included in the cost of disposal:

- storage and shipping records;
- preparation and packaging for transportation to disposal facilities; on-site manifesting, as required;
- verification/characterization when required for disposal;
- operations/surveillance and maintenance (preventive and corrective) facilities including inspections, spill cleanup, record keeping, leachate monitoring, assays of packaging or repackaging materials, and closure activities;
- ES&H including Conduct of Operations, NEPA, procedures, training, permits, quality assurance, SARS, ORPs, technical support;
- capital equipment and general plant projects to maintain disposal ready facilities;
- identification and evaluation of disposal options.

EM does not pay for transportation to and disposal in the Federal HLW repository.

II. Transuranic Waste

Includes all costs related to transuranic waste, which is waste that is contaminated with alpha-emitting transuranic radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of the assay, without regard to source or form. Mixed transuranic waste is also included in this definition.

A. Storage: Includes all costs for storage (defined as the retention and monitoring of waste in a retrievable manner pending final disposal) of Transuranic Waste. Includes costs for long-term storage of WAC-ready waste in inventory. Long-term storage is disposal-ready certified waste that meets current waste acceptance criteria for disposal. Also included in the cost of storage (as applicable):

- waste documentation for, and acceptance by, storage facilities;
- on-site collection of waste from generators;
- transportation to storage facilities including truck operations, on-site manifesting and unloading;
- waste tracking and data recording;
- characterization TRU in inventory and verification of program generated waste;
- operations, surveillance and maintenance of facilities including inspections, repackaging, spill cleanup, waste containers and record keeping;
- environment, safety, and health including Conduct of Operations, NEPA, procedures, training, quality assurance, permits, safety analysis reports, occurrence reporting, and technical support;
- capital equipment and general plant projects to maintain storage facilities;
- and generator fees paid and received.

B. Treatment: Includes all costs for treatment of Transuranic Waste, including retrieval and preparation of waste going directly to treatment. Treatment is any activity that alters the chemical or physical nature of waste to reduce its toxicity, volume, mobility or render it amendable for transport, storage, or disposal. It includes any additional characterization, preparation required for waste directly before treatment; the actual treatment; lab packing for pre-treatment; and the sorting, segregation, and characterization required for transport to treatment activities. Also included in the cost of treatment (as applicable):

- waste documentation for, and acceptance by, treatment facilities;
- preparation and packaging for transportation to treatment facilities;
- on-site collection of waste from generators for transportation to treatment facilities;
- transportation to treatment facilities including truck operations, on-site manifesting, as required, and unloading;
- waste tracking and data recording;
- verification/characterization of waste before treatment or pretreatment including RCRA compliance sampling and analysis, assay, surface contamination survey, visual inspection, weight and dose;
- operations, surveillance and maintenance (preventive and corrective) of facilities including safety support systems, outfall monitoring and sample and analysis, inspections (fire, safety and life support systems), repackaging, spill cleanup, waste containers, record keeping, health physics and industrial hygiene;
- ES&H including Conduct of Operations, NEPA, procedures, training, Permits, SARS, ORPs, quality assurance, and technical support;

- capital equipment and general plant projects to maintain treatment facilities;
- identification and evaluation of treatment options; treatability studies; generator fees paid and received, as well as transportation costs of treated waste back to the generator, if applicable.

C. **Disposal**: Includes all costs for disposal of Transuranic Waste. Disposal is the final packaging and transporting for final disposal. It begins with any additional packaging required for disposal and certification so that the material meets the disposal facilities waste acceptance criteria (WAC). This includes activities for on-site/off-site disposal. Also included in the cost of disposal (as applicable):
- waste documentation for, and acceptance or certification by, disposal facilities;
- preparation and packaging for transportation to disposal facilities;
- on-site collection of waste from generators for transportation to disposal facilities;
- transportation to disposal facilities including truck operations, on-site manifesting, as required, and unloading;
- verification/characterization when required for disposal;
- operations/surveillance and maintenance (preventive and corrective) facilities including inspections, repackaging;
- spill cleanup, waste containers, record keeping, leachate monitoring, assays packaging or repackaging materials, and closure activities;
- ES&H including Conduct of Operations, NEPA, procedures, training, permits, quality assurance, SARS, ORPs, technical support, performance assessment activities;
- capital equipment and general plant projects to maintain disposal facilities;
- identification and evaluation of disposal options and generator fees paid and received.

III. Mixed Low Level Waste

Includes all costs related to mixed low-level waste, which is waste of disposal options. Radiologically meets the definitions for low-level waste and that is also defined as hazardous under RCRA. Also includes TSCA wastes such as PCB-contaminated wastes.

A. **Storage**: Includes all costs for storage (defined as the retention and monitoring of waste in a retrievable manner pending final disposal) of Mixed Low-Level Waste. Includes costs for long-term storage of WAC-ready waste in inventory. Long-term storage is disposal-ready certified waste that meets current waste acceptance criteria (WAC) for disposal. Also, included in the cost of storage (as applicable):
- waste documentation for, and acceptance by, storage facilities;
- on-site collection of waste from generators;
- transportation to storage facilities including truck operations, on-site manifesting and unloading; waste tracking and data recording;
- characterization of waste management generated waste and verification of program generated waste; operations, surveillance and maintenance of facilities including inspections, repackaging, spill cleanup, waste containers and record keeping;
- ES&H including Conduct of Operations, National Environmental Policy Act (NEPA), procedures, training, quality assurance, permits, safety analysis reports (SARS), occurrence reporting, and technical support;
- capital equipment and general plant projects to maintain storage facilities; and generator fees paid and received.

B. **Treatment:** Includes all costs for treatment of Mixed Low-Level Waste, including preparation of waste going directly to treatment. Treatment is any activity that alters the chemical or physical nature of waste to reduce its toxicity, volume, mobility or render it amendable for transport, storage, or disposal. It includes any additional characterization, preparation required for waste directly before treatment; the actual treatment; lab packing for pre-treatment; and the sorting, segregation, and characterization required for transport to treatment activities. Also included in the cost of treatment (as applicable):

- waste documentation for, and acceptance by, treatment facilities;
- preparation and packaging for transportation to treatment facilities;
- on-site collection of waste from generators for transportation to treatment facilities;
- transportation to treatment facilities including truck operations, on-site manifesting, as required, and unloading;
- waste tracking and data recording;
- verification/characterization of waste before treatment or pretreatment including RCRA compliance sampling and analysis, assay, surface contamination survey, visual inspection, weight and dose;
- operations, surveillance and maintenance (preventive and corrective) of facilities including safety support systems, outfall monitoring and sample and analysis, inspections (fire, safety and life support systems), repackaging, spill cleanup, waste containers, record keeping, health physics and industrial hygiene;
- ES&H including Conduct of Operations, NEPA, procedures, training, Permits, SARS, ORPs, quality assurance, and technical support;
- capital equipment and general plant projects to maintain treatment facilities;
- identification and evaluation of treatment options;
- treatability studies;
- generator fees paid and received, as well as transportation costs of the treated waste back to the generator, if applicable

C. **Disposal**: Includes all costs for disposal of Mixed Low-Level Waste. Disposal is the final packaging and transporting for final disposal. It begins with any additional packaging required for disposal and certification so that the material meets the disposal facilities waste acceptance criteria (WAC). This includes activities for on-site/off-site disposal. Also included in the cost of disposal (as applicable):

- waste documentation for, and acceptance or certification by, disposal facilities;
- preparation and packaging for transportation to disposal facilities;
- on-site collection of waste from generators for transportation to disposal facilities;
- transportation to disposal facilities including truck operations, on-site manifesting, as required, and unloading;
- verification/characterization when required for disposal;
- operations/surveillance and maintenance (preventive and corrective) facilities including inspections, repackaging;
- spill cleanup, waste containers, record keeping, leachate monitoring, assays packaging or repackaging materials, and closure activities;
- ES&H including Conduct of Operations, NEPA, procedures, training, permits, quality assurance, SARS, ORPs, technical support, performance assessment activities; capital equipment and general plant projects to maintain disposal facilities;
- identification and evaluation of disposal options; and generator fees paid and received.

IV. Low Level Waste

Includes all costs related to low-level waste, which is waste that contains radioactivity and is not classified as high-level waste, transuranic waste, spent nuclear fuel or Atomic Energy Act (AEA) 11e(2) byproduct material as defined in DOE Order 5820.2A. Test specimens of fissionable material irradiated for research and development on, and not for the production of power or plutonium, may be classified as low-level waste, provided the concentration of transuranic is less than 100 nCi/g. Included as low-level waste is alpha-emitting transuranic waste in concentrations equal to or less than 100 nCi/g. Also included is special case waste, Greater than Class C waste, Specific Performance Assessment Required Waste, and sealed sources.

A. Storage: Includes all costs for storage (defined as the retention and monitoring of waste in a retrievable manner pending final disposal) of Low-Level Waste. Includes costs includes long-term storage of WAC-ready waste in inventory. Long-term storage is disposal-ready certified waste that meets current waste acceptance criteria (WAC) for disposal. Also included in the cost of storage (as applicable):

- waste documentation for, and acceptance by, storage facilities;
- on-site collection of waste from generators;
- transportation to storage facilities including truck operations, on-site manifesting and unloading;
- waste tracking and data recording;
- characterization of waste management generated waste and verification of program generated waste;
- operations, surveillance and maintenance of facilities including inspections, repackaging, spill cleanup, waste containers and record keeping;
- ES&H including Conduct of Operations, National Environmental Policy Act (NEPA), procedures, training, quality assurance, permits, safety analysis reports (SARS), occurrence reporting, and technical support;
- capital equipment and general plant projects to maintain storage facilities;
- generator fees paid and received.

B. Treatment: Includes all costs for treatment of Low-Level Waste, including preparation of waste going directly to treatment. Treatment is any activity that alters the chemical or physical nature of waste to reduce its toxicity, volume, mobility or render it amendable for transport, storage, or disposal. It includes any additional characterization, preparation required for waste directly before treatment; the actual treatment; lab packing for pre-treatment; and the sorting, segregation, and characterization required for transport to treatment activities. Also included in the cost of treatment (as applicable):

- waste documentation for, and acceptance by, treatment facilities;
- preparation and packaging for transportation to treatment facilities;
- on-site collection of waste from generators for transportation to treatment facilities;
- transportation to treatment facilities including truck operations, on-site manifesting, as required, and unloading;
- waste tracking and data recording;
- verification/characterization of waste before treatment or pretreatment including RCRA compliance sampling and analysis, assay, surface contamination survey, visual inspection, weight and dose;
- operations, surveillance and maintenance (preventive and corrective) of facilities including

safety support systems, outfall monitoring and sample and analysis, inspections (fire, safety and life support systems), repackaging, spill cleanup, waste containers, record keeping, health physics and industrial hygiene;
- ES&H including Conduct of Operations, NEPA, procedures, training, Permits, SARS, ORPs, quality assurance, and technical support;
- capital equipment and general plant projects to maintain treatment facilities;
- identification and evaluation of treatment options;
- treatability studies;
- generator fees paid and received, as well as transportation costs of the treated waste back to the generator, if applicable.

C. **Disposal**: Includes all costs for disposal of Low-Level Waste. Disposal is the final packaging and transporting for final disposal. It begins with any additional packaging required for disposal and certification so that the material meets the disposal facilities waste acceptance criteria (WAC). This includes activities for on-site/off-site disposal. Also included in the cost of disposal (as applicable):
- waste documentation for, and acceptance or certification by, disposal facilities;
- preparation and packaging for transportation to disposal facilities;
- on-site collection of waste from generators for transportation to disposal facilities;
- transportation to disposal facilities including truck operations, on-site manifesting, as required, and unloading; verification/characterization when required for disposal;
- operations/surveillance and maintenance (preventive and corrective) facilities including inspections, repackaging;
- spill cleanup, waste containers, record keeping, leachate monitoring, assays packaging or repackaging materials, and closure activities;
- ES&H including Conduct of Operations, NEPA, procedures, training, permits, quality assurance, SARS, ORPs, technical support, performance assessment activities;
- capital equipment and general plant projects to maintain disposal facilities;
- identification and evaluation of disposal options;
- generator fees paid and received.

During the HLW treatment process, a low-activity fraction of waste is produced, which is treated and disposed. This incidental waste is disposed as low-level waste.

V. **Hazardous Waste**

Includes all costs related to hazardous waste, which is material defined as hazardous waste in 40CFR 261.3 or material defined as hazardous by a State.

VI. **11e(2) or 11e(2) Mixed Byproduct Waste**

Includes all costs related to 11e(2) Byproduct Waste. 11e(2) Byproduct Waste is defined by Section 11e(2) of the Atomic Energy Act as tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

VII. **All Other Waste Types**

Includes all costs not related to high-level, transuranic, mixed low-level, low-level, hazardous, or 11e(2) by product waste. All other waste types may include: sanitary waste, which is waste

generated as a result of routine operations of a facility and that is not considered hazardous or radioactive, can be solid or liquid; special case waste, which is radioactive waste that presents unique management concerns relative to the overall, final disposition plans for the major radioactive waste types (e.e., HLW, TRU, LLW); special case waste such as GTCC and SPAR LLW, non-certifiable defense TRU waste and sealed sources; and waste water, which is treated in a waste water treatment facility and discharged under the Clean Water Act permits to the environment. Waste water can have hazardous, radioactive, or mixed constituents, which are separated out in treatment, but the bulk of which is discharged as clean water.

VIII. Remedial Action

Includes operating, capital equipment, and general plant project costs associated with remedial action of release sites. A "release site" is generally defined as a unique location where a hazardous, radioactive, or mixed waste release has occurred or is suspected to have occurred. It is usually associated with an area where wastes or substances contaminated with wastes have been disposed of, treated, stored, and/or used. Sites include both source areas and areas of migration where hazardous substances have come to be located.

A. **Assessments (of Release Sites):** Includes, but is not limited to, expenditures for confirmation of the presence or absence of hazardous materials, characterization of the release or potential for release, as required, to determine if a basis exists for further action, accurate determination of the future and extent of problems at the site, preliminary/conceptual engineering assessment of remedial action criteria and standards, preparation of documentation, including NEPA, required by environmental statutes and derivative regulations, and selection of preferred remedial action alternatives.

B. **Cleanup (of Release Sites, Excluding Assessments):** Includes, but is not limited to preparation of detailed design and engineering plans, implementation of the selected remedial action alternatives, verification of completion of remedial actions and prior interim actions, and preparation of final documentation for completed remedial actions. It also includes pollution prevention, recycling, minimization, treatment, storage, and disposal of all radioactive, hazardous or mixed wastes.

IX. Facilities Deactivation

Includes operating, capital equipment, and general plant project costs associated with activities performed to reduce costs associated with a surplus facility prior to its ultimate disposition and include surveillance and maintenance actions required to achieve that condition.

A. **S&M Prior to Completion of Deactivation:** These activities directly associated with deactivation, maintenance of safety basis as required by the material or facility, compliance activities, contaminated facility radiation protection, configuration management, sampling/monitoring, emergency response, security, material control and accountability, training and certification, conduct of operations, utilities, maintenance, etc.

B. **Deactivation:** Includes costs associated with activities undertaken with the intent to both reduce the physical risks and hazards at these facilities and to decrease costs associated with facility mortgage. This includes planning, removal of surplus materials, chemicals, supplies, classified equipment and documents, stabilization of radioactive contamination, and removal of hazardous, mixed and radioactive wastes.

Specific examples include: Nuclear Materials programs and operations, including surplus material management; Surplus facility conversion programs; Removal of radioactive, hazardous or mixed wastes; Classified material removal activities; and Deactivation related activities specifically undertaken in response to binding commitments (including compliance orders, court decisions or consent agreements) with Federal, state and local authorities.

X. Facilities Decommissioning

A "facility" refers to a building or walled structure; its functional, systemized equipment; and other fixed systems and equipment installed therein. "Facility" refers to a single building, not a group of buildings. Facilities can be stand alone tanks if the tanks service several buildings; require significant deactivation/decommissioning efforts; and/or are being managed as a deactivation/decommissioning effort separate from nearby facilities. A facility may be a portion of a building (e.g., vault area, storage pool, fuel washing room, etc.) if that is the only section of the building to be deactivated/decommissioned.

A. **Assessments (of Facilities):** Includes, but is not limited to, expenditures for confirmation of the presence or absence of hazardous materials, characterization of the release or potential for release, as required, to determine if a basis exists for further action, accurate determination of the future and extent of problems at the site, preliminary/conceptual engineering assessment of remedial action criteria and standards, preparation of documentation, including NEPA, required by environmental statutes and derivative regulations, and selection of preferred remedial action alternatives.

B. **Decommissioning (of Facilities, Excluding Assessments):** Includes operating, capital equipment, and general plant project costs associated with decommissioning activities within a facility. Decommissioning costs include, but are not limited to, developing engineering plans, implementing projects, disposing of contamination or contaminated waste, verifying project completion, issuing completion reports, and conducting surveillance and maintenance of surplus facilities awaiting decommissioning.

XI. Nuclear Materials

Includes operating, capital equipment, and general plant project costs associated with activities performed to stabilize surplus nuclear material and place it in a disposition ready condition prior to its ultimate disposition, including surveillance and maintenance actions required to achieve that condition.

A. **S&M Prior to Completion of Stabilization/Disposition Ready:** Activities directly associated with nuclear material stabilization, maintenance of safety basis as required by the material (e.g., documenting), specific nuclear material, compliance activities, contaminated facility radiation protection, configuration management, sampling/monitoring, emergency response, security, material control and accountability, training and certification, conduct of operations, utilities, maintenance of stabilization system, etc.

B. **Stabilization and/or Made Disposition Ready**: Activities intended to convert or move surplus nuclear materials to a form/condition or location that is safe for interim storage or to maintain those nuclear materials in a stable state. Encompasses activities conducted to make these materials disposition ready. Included in this category are activities directed under the implementation plan for DNFSB Recommendation 94-1, the Plutonium Vulnerability

Management Plan, and other directives related to nuclear materials.

Specific examples include: Start-up of facilities to perform stabilization activities; Design and procurement of stabilization equipment; Repackaging of nuclear materials to meet storage standards and criteria; Research and technology development to support stabilization activities; Processing of materials to forms suitable for safe interim and long-term storage; and maintenance of material prior to long-term storage.

XII. Spent Nuclear Fuel

Includes operating, capital equipment, and general plant project costs associated with activities performed to stabilize spent nuclear fuel and place it in a disposition ready condition prior to its ultimate disposition, including surveillance and maintenance actions required to achieve that condition.

A. **S&M Prior to Completion of Stabilization/Disposition Ready**: Activities directly associated with SNF stabilization, specific SNF compliance activities, radiation protection, sampling/monitoring, emergency response, security, SNF inventory control and accountability, training and certification, conduct of operations, utilities, maintenance of SNF systems, etc.

B. **Stabilization and/or Made Disposition Ready**: The intent of spent nuclear fuel (SNF) stabilization activities is to stabilize vulnerable SNF and store or process it into a safe condition for an interim period of time (assumed to be 40 years) which is compatible with the permanent repository (i.e. disposition ready) until they are transferred to a permanent repository.

Specific examples include: National Fuel Characterization; Technology Development; Project Procedure Review; Other SNF Related Drivers and Activities; Vulnerability / Risk Assessment Support; and Foreign Research Reactor EIS ROD

XIII. Long-Term Monitoring

Includes operating, capital equipment, and other project costs associated with activities performed following restoration, facility deactivation, decommissioning, and surplus nuclear material stabilization including long-term surveillance & maintenance performed at a site or facility.

A. **Nuclear Materials**: Intent of long-term monitoring activities for stabilized, disposition ready nuclear material is to safely maintain these materials and related facilities in a form, condition, or location that is safe for interim storage.

Specific examples include: maintenance of fire, safety and life support systems specific to a nuclear material storage facility; maintenance of vital safety systems which are specific to a nuclear material storage facility; compliance with national fire codes (e.g., NAPA) & national electric codes as required for nuclear material storage facility; radiation protection requirements; and material/facility security support.

B. **Spent Nuclear Fuel**: Intent of long-term monitoring activities for stabilized, disposition ready spent nuclear fuel is to safely maintain the spent fuel and related facilities in a form, condition, or location that is safe for interim storage.

Specific examples include: maintenance of fire, safety and life support systems specific to a spent nuclear fuel storage facility; maintenance of vital safety systems which are specific to a spent nuclear fuel storage facility; compliance with national fire codes (e.g., NAPA) & national electric codes as required for a spent nuclear fuel storage facility; radiation protection requirements; and Material/Facility security support.

C. **Facilities**: Intent of long-term monitoring activities for site facilities is to safely maintain the site facility in a condition or location that is safe. Includes groundwater, land, disposal cell, and other long-term S&M requirements.

Specific examples include: maintenance of fire, safety and life support systems; maintenance of vital safety systems; compliance with national fire codes (e.g., NAPA) & national electric codes; radiation protection requirements; and facility security support.

D. **Post-remediation Long-term S&M:** Includes costs for inspections, environmental monitoring, and routine repair and maintenance of completed DOE radioactive disposal sites.

XIV. National Programs

A. **Environmental / Regulatory Analysis:** Includes activities associated with developing EM-wide positions on proposed legislation and regulations and compliance agreements and assisting the Administration on promoting responsible laws; coordinating EM wide positions on environmental and regulatory issues with the Office of General Council, the Assistant Secretary for Environmental Safety and Health; acting as the EM National Environmental Policy Act Compliance Officer; managing the EM contractor workforce restructuring program; and team building and partnering activities to assist EM.

B. **Transportation and Packaging:** Includes costs for developing, in conjunction with Department of Energy Program Offices, the policy and framework for ensuring the safe, secure, and economical transportation and logistical needs of DOE materials, including hazardous materials (particularly radioactive), hazardous substances, and hazardous and mixed wastes to meet the needs of the DOE programs. This program assures the uniformity in the implementation of regulatory requirements as they pertain to the packaging safety and transportation of DOE materials. Specific areas include assessments associated with operational policy analysis and development, productivity and safety enhancements through improved operations technology and methods, the development and implementation of operational systems, performing explosives classification reviews and maintenance of the Explosive Classification Tracking System, maintaining a nationwide baseline transportation regulatory compliance training program.

1. **Transportation Management**: Includes activities associated with the management of DOE-wide transportation management program including development and implementation of policies and procedures for all DOE unclassified shipping activities, develops technologies to foster safe, efficient, and cost effective transportation systems. Activities include resolution of transportation issues, engineering analysis, advanced technology development certification support, regulatory support, and safety and systems assessment. Also, includes Department-wide coordination of transportation in two major areas: (1) transportation operations and traffic management which includes technology

systems and data bases, and policy analysis; (2) training in the area of regulations and operations.

2. **Packaging Management**: Includes activities for providing Departmental support in the areas of transportation and packaging operations, packaging and transportation systems development and packaging operations, focusing on design support and general packaging management.

3. **Liaison and Communications**: Includes activities associated with developing, coordinating, and implementing processes to facilitate effective understanding and interactions among DOE decision-makers and the affected and interested public with regard to the transportation program. Also, includes costs to develop informational products, activities, and resources to explain the transportation program and to respond to public inquires.

C. **Emergency Management Services:** Includes all costs for activities related to independent monitoring and assessment, programmatic guidance and policy, integrated and independent performance analysis and technical assistance for DOE-wide activities in the area of transportation and Environmental Management activities for facilities emergency management.

D. **Analytical/Characterization Services:** Includes activities related to the enhancement and effective management of DOE's analytical resources and assuring technical validity and cost-effectiveness of EM sampling and analysis programs. The scope includes the establishment and implementation of and EPA-acceptable QA/QC system; establishment and maintenance of the necessary standards, methods, interfaces, and manuals; identification and implementation of techniques to improve efficiency; coordination and interfacing with private sector commercial analytical laboratory groups; and identification of environmental sampling and analysis services requirements and strategies.

E. **Pollution Prevention:** Includes costs for the Department-wide pollution prevention program crosscutting all sites, including planning, policy development, technical support, tracking and reporting, implementation, and other activities associated with the DOE pollution prevention program.

1. **Complex-wide Activities:** Includes costs for activities whose purpose is to facilitate the application of pollution prevention across the complex including uniform methodologies and training, crosscutting planning, coordination, outreach, information exchange, progress tracking, complex-wide tools development, policy development, and pilot programs.

2. **Site-wide Activities:** Includes costs for implementation of Site-wide program including goal setting, progress tracking and reporting, pollution prevention opportunity assessments, recycling, affirmative procurement, and activities necessary to comply with regulatory requirements, Executive Orders, and DOE Orders relating to pollution prevention.

3. **Facility-specific Activities:** Includes costs for assisting implementation of specific

measures that will reduce the generation of waste/pollutants and will reduce the long-term cost of environmental operations to the Department (such as the high return on investment projects and projects identified by pollution prevention opportunity assessments).

F. **Packaging Certification and Transportation Safety:** Includes costs for activities for ensuring that Departmental and contractor personnel and hazardous materials substances, and wastes are transported safely to ensure worker health, public safety, and environmental protection. This program provides the Department with the corporate level (cross-cutting) tools to oversee the safety in transportation and packaging activities. Activities include performing evaluations and analyses of safety analysis reports for packaging, as required by the Department of Transportation and developing analytical tools for these analyses in cooperation with the Nuclear Regulatory Commission; providing external coordination between the Department and other governmental, commercial, and international bodies regarding transportation safety and packaging certification; participating in the development of transportation safety and packaging standards by national and international organizations; coordinating within the Department all matters pertaining to hazardous materials package certification and transportation safety; oversees field aviation, maritime, rail, highway, and pipeline safety implementation activities as they relate to the transportation of personnel and hazardous materials. Packaging Certification and Transportation Safety manages the transportation and hazardous materials packaging safety programs to ensure safety in all modes of transport, including air, rail, water, highway, and pipeline.

XV. Technology Development

Includes costs for focus area activities that are aimed at using fundamental scientific and technical knowledge to meet needs for environmental restoration and waste management. Proof-of-principle, small-scale experimentation and pilot-scale efforts that will bring a technology to readiness for field demonstration are included. The scope of activities covered include demonstrating engineering systems under representative field conditions, collection of long-term performance data to determine acceptability and reliability of components, and independent evaluation of data to verify performance specifications and applicability to site-specific needs. Includes costs for focus area activities related to the development of new and improved technologies for the removal and/or processing of contaminated materials into a suitable form for disposal. Activities will also include decontamination and decommissioning. Includes costs for innovative and crosscutting technologies and focus area activities related to the development of new and improved technologies which reduce the generation of hazardous waste during the production of nuclear weapons. Applied research and development (R&D) activities will provide a technical, regulatory, and economic base for the decision-making process to transfer promising, need-focused technologies to the demonstration, testing, and evaluation phase. Promising technologies will be evaluated through full-scale or near full-scale field demonstrations to validate their suitability for implementation and potential transfer to interested parties. Implementation of these technologies will be accomplished through projects organized as focus areas. Certain management functions in this category include program management and administration of focus area crosscutting activities, and participation/coordination of focus area working groups, and a number of joint activities with WM, ER, DP, and the USAF.

A. **Mixed Waste Focus Area**
B. **Tank Focus Area**

C. **Subsurface Contaminant Focus Area**
D. **Decontamination and Decommissioning Focus Area**
E. **Plutonium Focus Area**
F. **Spent Fuels Focus Area**

XVI. Technology Acceptance and Deployment

A. **Technology Acceptance:** Includes the following activities that are responsive to OTD efforts to provide a structure that facilitates the application of innovative environmental technologies through collaborative partnerships with U.S. industry, the National Laboratories, other Federal agencies, universities, and appropriate international participants:

- **Domestic** - Includes activities focused on the technology assistance and implementation facilitation of environmental management technologies; technology decision integration; regulatory coordination activities to ensure DOE's compliance with Federal, state, and local regulations and codes; information and communication coordination to enable critical involvement of key participants in the decision making process; and public participation activities to develop national linkages with public interest groups, universities, stakeholders, and Tribal Nations to encourage informed awareness of environmental science and technology.

- **International** - Includes activities to establish an international technology transfer system which identifies worldwide needs and available technologies for the purpose of providing foreign technological options for meeting EM needs and establishing a mechanism for transferring U.S. national laboratory, private industry, and university technologies to foreign markets. Also included are activities which will focus on identifying worldwide needs and establishing worldwide contracts, initiation of participation in international cooperative programs and integrated demonstrations and creation of a jointly-sponsored international environmental technology information system network. Users of the system will be Federal agencies, state, and local governments, environmental groups, industry and trade associations, laboratories and universities, U.S. foreign missions, foreign governments and international organizations and private industry.

- **Technology Development Program Integration** - Includes activities that support managerial decision making, program management, and the integration of functions across the OST program. Activities will also include field management of OST tasks by DOE Focus Area Leads and Technical Program Officers, including associated staff; Headquarters administrative and review of planning tasks coordinated or conducted by support contractors and field organizations; near-term and long range strategic planning; and integration of TD activities with other Environmental Management program offices.

B. **Technology Deployment:** Includes activities focused on deploying new and innovative technologies and approaches into widespread use across the DOE complex, and targeting those key areas that will have the largest impact on cleanup cost, risk and/or schedule. Activities will include competitively awarding projects to Operations/Field Offices, involving stakeholder, regulatory, and Tribal Nations acceptance of deployment activities and reinvesting cost savings to accelerate further cleanup at participating sites. Certain management functions in this category include program management and administration of deployment activities, and participation/coordination of working groups, and a number of joint activities with Waste Management and Environmental Restoration.

XVII. Basic Science and Risk Policy Program

A. Basic Science

B. Risk Policy

XVIII. Program Support

Includes costs for technical support and contract expertise to assist the federal staff in evaluating alternative end-state facility condition, verifying building characterization, developing system modeling and facility data tracking systems, and reviewing transition management plans. It also includes activities related to strategic planning, information activities and field management of technology development tasks by DOE Technical Program Officers and contractor Technical Program Managers. Also included are costs for Agreements-in-Principle, grants, preparation of project baseline summaries, risk data sheet documentation, integrated priority lists, site-wide technical baselines, integrated site-wide facility plans, systems engineering, and complex-wide plans.

XIX. Landlord

Includes planning, operating, maintenance, construction and capital equipment design and procurement costs, associated with general purpose site-wide infrastructure services and general sitewide non-infrastructure.

A. Site-wide Infrastructure: Provide expense funding for the basic facilities, equipment, installations and related services, not tied directly to Environmental Management missions, that are essential to occupy and operate a site. Examples of general purpose site-wide infrastructure systems include: transportation (buses, motor pools, railroads, etc.), roads, utilities (electricity, water, steam, fuels, sanitary & industrial wastewater), environmental monitoring, communications, information management, analytical laboratories, emergency facilities, safeguards and security, integrated databases, offices, warehouses, fabrication and maintenance and grounds keeping. Maintenance includes both corrective and preventive maintenance. Corrective maintenance includes the repair and restoration of equipment or components that have failed or malfunctioned so that they are not performing their intended function. Preventive maintenance includes predictive, periodic, and planned maintenance actions taken to maintain a piece of equipment within design operating conditions and extend its life and is performed prior to equipment failure or to prevent equipment failure.

B. Site-wide Non-Infrastructure: Provide on-site operating activities, not related to general purpose infrastructure, that are needed to either occupy and operate a site, or to standardize and integrate work from multiple Environmental Management programs. Examples non-infrastructure services include site-wide environmental, ecological, geological, meteorological, cultural and historical work.

XX. All Other

A. Intergovernmental/Stakeholder Outreach Services: Provide operating activities for other government agencies or off-site organizations that may be affected by DOE activities. Examples of Intergovernmental/Stakeholder Outreach Services include: payments-in-lieu-of-taxes, oversight/state permits, down winder litigation, site specific advisory boards, health

information and screening, the Hazardous Materials Management and Emergency Response (HAMMER) training project, support for geologic surveys, support for National Monuments or museums, and other activities of a similar nature. This does NOT include costs associated with grants.

B. **Conceptual Design Reports:** Includes costs associated with the efforts of the Environmental Management program to develop project scope that will satisfy program needs; assure project feasibility and attainable performance levels; develop reliable cost estimates and realistic schedules to provide a complete description of the project for Congressional consideration; and develop project criteria and design parameters for all engineering disciplines, identification of applicable codes and standards, quality assurance requirements, environmental studies, materials of construction, space allowances, energy conservation features, health, safety, safeguards and security requirements, and any other features or requirements necessary to describe the project.

C. **Other Project-Related Bridge Costs:** Includes costs associated with the efforts of the Environmental Management program in Pre-Title I activities (except for Conceptual Design) to include preliminary safety analysis reports, preparation of Project Data Sheets, design criteria, National Environmental Policy Act (NEPA) documentation, and formulation of Quality Assurance Criteria; research and development (R&D) necessary for fabrication, testing and rework of prototype equipment; R&D (scale-up or demonstration plants of high-risk technology) required prior to the start of construction; site suitability testing and evaluation; quality assurance related to site suitability and testing; regulation compliance; systems studies and selected engineering services; and institutional activities related to facility siting and external interactions.

D. **UE D&D Fund Contribution:** Includes the annual Defense contribution made into the Uranium Enrichment Decontamination and Decommissioning Fund.

E. **Uranium Leasing**: Includes all costs associated with the administration of leases for uranium on land belonging to the United States pursuant to Section 5(b)6 of the Atomic Energy Act of 1954.

F. **U/Th Reimbursement**: Includes all costs associated with the administration of leases for uranium on land belonging to the United States pursuant to Section 5(b)6 of the Atomic Energy Act of 1954.

XXI. **Program Direction** **To be used only at Headquarters**

Program Direction is for federal salaries, benefits, support services, travel, and other related expenses (e.g., contracted services related to personnel costs.)

Total All Categories

Automatically calculated summation of annual cost figures. Do not enter data.

Escalation Rate

Enter the rate in place for each year to adjust current year dollar totals reported in "Total All Categories" to constant FY 1998 dollars. This rate should be consistent with that used for any other recosting calculations.

Cost Baseline in Constant FY 1998 Dollars

Automatically calculated using the summations from the "Total All Categories" row multiplied by the escalation rates reported in the preceding row.

S.11. FY 1999 Budget Update: Budget by B&R

Budget Structure

Budget authority data (BA) will be collected by budget and reporting (B&R) code at the **Site Summary Level** (SSL) for this update. Please see Attachment C for a valid list of sites at the SSL. This is different from the August 1, 1997, Limited Update to the Project Baseline Summaries (PBSs), when BA by B&R code was collected at the PBS level. The following guidance explains how to complete the budget by B&R code at the SSL, which is due to Headquarters on November 26, 1997 (See Section 1.2 "Schedule").

Budget authority (BA) will be collected in Table S.11 at the SSL against the same Congressional control points (i.e., "Funds") developed for the August 1, 1997, Limited Update to the PBSs. Each site is generally categorized in either the Environmental Closure Fund, the Long-Term Cleanup and Waste Management Fund, or the Project Completion Fund (added after the Limited Update data was submitted to Headquarters), although BA may also be reported for Privatization Funds at an SSL. Privatization BA **SHOULD NOT** be entered into Table S.11. of the SSL worksheet. The additional Privatization worksheet (S.11.3) in Part B of the SSL should be used to report BA for Privatization activities. BA for the Technology Development Fund is to be allocated among three budget categories, either Technology Development, Technology Acceptance and Deployment, and/or Basic Science and Risk Policy Program. The Program Direction Fund is reserved for use at Headquarters, where program direction BA for the entire complex will be reported. Under each of these Congressional controls, the budget will be divided by categories and subcategories that serve as administrative controls. Program elements (such as Waste Management, Environmental Restoration, and Nuclear Material and Facility Stabilization) do not play a significant role in the budget reporting structure. The integrity of the budget accounts (Defense, Non-Defense, Uranium Enrichment D&D Fund) and expense types (operating, line item, capital equipment, and general plant project) must be maintained when reporting BA for this update. A list of valid B&R codes is provided in Attachment H.

BA Targets for FY 2000

EM is committed to achieving accelerated cleanup consistent with the vision for the National 2006 Plan. Each Operations/Field Office is expected to submit BA data for FY 2000 consistent with a $5.75 allocation (see Section 3.0 for targets). With the application of efficiencies, the costs of compliance are expected to be fully covered at this level. FY 1997 BA by B&R code has been seeded with the FY 1997 Appropriation. FY 1998 BA by B&R code has been seeded with the FY 1998 Congressional Request. FY 1999 BA by B&R code has been seeded with data from the August 1, 1997, Limited Update to the PBS. Seeded BA data for FY 1997 and FY 1998 have been locked. Operations/Field Offices are permitted to update FY 1999 data if necessary. Operations/Field Offices are only required to submit new BA data for FY 2000.

Program Direction/National Programs

A single, complex-wide program direction PBS will be prepared at Headquarters to incorporate into the Headquarters SSL BA submittal for the November 26, 1997, deliverable. Field program direction data will be based upon the Field data received in the Spring, 1997, CFO Unicall. Headquarters will work with the Field to ensure that Field requirements are being addressed. Operations/Field Offices should **not** include any program direction BA in their submittals at this time.

National Program BA will be submitted by the appropriate SSLs. Section 4.0 contains a table that provides points of contact/responsible parties for reporting National Program data.

S.11.1 Fund

EM has adopted a new set of budget and reporting (B&R) codes that were first incorporated in the August 1, 1997, Limited Update to the PBSs for FY 1999 Budget Formulation. These codes replaced both Congressional and administrative controls from years past with new controls that align with both performance-based budgeting requirements and EM's accelerated cleanup planning vision. EM will continue to separate Defense, Non-Defense, and Uranium Enrichment D&D funding requests into their separate categories as required by Congress and OMB. Congressional controls, formerly comprised of program elements (i.e., Waste Management, Environmental Restoration, Technology Development, Nuclear Material and Facility Stabilization, etc.), now consist of five categories, referred to as "Funds".

The "Fund" field represents the Congressional control points for the new budget account structure and will be seeded and locked at Headquarters based upon decisions made after the August 1, 1997, Limited Update to the PBSs data submittal. Each SSL has been placed in the Closure, Project Completion, or Long-Term Fund according to the criteria outlined below. Operations/Field Offices may also report BA for the Technology Development Fund in the three Technology Development categories (Technology Development, Technology Acceptance and Deployment, and Basic Science and Risk Policy Program), if appropriate for a given SSL, and Privatization Fund BA requests will be reported in the separate Privatization worksheet (Table S.11.3) in Part B of the SSL. Program Direction is reserved for Headquarters.

- **Environmental Closure Fund.** This category includes all sites that will be "complete" by 2006 (excluding technology development, program direction, and privatization activities). Currently, Rocky Flats and Ohio sites are included in this Fund.

- **Project Completion Fund.** This category includes all sites where cleanup will be complete in or before 2006, but a DOE presence will continue at the site after 2006. Currently, Albuquerque, Chicago, and Oakland sites are included in this fund.

- **Long-Term Cleanup and Waste Management Fund.** This category includes all sites where cleanup will not be completed by 2006, and where a long-term DOE presence is expected. Currently, Carlsbad, Headquarters, Richland, Idaho, Savannah River, and Oak Ridge sites are included in this Fund.

- **Program Direction.** This category includes funding associated with federal FTE salaries and associated requirements (travel, etc.). For the purposes of this update, program direction will be completed at Headquarters. Operations/Field Offices are NOT to submit any program direction BA as part of the SSL submittals.

- **Technology Development.** This category encompasses EM's technology development program.

- **Privatization.** This category is not available for use in Table S.11.2. All privatization funding will be reported in Table S.11.3. The assumption is that privatization funding will be available in excess of FY 2000 targets. For this update, Operations/Field Offices should **not** report BA for any new privatization projects. BA for **approved, pre-existing** privatization projects should be reported Table S.11.3, and is permitted to exceed the target funding level in the near term. All privatization BA must be reported by B&R code.

S.11.2. Budget Table (in thousands)

The BA requested in the Budget Table serves as the site budget submission for FY 2000 in combination with the BA for privatization reported in the separate Privatization worksheet (S.11.3.). BA data should be requested for FY 1997 - FY 2000 according to the categories and subcategories of the budget account structure. These categories and subcategories serve as the administrative controls in the EM budget. **Privatization funding should NOT be included in this table. All privatization BA should be reported in the separate Privatization worksheet** (Table S.11.3). Do not double count dollars: each dollar should be allocated to a single budget category/subcategory. Whenever possible, FY 1997 BA by B&R code will be seeded with the Appropriation and locked, FY 1998 BA by B&R code will be seeded with the Congressional Request and locked, and FY 1999 BA by B&R code will be seeded with data from the August 1, 1997, Limited Update to the PBSs. Operations/Field Offices are only required to submit new BA data for FY 2000. The total of all SSLs at an Operations/Field Office for each year should equal the total target for that year as outlined in Section 3.0. Any funding entered into the separate Privatization worksheet is above the Operations/Field Office target. **The total BA by B&R code at the Operations/Field Office level must equal the PBS BA by Appropriations Account (Table B.1. of the PBSs) total by Operations/Field Office.**

The Budget Table is designed only to display the B&R codes that you report for the project. Each B&R code category is represented by a question that you should answer (e.g., does this SSL contain any high level waste activities?). If you answer yes to one of the questions, the spreadsheet data entry section for that B&R category will pop up and you can complete your budget data entry as directed below. If some questions do not apply, you do not need to enter anything (although clicking on "no" for a question will not change the data you have entered for other questions). Please enter BA only for those B&R codes that are applicable. Each B&R code highlights the Appropriations Account, the Fund, the category, and the subcategory associated with a portion of a SSL's BA. The expense type (i.e., line item, operating, capital, or general plant project) is included as a separate field used in conjunction with the B&R code. A valid list of B&R codes is provided in Attachment H.

Account and Expense Type

This field, along with the category and the subcategory, defines the B&R codes associated with an SSL. The "Account and Expense Type" field contains a pick list that highlights both the appropriations account and the expense type associated with the category (e.g., "High Level Waste") and subcategory (e.g., "Storage") you are in. The following choices are available from the "Account and Expense Type" pick list:

EM Defense, Operating Expenses
EM Defense, Capital Equipment
EM Defense, Capital Construction Line Item
EM Defense, General Plant Project
EM Non-Defense, Operating Expenses
EM Non-Defense, Capital Equipment
EM Non-Defense, Capital Construction Line Item
EM Non-Defense, General Plant Project
EM Uranium Enrichment D&D, Operating Expenses
EM Uranium Enrichment D&D, Capital Equipment
EM Uranium Enrichment D&D, Capital Construction Line Item

When you choose one of these items from the pick list, the corresponding B&R code will pop up in the "B&R Code" field. For example, if you are in the "High Level Waste - Treatment" category and subcategory, and you select "EM-Defense, Operating Expenses" from the "Account and Expense Type" field pick list, the associated B&R code will appear in the B&R code field.

For each row where "Line Item" is selected, it is essential to complete the last two columns at the end of the spreadsheet, "Line Item #" and "Line Item Name" (e.g., MIE, ADP). These two columns should NOT be completed for other expense types.

B&R Code
Do NOT enter any data into this field as it is automatically updated when you choose an account and expense type. This field contains the B&R code for each category (e.g., "High Level Waste") and subcategory (e.g., "Storage"). B&R codes contain the following levels of detail:

Appropriations Account
Fund (Congressional control)
Activity (e.g., Waste Activities, Remediation)
Category (administrative control)
Subcategory (administrative control)

After you have chosen an account type, the B&R code associated with that account type, budget category, and budget subcategory will pop up in the "B&R Code" field. You may then enter BA data for FY1997 - FY2000.

Categories and Subcategories Definitions
The category and subcategory definitions listed in Section S.10, Site Summary Costs, should be consulted in completing the Budget by B&R Table. Aside from slight modifications to the reporting level for **Hazardous Waste** and **Facility Deactivation/Decommissioning**, which have been reflected in the definitions below, the definitions provided in S.10 are also applicable to this section. **(See S.10 for a complete definition for all categories and subcategories not defined below.)**

V. **Hazardous Waste:**
Includes all costs related to hazardous waste, which is material defined as hazardous waste in 40CFR 261.3 or material defined as hazardous by a State.

A. **Treatment**: Includes all costs for treatment of Hazardous Waste, including preparation of waste going directly to treatment.

B. **Disposal**: Includes all costs for disposal of Hazardous waste. All hazardous waste is disposed off-site.

IX. **Facility Deactivation and Decommissioning**

A. **Pre-deactivation Surveillance and Maintenance:** These activities directly associated with

deactivation, maintenance of safety basis as required by the material or facility, compliance activities, contaminated facility radiation protection, configuration management, sampling/monitoring, emergency response, security, material control and accountability, training and certification, conduct of operations, utilities, maintenance, etc.

B. **Deactivation:** Includes costs associated with activities undertaken with the intent to both reduce the physical risks and hazards at these facilities and to decrease costs associated with facility mortgage. This includes planning, removal of surplus materials, chemicals, supplies, classified equipment and documents, stabilization of radioactive contamination, and removal of hazardous, mixed and radioactive wastes.

   Specific examples include: Nuclear Materials programs and operations, including surplus material management; Surplus facility conversion programs; Removal of radioactive, hazardous or mixed wastes; Classified material removal activities; and Deactivation related activities specifically undertaken in response to binding commitments (including compliance orders, court decisions or consent agreements) with Federal, state and local authorities.

C. **Assessments (of Facilities):** Includes, but is not limited to, expenditures for confirmation of the presence or absence of hazardous materials, characterization of the release or potential for release, as required, to determine if a basis exists for further action, accurate determination of the future and extent of problems at the site, preliminary/conceptual engineering assessment of remedial action criteria and standards, preparation of documentation, including NEPA, required by environmental statutes and derivative regulations, and selection of preferred remedial action alternatives.

D. **Decommissioning (of Facilities, Excluding Assessments):** Includes operating, capital equipment, and general plant project costs associated with decommissioning activities within a facility. Decommissioning costs include, but are not limited to, developing engineering plans, implementing projects, disposing of contamination or contaminated waste, verifying project completion, issuing completion reports, and conducting surveillance and maintenance of surplus facilities awaiting decommissioning. A "facility" refers to a building or walled structure; its functional, systemized equipment; and other fixed systems and equipment installed therein. "Facility" refers to a single building, not a group of buildings. Facilities can be stand alone tanks if the tanks service several buildings; require significant deactivation/decommissioning efforts; and/or are being managed as a deactivation/decommissioning effort separate from nearby facilities. A facility may be a portion of a building (e.g., vault area, storage pool, fuel washing room, etc.) if that is the only section of the building to be deactivated/decommissioned.

E. **Pre-Decommissioning S&M:** Includes costs for inspections and environmental monitoring of sites awaiting decontamination and decommissioning activities.

S.11.3. Privatization Budget Data

All privatization funding requested by an SSL should be reported in Table S.11.3., Privatization Budget Data worksheet. This worksheet will include all BA data that an SSL is reporting for the Privatization Fund. See above for a full discussion of Fund Types.

For this update, Operations/Field Offices should **not** report BA for any new privatization activities. BA for **approved, pre-existing** privatization activities only should be reported in this worksheet.

The first column of the Privatization worksheet contains a pick list from which you should select the appropriate B&R code(s) for the privatization activities at the SSL. The B&R code pick list is composed of all of the B&R code categories and subcategories that apply to privatization activities. See Attachment H for a list of valid privatization B&R codes. Each appropriate B&R code has been seeded with the FY 1997 Appropriation and the FY 1998 Congressional Request and locked for these years. BA by B&R for FY 1999 has been seeded with the August 1, 1997, Limited Update to the PBSs BA data and may be edited if necessary. Operations/Field Offices are only required to submit new BA data for FY 2000. Privatization BA is not part of the allocation outlined in Section 3.0. For all line item funding reported in Table S.11.3, it is essential to complete the last two columns at the end of the table, "Line Item #" and "Line Item Name" (e.g., MIE, ADP.) These two columns should **not** be completed for other funding

Information on Indirect Safety & Health activities is needed to ensure that the major S&H issues within a site have been addressed, and to identify resources employed and/or needed to accomplish S&H objectives.

S.12. Indirect Safety & Health and Risk Narratives

Descriptions of indirect Safety & Health activities are to be provided in the following narratives separated under the category headings of hazards, controls, work performance, and feedback and continuous improvement. Additionally, a narrative indicating incremental risk reduction metrics is to be provided.

S.12.1. Indirect S&H Narrative - Hazards

Identify categories of significant S&H hazards, (e.g., radiological, chemical, industrial, construction, fire/explosion, etc.) that could impact workers, the public, or the environment. Describe site-wide activities that have been or will be conducted to identify and analyze the hazards associated with this site. Include reference to existing documentation (by specific facility or site document number and name) or to specific site-wide hazard documentation. The hazards identification need to cover the entire site life cycle.

S.12.2. Indirect S&H Narrative - Controls

Describe the formally-established and agreed-upon standards/requirements that have been tailored to address the above-discussed hazards associated with performing site-wide activities (e.g., PSAR, HASP, documented Safety Management System Description, set of approved work smart standards, etc.). This includes standards and requirements necessary and sufficient for both facility safety and worker safety. Also include a discussion of the indirect S&H controls that have been planned and budgeted to mitigate the above-mentioned hazards based upon the formally-established and agreed-upon standards/requirements.

S.12.3. Indirect S&H Narrative - Work Performance

Describe the indirect activities and checkpoints (e.g., Operational Readiness Reviews (ORRs), Unresolved Safety Question (USQ) Process, DEAR Clause, Stop Work Procedures, training, etc.) needed to ensure readiness prior to start of work, measures used to monitor adequacy of safety controls, and mechanisms that will be used to identify unforeseen indirect S&H site-wide hazards. Also describe the indirect S&H resources for the site (allocated by Functional Area) necessary for work to be performed in a manner that protects the health and safety of the environment, workers and the public (i.e., the work can be performed safely). Resource descriptions should show that the resources (including both costs and skill mix) are adequate to support the identified indirect controls, including establishing safety and health management systems, standards/requirements, and hazard controls. Changes that may occur between resource allocation (by Functional Area) over the life cycle of the site should also be discussed. This discussion should be consistent with the indirect resource allocation (by Functional Area) provided in the SSL. It should also highlight any unfunded S&H resource requirements.

S.12.4. Indirect S&H Narrative - Feedback and Continuous Improvement

Describe the activities and mechanisms necessary to collect feedback information; identify and implement opportunities for improvement, and ensure oversight (e.g., self- assessment, lessons learned, corrective actions, external assessments, enforcement, accident/incident investigation, etc.). Ensure that these activities are sufficiently planned and budgeted.

S.13. Safety and Health Indirect Data

All major Safety & Health costs from FY 1997 to FY 2000 are to be captured under nine major headings based on cost category, and according to functional area as further explained below. All cost figures are to be reported in thousands of dollars. Numbers in the "Total" rows will be calculated automatically as cost data is entered.

Safety and Health Functional Categories

The S&H components of site work can be viewed as consisting of different types of activities, regardless of whether they are directly or indirectly funded. These types include:

- Safety and Health functions necessary and integral to conduct EM programmatic activities safely, e.g., the S&H personnel and funding resources at the elemental work unit level necessary to conduct the specific activity, such as radiation monitoring for SNM stabilization. This also includes direct mission activities whose primary driver is safety and health in nature, e.g., a line item to upgrade the fire protection equipment. However, this should not include activities that are the primary focus of the EM mission, e.g., actual cleanup activities.

- If they have been projectized, site-wide safety and health activities necessary for the operation of the site, regardless of the EM programmatic work, e.g., site-wide fire protection and emergency services, and occupational medical services necessary as a landlord function, and/or program management and S&H training functions integral to the conduct of S&H activities at the site. (If not specifically projectized these may be included in a site-wide PBS.)

- If projectized, S&H initiatives pursued for cost-effectiveness or continuous improvement of the site safety and health posture, e.g., pursuit of VPP star status, or the implementation of behavior-based safety initiatives to bring about a fundamental change in the safety culture of the workforce. (Note: If managed on a site-wide basis, these resources should be included in the site-wide reporting section.)

Nine Safety and Health Functional Categories have been established to assist planners in understanding and communicating the major S&H issues, activities, and resources associated with a project or site-wide S&H program. The functional category definitions provided below describe the programmatic activities that should be included for that particular functional category. These definitions are consistent with the ES&H Management Planning Process.

A. **Emergency Preparedness** - The Emergency Preparedness functional category includes activities that are intended to provide the final barrier for ensuring the safety and health of workers and the public, and for protecting property and the environment in the event of an emergency. Activities in this functional category include maintenance/inspection of emergency facilities and equipment; emergency response team personnel training, drills and exercises; maintaining/updating current emergency plan based on site-specific hazards; coordination with State and Local authorities and

Federal agencies. Hazard assessment provides the technical basis to establish the resources necessary for the site emergency management programs.

B. **Fire Protection** - The Fire Protection functional category includes all activities intended to prevent, minimize, detect, and suppress fires. This functional category includes fire prevention; fire detection; fire suppression systems; fire fighting and HAZMAT response; loss prevention; operation of ambulances and fire fighting equipment; life safety testing and inspection of fire detection and suppression equipment and alarm systems; enforcement of flammable and explosive material control; training/systems to meet OSHA, National Fire Protection Association (NFPA), state and local fire protection requirements; review of designs/plans/specifications for compliance with regulations, codes, and standards, and inspection of construction activities for potential fire hazards; and mutual aid agreements with local authorities. This functional category excludes fire protection activities and/or systems that are solely for the benefit or protection of nuclear systems (e.g., glove box inerting systems). These excluded activities are to be included in the Nuclear Safety functional category.

C. **Industrial Hygiene** - The Industrial Hygiene functional category includes all activities intended to provide protection to workers from chemical, biological, physical, and physiological hazards. Activities in this functional category include anticipation, recognition, evaluation, and control of health hazards (including physiological stress, such as noise, heat, cold, and non-ionizing radiation); redesign of equipment and tasks; ventilation; substitution of less hazardous materials; written and verbal communication of real and perceived hazards; personnel protection; and laser safety. This functional category does not include medical surveillance, employee medical records, and exposure of workers to ionizing radiation.

D. **Industrial Safety** - The Industrial Safety functional category includes all activities intended for the protection of workers from physical trauma. This functional category includes electrical safety; machinery and machine guarding; personnel protection; accident investigation; compressed gas and pressure system safety; hoisting, rigging, and material handling; lock-out/tag-out; confined space controls; platform, man-lift and scaffolding usage; ensuring safe surfaces for walking and working; cutting, welding and brazing safety; hand and portable power tool safety; explosives and hazardous material handling, storage and use; construction safety; firearms safety; and facility egress.

E. **Occupational Medicine** - The Occupational Medical Services functional category includes all activities intended to provide a comprehensive occupational medical program. This functional category includes employee health examinations such as pre-placement and qualification, return to work, fitness for duty, and termination examinations; diagnosis and treatment of occupational illnesses and injuries; employee health counseling (employee assistance program and wellness); maintenance of medical records; emergency medical treatment and triage; specialized medical equipment; and immunization programs.

F. **Nuclear Safety** - The Nuclear Safety functional category includes activities that maintain or improve the level of safety associated with radioactive and/or fissionable materials that exist in such form and quantity that a nuclear hazard potentially exists to the employees or the general public. Included are activities involving critical safety or nuclear operations safety associated with the following 2006 Plan operations:

- Production, processing, or storage of radioactive liquid or solid waste, fissionable materials or tritium;
- Nuclear material separations operations;
- Irradiated materials inspection, fuel fabrication, decontamination or recovery operations;
- Fuel enrichment operations;
- Environmental remediation or waste management activities involving radioactive materials.
- Radioactive source production and source materials
- Nuclear Safety Analyses

It is not intended that the programmatic aspects of nuclear operations be captured and reported in this functional category; only those activities designed to enhance or maintain the safety and health performance of the line programs should be categorized as nuclear safety. The physical systems, personnel, and programs to provide nuclear material accountability, safeguards, and security are not included.

G. **Radiation Protection** - The Radiation Protection functional category includes activities intended to control worker and public exposure to radioactivity. This functional category includes control equipment and procedures for radiation sources; interlocks, instrumentation and shielding for radiation-generating devices; equipment and procedures used to minimize or mitigate external exposure; personnel dosimetry, bioassay program, and ALARA programs; control of paths for inhalation/ingestion/skin penetration of radioactive material; radiation-exposure records; fixed and portable instrumentation for radiation detection and measurement; and contamination control.

H. **Transportation Safety** - The Transportation Safety functional category includes activities that ensure safe packaging and transportation. This functional category includes packaging certification; coordination of intra-building and on-site movements and transfers; off-site and international shipments; transportation (including marking and labeling) of hazardous material; inspection/maintenance of transportation equipment; testing and technology of transportation hardware; certification and training of transportation operators; aviation safety; motor vehicle safety; watercraft safety; and rail safety.

I. **Management Oversight** - The Management and Oversight functional category includes activities that coordinate, direct, integrate and control S&H activities across multiple functional categories. If the oversight is limited to only one functional area, include that oversight activity in the corresponding functional area. This category includes S&H documentation and document control activities; configuration management; S&H performance trending, analyses, and lessons learned feedback; corrective action tracking; S&H self-assessment activities; dedicated internal S&H personnel; coordination and communication with DOE, state, and local authorities; internal audits and surveillance; external S&H program reviews; operational readiness reviews; and voluntary protection program. Nuclear safety analyses are included in the Nuclear Safety functional category.

S.13.1. Safety and Health Cost Reporting - Indirect Costs

Enter all major **indirect costed** contractor, any subcontractor, and any non-labor S&H costs, for each year, from FY 1997 through FY 2000. Enter the percentage to the nearest number (i.e., 100 would equal 100%) of the indirect S&H costs which will be allocated to EM. Sites with other than EM funding will have a number less than 100%. DO NOT adjust the site-wide indirect S&H cost

down to reflect only the EM portion. Include the total S&H costs and use the percentage indicator to derive the EM portion. All S&H costs are to be reported as Average S&H. Numbers in the "Total" rows will be calculated automatically as S&H data is entered. The Total S&H costs allocated to EM will be a calculated field which will record the product of the Total S&H and the % of EM S&H. All cost figures are to be reported in thousands of dollars.

S.13.2. Safety and Health FTE Reporting - Indirect Contractor FTEs

Enter all major indirect costed contractor, and any subcontractor S&H FTEs for each year, from FY 1997 through FY 2000. All FTEs are to be reported as Average FTEs (see definition of Average FTEs below). Enter the percentage to the nearest number (i.e., 100 would equal 100%) of the indirect FTEs which will be allocated to EM. Sites with other than EM funding will have a number less than 100%. DO NOT adjust the site-wide indirect FTEs down to reflect only the EM portion. Include the total FTEs and use the percentage indicator to derive the EM portion. All FTEs are to be reported as Average FTEs. Numbers in the "Total" rows will be calculated automatically as FTE data is entered.

Average FTEs - Average FTEs reflect an estimate of the average for the number of site management contract, subcontracted within site management contract, and "other" FTEs over the course of each fiscal year. It is assumed this average will remain the same throughout the project life cycle unless you indicate otherwise.

NOTE: ONLY indirect costs and FTEs for Sites where EM is the Landlord SHOULD BE INCLUDED. For sites with other Programs as the landlord (i.e., DP, NE, FE, etc., NOT EM), indirect ES&H costs and FTEs should be reported in accordance with Department-wide and program-specific guidance for reporting of these costs and FTEs. Currently, departmental budget guidance requires capturing these costs and FTEs through the use of ES&H Activity Data Sheets generated in the Departmental ES&H Management Planning Information System (and consolidated by EH.)

S. - SITE SUMMARY LEVEL - PART C: Critical Closure Path and Critical Events

The information in this section is needed in order to prioritize activities so that site closure goals may be achieved. The identification of the critical closure path and critical events will facilitate proper project planning at the site to efficiently accomplish this objective.

S.14. Critical Closure Path and Critical Events

The critical closure path is a streamlined schedule of high level activities, events, and/or decisions that warrant DOE management attention. The critical closure path must occur "on schedule" to achieve the site closure date. The critical closure path is composed of two sources of schedule information: Critical Closure Path and Critical Events.

I. Critical Closure Path.

The Critical Closure Path is defined as the longest path (in terms of duration) through the schedule of project activities that achieve site cleanup and closure. The duration of activities on the critical path drives the site closure date. Delay in a critical closure path activity will delay the closure of the site; similarly, acceleration of the site closure date can occur only if the acceleration occurs with critical closure path activities.

II. Critical Events.

Critical Events are events (decisions, activities, and/or selected milestones) that are not on the critical path, but are scheduled to occur within the next three years and are of sufficient programmatic risk to warrant upper level DOE management, stakeholder, and Tribal Nations visibility.

Critical paths and events are identified by project title, a unique site-designated project ID. For each identified project, the following information is collected: short activity description, activity scheduled start and completion dates, and programmatic risk category (i.e., technological, schedule, or scope) along with the associated STCG Need for technological risks.

Project Identification

Pick lists are available to identify the project. You may select either a ***Project Title*** or a ***Unique Site-Designated Project ID***; selecting one of either of the two fields will automatically enter the appropriate information in the corresponding field in the adjoining cell.

Short Activity Description

Provide a short summary of each activity identified to be critical to achieving completion and end state goals at the site. For Critical Closure Path and Critical Event entries where the Technological Risk is rated 3, 4 or 5, also include the STCG Need Number(s).

Activity Dates

In the columns provided, enter ***Activity Scheduled Start Date***, and ***Activity Scheduled Completion Date***. This data must be entered in a specific manner: the month information must be in a two digit format and the year must be recorded as four digits. (Thus, a date with the month of February and a year of 2002 becomes 02/2002.)

STCG Need ID#

For technology related critical events assessed at a programmatic risk level of 3, 4, or 5, indicate the STCG Need ID# (from Table O.9.2).

Programmatic Risk Category

Pick lists are used for selecting the Programmatic risk categories. For the desired category the pick list provides 1 through 5 as the options available to be entered in that cell. Definitions for the five Programmatic Risk categories are provided in the following table:

Programmatic Risk Table

Programmatic Risk Categories	Technology	Work Scope Definition	Inter-Site Dependency
5 (high)*	• No technology to accomplish the planned activity has been found to exist and no technology is under development. • The identified STCG Need is listed in Table O.9.2.	• Project end state is not determined or supported by stakeholders and Tribal Nations • Waste/material quantities and characteristics are unknown • Process operations are not identified or supported by stakeholders and Tribal Nations • Final disposition location for waste/material has not been identified	• Activity involves multiple sites • No concurrence has been reached between sites
4*	• A potential technology has been identified to accomplish the planned activity, but development is only at the laboratory scale level or earlier. • The identified STCG Need is listed in Table O.9.2.	• Project end state is determined but may be controversial to stakeholder and Tribal Nations • Process operations are identified, but may be controversial to stakeholder and Tribal Nations • Final disposition location for waste/material has not been identified and approved	• Activity involves multiple sites, site concurrence has been verbally reached • Receiving facility is unsure if waste/material will meet WAC • No funding has been identified and no schedule for receipt or treatment of the waste/material exists

Programmatic Risk Categories	Technology	Work Scope Definition	Inter-Site Dependency
3*	• A potential technology has been identified to accomplish the planned activity and is being demonstrated at full or pilot scale. • The identified STCG Need is listed in Table O.9.2.	• Project end state is determined and is expected to be acceptable to stakeholder and Tribal Nations • Waste/material quantities and characteristics are broadly known • Process operations are identified and are expected to be acceptable to stakeholder and Tribal Nations • Final disposition location for waste/material has been identified and EIS is being prepared	• Activity impacts another site, site concurrence has been verbally reached • Receiving facility is reviewing characterization data to determine WAC acceptability • Funding has been identified but no schedule for receipt or treatment of the waste/material exists
2*	• The required technology has been fully developed and demonstrated at another site with a similar waste/material type	• Project end state is determined and supported by stakeholder and Tribal Nations • Waste/material quantities and characteristics are well known • Process operations are identified and are supported by stakeholder and Tribal Nations • Final disposition location for waste/material has been identified and EIS ROD is prepared	• Activity doesn't impact another site or Site concurrence has been documented if multiple sites are impacted • Receiving facility has verified WAC acceptability • Funding has been identified but no schedule for receipt or treatment of the waste/material exists
1 (low)*	• Technology has been demonstrated at the site on some actual waste/materials and is operationally ready	• Project end state is determined and supported by stakeholder and Tribal Nations • Waste/material quantities and characteristics are well known • Process operations are identified and are supported by stakeholder and Tribal Nations • Final disposition location for waste/material has been identified and EIS ROD is pending	• Activity doesn't impact another site or Site concurrence has been documented if multiple sites involved • Receiving facility has verified WAC acceptability • Funding is identified in an approved PBS and facility is ready to receive the waste/material

*The numerical categories used to determine level of Programmatic Risk will be converted to colored symbols on waste/material disposition maps. Category 1 is shown as a green circle, Categories 2 and 3 are shown as a yellow triangle, and Categories 4 and 5 are shown as a red square.

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Attachment F. Operations/Field Office Data Summary Format and Instructions

This section contains guidance for completion of the Operations/Field Office Data Summary (ODS). Only one ODS needs to be completed for each Operations/Field Office. An outline of the data collected in the ODS and the page numbers corresponding to each section follow.

PART B **Page No.**

O.8. Integrated Priority List Data

PART C

O.9. Science and Technology Development

Operations/Field Office Data Summ - Part A: Operations Office Header

O. - Operations/Field Office Data Summary - Part A

O.1. Operations/Field Office:

O.2. FY 1999 Operations/Field Office Full Compliance Case (in $000):

O.3. Lifecycle Cost Data

O.3.1. Lifecycle Costs for this Operations/Field Office for each Funding Scenario (All dollars in thousands)

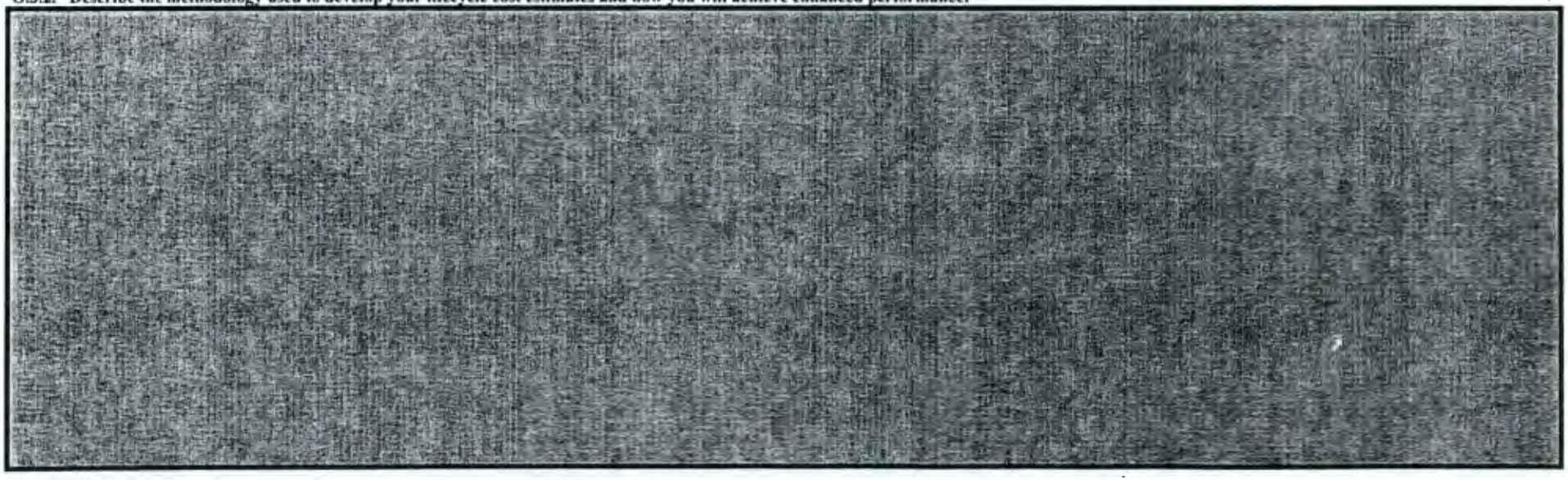
Note: See Table X.X for funding level for each scenario.

Note: EP = Enhanced Performance

Funding Scenario	Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
5.75		The 5.75 cost data will be determined by rolling up the PBS costs.													
5.75 (with all EP)	0														

Funding Scenario	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
5.75	The 5.75 cost data will be determined by rolling up the PBS costs.											
5.75 (with all EP)												

O.3.2. Describe the methodology used to develop your lifecycle cost estimates and how you will achieve enhanced performance:



Operations/Field Office Data Sumı y - Part A: Support Costs Breakout

0.4. Support Costs Breakout

O.4.1. M&O/M&I Functional Support Cost Reporting (Section O.2. in the 2/28/97 OBS)

All dollars in thousands.	1997-2006 Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
General Support	0										
Mission Support	0										
Mission Direct (non-construction)	0										
Construction Direct	0										
Total	0	0	0	0	0	0	0	0	0	0	0

O.4.2. EM Functional Support Cost Reporting (Section O.3. in the 2/28/97 OBS)

All dollars in thousands.	1997-2006 Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
General Support	0										
Mission Support	0										
Mission Direct (non-construction)	0										
Construction Direct	0										
Total	0	0	0	0	0	0	0	0	0	0	0

Operations/Field Office D Summary - Part A: FTEs

0.5. Workforce/Employment Levels

O.5.1. Operations/Field Office Federal FTEs at Year End (Section O.4.a. in the 2/28/97 OBS)

	1997-2006 Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Federal FTEs	0										

O.5.2. Operations/Field Office and Major Site M&O/M&I FTEs at Year End (excluding subcontractors) (Section O.4.b. in the 2/28/97 OBS)

M&O/M&I FTEs

Major Site	1997-2006 Total	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	0										
	0										
	0										
	0										
	0										
	0										
	0										
	0										
All Others	0										
Operations/Field Office Total	0	0	0	0	0	0	0	0	0	0	0

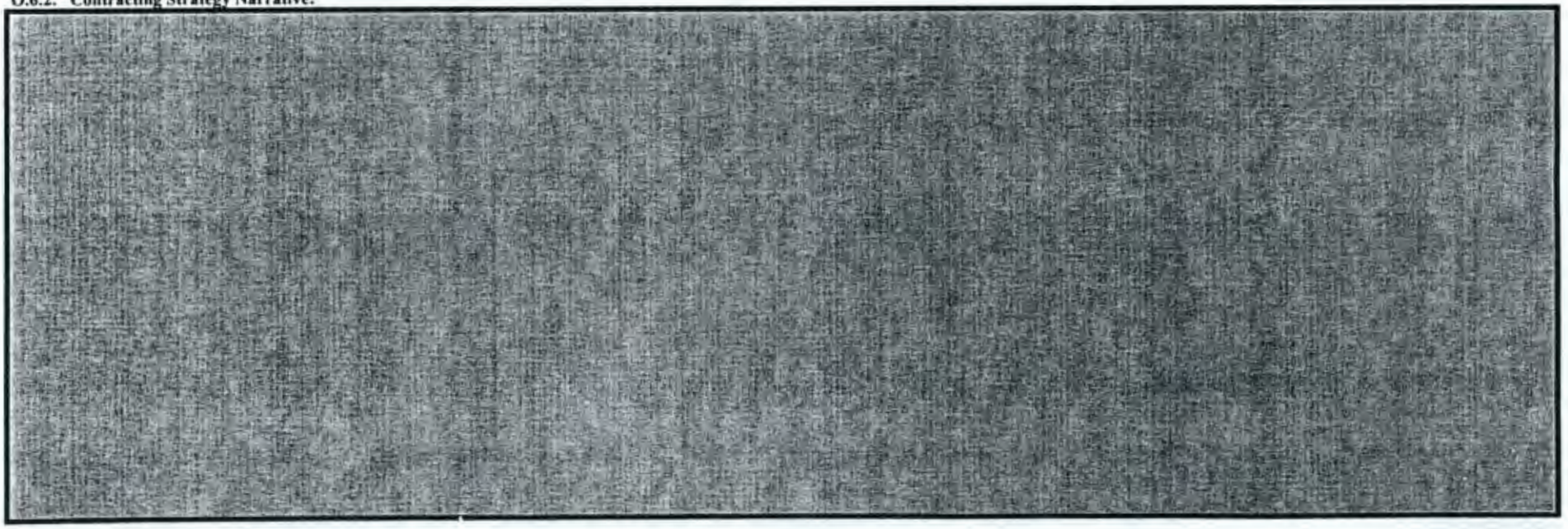
Operations/Field Office Data Su ıary - Part A: Contracting Data

O.6. Environmental Management Contracting Data

O.6.1. Environmental Management Contracting Profile (Section O.5. in the 2/28/97 OBS)
(Prime Contractors plus 1st Tier Subcontractors)

	Project Expenditures as Percentage of Operations/Field Office Overall Budget									
Contract Type	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Firm Fixed Price										
Fixed Price Award Fee										
Fixed Price Incentive										
Fixed Price, Level-of-Effort										
Cost Plus Award Fee										
Cost Plus Incentive Fee										
Cost Plus Fixed Fee										
Basic/Task Ordering Agreement										
Time and Materials/Labor Hours										
Indefinite Delivery										
Other										
Total	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**

O.6.2. Contracting Strategy Narrative:



O.7. 1998 EM Safety and Health Performance Indicator Data Report

O.7.1. Safety and Health Indicator #1 - Total Recordable Case Rate (Section O.6. in the 2/28/97 OBS)

	Target	Cumulative Actual	1st Quarter Actual	2nd Quarter Actual	3rd Quarter Actual	4th Quarter Actual
Ops Office annual TRC rate goal						
1.1 Enter total number of recordable death, illness, and injury cases (for all contractors and subcontractors)						
1.2 Enter total number of above cases resulting in a fatality						
1.3 Enter total person-hours worked (for all contractors and subcontractors)						
1.4 Total number of recordable injury cases per 200,000 hours worked (TRC) =						

O.7.2. Safety and Health Indicator #2 - Lost Workday Case Rate (Section O.7. in the 2/28/97 OBS)

Ops Office annual Lost Workday Case Rate goal						
2.1 Enter total number of lost workday cases this quarter (for all contractors and subcontractors)						
2.2 Enter total person-hours worked this quarter						
2.3 Number of lost workday cases per 200,000 hours worked (LWC) =						

O.7.3. Safety and Health Indicator #3 - Procedure Deficiencies and Violations (Section O.8. in the 2/28/97 OBS)

Ops Office annual goal						
3.1 Enter total number of procedure deficiencies and violations this quarter						
3.2 Enter total person-hours worked this quarter (same total from step 1.3)						
3.3 Procedure violations per 200,000 person-hours worked						

O.7.4. Safety and Health Indicator #4 - ORPS Corrective Action Status (Section O.9. in the 2/28/97 OBS)

Ops Office annual goal						
4.1 Enter total number of open corrective actions which are overdue						
4.2 Enter total number of open corrective actions						
4.3 Corrective action status ratio (percent)						

Operations/Field Office Data Summary - Part B: Integrated Priority List

O. - Operations/Field Office Data Summary - Part B

O.1. Operations/Field Office:

O.8. Integrated Priority List Data

O.8.1. Integrated Priority List
(Attachment 4 in 1997 Mid-year Performance Measures Update)

Integrated Priority List Contact:
Integrated Priority List Contact's Phone Number:

Describe Differences Between this IPL and the IPL Submitted on June 27, 1997:

How many elements comprise the Integrated Priority List for this Operations/Area Office?

1-46 | 47-101 | 102-145 | 146-200 | 201-250

All dollars in thousands.

Priority Ranking	Unique Site-Designated Project ID	Sub-PBS ID	Element Title		FY 99 Request
			Project Title	Sub-PBS Title	

Operations/Field Office Data Summary - Part B: Integrated Priority List

O. - Operations/Field Office Data

O.1. Operations/Field Office:

O.8. Integrated Priority List Dat

O.8.1. Integrated Priority List (Attachment 4 in 1997 Mid-year Perfor Measures Update)

All dollars in thousands.

Priority Ranking	FY 99 Cumulative Total	Approp. Account	Reg. Driver Total (1-10)	1	2	3	4	5	6	7	8	9	10
	0		0										
	0		0										

Operations/Field Office Data Summary - Part B: Integrated Priority List

O. - Operations/Field Office Data

O.1. Operations/Field Office:

O.8. Integrated Priority List Dat

O.8.1. Integrated Priority List (Attachment 4 in 1997 Mid-year Perfor Measures Update)

All dollars in thousands.

Priority Ranking	Impact of $5.0 Billion Funding Level/ Advantage of $6.0 Billion Plus Funding Level on Affected Data Element

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	Unique Site-Designated Project ID	Sub-PBS ID	Element Title		FY 99 Request
			Project Title	Sub-PBS Title	

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	FY 99 Cumulative Total	Approp. Account	Reg. Driver Total (1-10)	1	2	3	4	5	6	7	8	9	10
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	Impact of $5.0 Billion Funding Level/ Advantage of $6.0 Billion Plus Funding Level on Affected Data Element

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	Unique Site-Designated Project ID	Sub-PBS ID	Element Title		FY 99 Request
			Project Title	Sub-PBS Title	

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	FY 99 Cumulative Total	Approp. Account	Reg. Driver Total (1-10)	1	2	3	4	5	6	7	8	9	10
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	Impact of $5.0 Billion Funding Level/ Advantage of $6.0 Billion Plus Funding Level on Affected Data Element

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	Unique Site-Designated Project ID	Sub-PBS ID	Element Title		FY 99 Request
			Project Title	Sub-PBS Title	

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	FY 99 Cumulative Total	Approp. Account	Reg. Driver Total (1-10)	1	2	3	4	5	6	7	8	9	10
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	Impact of $5.0 Billion Funding Level/ Advantage of $6.0 Billion Plus Funding Level on Affected Data Element

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	Unique Site-Designated Project ID	Sub-PBS ID	Element Title		FY 99 Request
			Project Title	Sub-PBS Title	

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	FY 99 Cumulative Total	Approp. Account	Reg. Driver Total (1-10)	1	2	3	4	5	6	7	8	9	10
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										
	0		0										

Operations/Field Office Data Summary - Part B: Integrated Priority List

All dollars in thousands.

Priority Ranking	Impact of $5.0 Billion Funding Level/ Advantage of $6.0 Billion Plus Funding Level on Affected Data Element

Operations/Field Office Data Summary - Part B: Integrated Priority List Narratives

O.8.2. Integrated Priority List Narratives (Attachment 4 in the 1997 Mid-year Performance Measures Update)

O.8.2.1. Accomplishments and Compliance Issues at $5.0 Billion Funding Level (Table 1)

The size and shape of the narrative box can be adjusted.

O.8.2.2. Accomplishments and Compliance Issues at $5.5 Billion Funding Level (Table 1)

The size and shape of the narrative box can be adjusted.

O.8.2.3. Accomplishments and Compliance Issues at $5.75 Billion Funding Level (Table 1)

The size and shape of the narrative box can be adjusted.

O.8.2.4. Accomplishments and Compliance Issues at $6.0 Billion Funding Level (Table 1)

The size and shape of the narrative box can be adjusted.

O.8.2.5. Justify Any Additional Funding Requirements

The size and shape of the narrative box can be adjusted.

("Impacts of Differences Between Table 1 and the Revised April 1, 1997 Reference Case" narrative in Attachment 4 of the 1997 Mid-year Performance Measures Update has been removed.)

Operations/Field Office Data Summary - Part C: Innovative Technology Deployment

O. - Operations/Field Office Data Summary - Part C

O.1. Operations/Field Office:

O.9. Science and Technology Development (Section O.10. in the 2/28/97 OBS)

O.9.1. Innovative Technology Deployment

- Identify the technologies selected for deployment and those technologies which are strong candidates for deployment at this Operations/Field Office

How many Waste Type/Problem Area rows are required?
(Data in rows beyond highest number of selection will be deleted)

1-19 | 20-54 | 55-89 | 90-124 | 125-159 | 160-200

	STCG Needs	
Waste Type/ Problem Area	ID #	Title

Operations/Field Office Data Summary - Part C: Innovative Technology Deployment

Science/Technology Data					PBS	
Innovative Technology Name	TTP or Project ID #	OST Tech ID	Projected Deployment Date	Site Deployment Plan	Site Designated Project ID #	Project Title

Operations/Field Office Data Summary - Part C: Innovative Technology Deployment

Comments

Operations/Field Office Data Summary - Part C: Science and Technology Needs

O.9.2. Science and Technology Needs

- Identify the science and/or technology needs of this Operations/Field Office

How many Waste Type/Problem Area rows are required?
(Data in rows beyond highest number of selection will be deleted)

1-25 | 26-61 | 62-97 | 98-133 | 134-169 | 170-200

	STCG Needs	
Waste Type/ Problem Area	**Geographic Site**	**ID #**

Operations/Field Office Data Summary - Part C: Science and Technology Needs

STCG Needs		
Title	Timing In Years	2006 Plan Priority

Operations/Field Office Data Summary - Part C: Science and Technology Needs

PBS		
Site Designated Project ID #	Project Title	Comments

Operations/Field Office Data Summary - Part C: Innovative Technology Cost Savings & Other Benefits

O.9.3. Innovative Technology Cost Savings & Other Benefits

How many Waste Type/Problem Area rows are required?
(Data in rows beyond highest number of selection will be deleted)

1-27 | 28-63 | 64-99 | 100-135 | 136-171 | 172-200

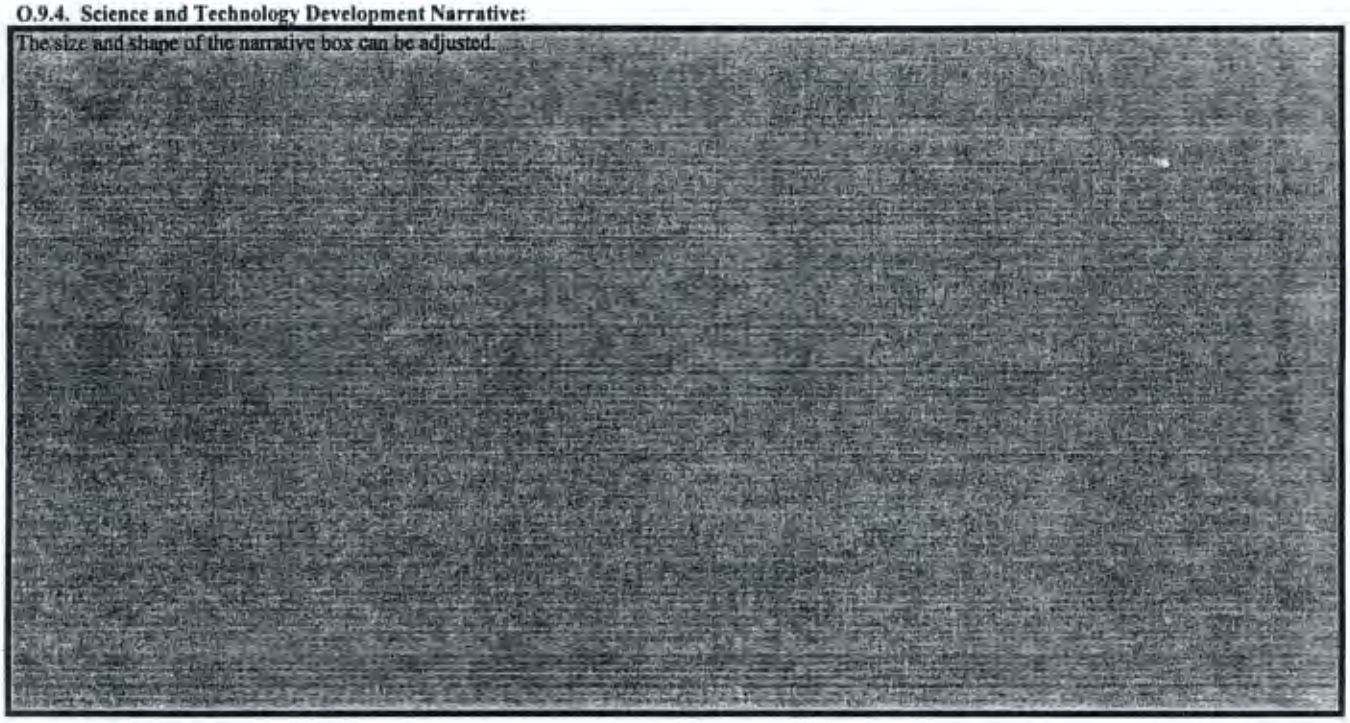
	Technology Savings Data				
Waste Type/ Problem Area	Geographic Site	Innovative Technology Name	OST Tech ID	Lifecycle Cost Savings	Confidence

Operations/Field Office Data Summary - Part C: Innovative Technology Cost Savings & Other Benefits

Technology Savings Data	PBS			
Source/Reference	Site Designated Project ID #	Project Title	Technology Status	Comments

Operations/Field Office Data Summary - Part C: Science and Technology Development Narrative

O.9.4. Science and Technology Development Narrative:



PART A

O.1. Operations/Field Office

Identify the full name of the Operations/Field Office.

O.2. FY 1999 Operations/Field Office Full Compliance Case

Knowing the full compliance budget for each Operations/Field Office will enable the Department to meet the requirements of Executive Order 12088, which requires the heads of all executive agencies to request sufficient funds to ensure compliance with all environmental regulations.

Enter the budget level required at the Operations/Field Office level for FY 1999 in order to be in full compliance. Full compliance means that all sites are meeting all legally-required milestones and requirements.

O.3. Life-Cycle Cost Data

Life-cycle cost estimates for each Operations/Field Office will be collected to understand the potential benefits of enhanced performance.

O.3.1. Life-cycle Costs for this Operations/Field Office for each Funding Scenario

In Table O.3.1, enter the life-cycle costs for the $5.75 billion funding scenario **meeting all enhanced performance targets.** (Life-cycle cost data for the $5.75 billion funding scenario will be calculated by rolling up the PBS cost data.) Report annually through 2010, and in five year blocks from 2011 to 2070. All cost figures should be reported in thousands of current year dollars.

O.3.2. Cost Estimating Methodology

Use this narrative field to describe the methodology used to develop the life-cycle cost estimates reported in O.3.1. Identify all major assumptions made in developing the estimates with full enhanced performance. Explain how enhanced performance will be achieved.

O.4. Support Costs Breakout

Support cost data are necessary to track progress in achieving support cost reduction under the enhanced performance scenarios, and to identify additional opportunities for support cost reduction. Since 1994, EM has undertaken an aggressive effort to reduce support costs. When support costs are reduced, more funds are available for actual field work. Support cost data are also essential for projecting the budget requirements to implement the National 2006 Plan.

Cost Definitions - Use the following definitions when allocating support costs. These definitions are consistent with the October 7, 1996, DOE memorandum, *Functional Support Cost Reporting*, from Donald Pearman, Acting Chief Financial Officer. The information provided in this Operations/Field Office Summary should be consistent with other Functional Support Cost reporting. For Operations/Field Offices with multiple sites reporting (e.g., Ohio), provide a separate table for each site.

General Support - General support costs (e.g., human resources, procurement, legal, taxes, MIS) which are not explicitly tied to mission programs.

Mission Support - Mission support costs (e.g., maintenance, health and safety, safeguards & security) incurred that facilitate, but are not directly involved with the operation of the mission direct programs.

Mission Direct (non-construction)- Mission direct includes direct costs for cleanup such as characterization, remediation, waste containment, waste treatment, deactivation/decommissioning of facilities.

Construction Direct - Construction direct includes construction costs capitalized in accordance with generally accepted accounting principles.

O.4.1. Management and Operating (M&O)/Management and Integrating (M&I) Functional Support Cost Reporting

In Table O.4.1., provide all major M&O/M&I support and direct costs annually for the ten year window. All cost figures should be reported in thousands of current year dollars. Numbers in the "Total" columns and rows will be calculated automatically as cost data are entered.

This section should represent **ALL M&O/M&I SUPPORT COSTS ACROSS ALL PROGRAMS AT THE SITE**. This table should NOT reflect EM costs only.

O.4.2. EM Functional Support Cost Reporting

In Table O.4.2., provide all EM support and direct costs for the ten year window. All cost figures should be reported in thousands of current year dollars. Numbers in the "Total" columns and rows will be calculated automatically as cost data are entered.

This section should represent all EM costs across all contractors/activities. The sum of these columns should closely approximate the sum of all Project Baseline Summary (PBS) costs for the Operations/Field Office.

O.5. Workforce/Employment Levels

Data on federal and M&O/M&I FTEs are essential for reconciling projected workforce levels with workforce levels required to implement the National 2006 Plan. These data are also necessary to determine how workforce requirements relate to budget requirements and life-cycle costs.

O.5.1. Operations/Field Office Federal FTEs at Year End

Use Table O.5.1. to report the number of federal personnel Full Time Equivalents (FTEs) for each Operations/Field Office throughout the ten year window. In Table O.5.1., identify the expected number of federal FTEs for environmental management that will be needed to implement the National 2006 Plan. The estimates should represent the number of FTEs as of the end of the Fiscal Year and should be provided annually through FY 2006.

O.5.2. Operations/Field Office and Major Site M&O/M&I FTEs at Year End (Excluding Subcontractors)

Use Table O.5.2. to report the number of M&O/M&I contractor personnel FTEs for each Operations/Field Office throughout the ten year window. For Operations/Field Offices with multiple sites, information should be provided separately for each major site. For example, Grand Junction should be listed separately under Albuquerque, and Brookhaven separately under Chicago. A pick list of major sites has been provided to simplify data entry. Multiple small sites (e.g., FUSRAP sites) can be combined and listed under "All Others."

In Table O.5.2., identify the expected number of M&O/M&I contractor FTEs for environmental management that will be needed to implement the National 2006 Plan. The estimates should represent the number of FTEs as of the end of the Fiscal Year and should be provided annually through FY 2006. An Operations/Field Office total will be automatically calculated in Table O.5.2. FTE information for any site not listed individually must be included under "All Others" so that the calculated total is accurate. Contractor FTE estimates should include only M&O and prime M&I contractor personnel and should be consistent with the data reported quarterly to the Office of Human Resources and Administration.

Example:

Major Site	**1997-2006 Total**	**1997**	**1998**	**1999**	**2000**	***Actual table contains additional columns through FY 2006***
Site ABC		1,045	1,045	1,032	1,025	
Site XYZ		450	430	420	400	
All Others		45	43	43	40	
Ops Office Total						

O.6. Environmental Management Contracting Data

The Field is responsible for maintaining and tracking detailed contracting performance data to demonstrate progress in achieving contract reform. These data will allow the Field to demonstrate that the principles of contract reform are being utilized to achieve National 2006 Plan goals and objectives.

O.6.1. Environmental Management Contracting Profile

Use Table O.6.1 to report the percentage of the Operations/Field Office's FY 1997 budget expended on different contract types, and the future goals for improvement of those percentages through 2006. This breakdown should be based on project expenditures under prime contracts and first tier subcontracts for performing program work in support of the National 2006 Plan. This table should reflect estimated incurred costs (in thousands of current year dollars), not new budget authority. The definitions for each contract type are provided below.

- **Firm Fixed Price (FFP)**
  Contract type that establishes a fixed price up front for products or services, which are provided at a fixed price regardless of actual cost.

- **Fixed Price Award Fee (FPAF)**
  Contract type that establishes a fixed price up front for products or services, with additional money (award fee) to be earned by accomplishing specific performance measures.

- **Fixed Price Incentive (FPI)**
  Contract type that establishes a fixed price up front for products and services, with incentive (more profit) to contractor for improved performance.

- **Fixed Price, Level-of-Effort (FP, LOE)**
  Fixed price contract that specifies a level-of-effort (hours) to be provided over an established period of time for a set price.

- **Cost Plus Award Fee (CPAF)**
  Cost reimbursement contract with ceiling price based on estimate plus base (minimum fee) and reward (award fee). Award fee is dependent upon contractor's performance evaluated periodically against criteria established to improve efficiency, cost, quality, timeliness, etc.

- **Cost Plus Incentive Fee (CPIF)**
  Cost reimbursement contract with a negotiated target cost, a target fee, and maximum and minimum fees. The fee increases when final costs are below target and decreases when above. Incentives can be based on costs, performance, and/or delivery.

- **Cost Plus Fixed Fee (CPFF)**
  Cost reimbursement contract with a negotiated cost ceiling that may not be exceeded except at the contractor's own risk, and a "fixed" dollar fee that does not vary with actual costs.

- **Basic Ordering Agreement/Task Ordering Agreement (BAO/TAO)**
  Contracting mechanism allowing for identification and delivery of products and services once they have been determined. Contains general "generic/boilerplate" terms and conditions applying to future contracts and orders, and a general description or understanding of the services/items anticipated to be needed. The contracting method (i.e., fixed price, cost reimbursement) is outlined in each order. Additional terms and conditions are included in the task or order depending on the contracting method and the nature of the products or services to be provided.

- **Time and Materials (T&M)/Labor Hours (LH)**
  Cost reimbursement for all labor and material costs (LH includes cost reimbursement for labor only). Labor is reimbursed at a fixed hourly rate, and material is reimbursed at cost. Establishes a ceiling price which may not be exceeded except at the contractor's risk..

- **Indefinite Delivery (ID)**
  Contracting mechanism allowing for indefinite deliveries and/or quantities of specific products or services where it is impossible to determine in advance the quantities needed or the time frame required. A fixed price or cost reimbursement type of contract is established which outlines the terms and conditions that will govern the orders. Funds are authorized with each order.

- **Other**
  If any contracts do not meet the above definitions, report their expenditures as a percent of the site's overall budget in the "Other" category. If additional options or approaches are under consideration, discuss in the *Strategies and Prioritization* section of the Draft Site 2006 Plan.

O.6.2. Contracting Strategy Narrative

Discuss the contracting profile presented in Table O.6.1. (above). Describe the Operations/Field Office's overall contracting approach, including how that approach is integrated with the basic elements of contract reform (see Attachment L, Section 6). Discuss the organizational responsibilities and processes for federal management and administration of contracts and subcontracts. Identify subcontracts that are considered privatization/outsourcing, but are funded from the base program. For these subcontracts, provide similar discussion as provided for prime contracts and first tier subcontracts.

O.7. 1997 EM Safety and Health Performance Indicator Data Report

S&H performance indicator data are essential to ensure that safety and health are integral to the 2006 planning process. These data are also necessary to measure progress against stated safety and health targets.

The Office of Environmental Management intends to achieve "Best in Class" S&H performance within 5 years. Operations/Field Offices should be mindful of this when setting goals for the S&H performance measures described in this section. Operations/Field Offices are encouraged to benchmark their injury and illness rates against those of high-performing private corporations, such as Dupont, and set their own annual injury and illness rate goals accordingly. An annual goal which drives toward a 50% reduction in Lost Workday Case Rate and Total Recordable Case Rate in two years would be an example of a challenging safety goal. A goal which maintains or nearly maintains the status quo is not a challenging goal and would be considered unacceptable. EM is working with the Office of Environment, Safety, and Health to develop an improved set of corporate S&H performance measures. Additional guidance on this initiative will be forthcoming.

Enter the EM S&H performance goals for FY 1998 in accordance with the definitions and instructions below. For multi-program Operations/Field Offices, total Operations/Field Office goals (versus EM-specific S&H goals) may be established for both the Total Recordable Case Rate and Lost Workday Case Rate indicators.

O.7.1. S&H Indicator #1 - Total Recordable Case Rate

This measure tracks the number of work-related deaths and illnesses, and those work-related injuries which result in loss of consciousness, restriction of work or motion, transfer to another job, or require treatment beyond first aid, per 200,000 hours worked. The objective of this measure is to improve occupational safety performance, eliminate workplace fatalities, and reduce work-related injuries and illnesses.

Reporting Interval: Targets will be set annually; actualities will be tracked quarterly. For the initial data submission, place the annual target for TRC in the space provided.

Data Collection and Reporting Guidelines: This indicator applies to all prime contractors, subcontractors, lower-tier subcontractors, and so on. 29 CFR Part 1904 and DOE O 231.1 require all Department operating contractors and subcontractors to collect and report this information on a quarterly basis. Since TRC includes all lost workday injury cases as well as some injury cases not resulting in lost work days, TRC will always be equal to or greater than Lost Workday Case Rate (LWC). Data reported for TRC includes number of recordable injury cases and number of work hours. DOE O 231.1 requires contractors and subcontractors to report data by 25 days after the end of each calendar quarter to the Computerized Accident/Incident Reporting System input coordinator in Idaho Falls, Idaho. Since data reported to CAIRS usually does not appear in the database until several months after the end of the reporting quarter, Operations/Field Offices may directly contact the contractor's safety department or other appropriate representative to obtain a duplicate of the report sent to the CAIRS input coordinator (DOE O 232.1 requires contractors to provide this information to any representative of the Department of Energy upon request for the purpose of conducting oversight assessments or for statistical compilation). Using this data, Operations/Field Offices will complete the appropriate portion of the attached data sheet,

including the total number of recordable cases, total work hours for all contractors and subcontractors subordinate to the Operations/Field Office, combined TRC (i.e. for all contractors and subcontractors combined). Each quarter, a separate entry for any fatalities contributing to the quarterly TRC will be required in the space provided.

O.7.2. S&H Indicator #2 - Lost Workday Case Rate

This measure tracks the number of work-related injuries or illnesses that involve days away from work or days of restricted work activity, or both, per 200,000 hours worked. The goal is to improve occupational safety performance and reduce injuries and illnesses resulting in lost workdays or restricted work activity.

Reporting Interval: An annual target will be set and actualities will be tracked quarterly. For the initial data submission, place the annual target for Lost Workday Case Rate in the appropriate cell.

Data Collection and Reporting Guidelines: This indicator accounts for any work related injury or illness case that involves days away form work or days of restricted work activity, or both. It applies to all prime contractors, subcontractors, lower-tier subcontractors and so on. 29 CFR part 1904 and DOE O 231.1 require all Department operating contractors and subcontractors to collect and report this information on a quarterly basis. Data reported includes number of lost workday cases and number of work hours. Data must be reported by 25 days after the end of each calender quarter to the Computerized Accident/Incident Reporting System input coordinator in Idaho Falls, Idaho. Since data reported to CAIRS usually does not appear in the database until several months after the end of the reporting quarter, Operations/Field Offices may directly contact the operating contractor's safety department to obtain a duplicate of the report sent to the CAIRS input coordinator (DOE O 232.1 requires contractors to provide this information to any representative of the Department of Energy upon request for the purpose of conducting oversight assessments or for statistical compilation). Each quarter, complete the appropriate portion of the attached data sheet, including the total number of lost workday cases, total work hours for all Operations/Field Office contractors and subcontractors, and combined lost workday case rate (i.e. for all contractors and subcontractors combined).

O.7.3. S&H Indicator #3 - Procedure Deficiencies and Violations

This measure tracks the number of events involving a procedure violation, noncompliance, problem or deficiency as a root, direct, or contributing cause, or for which corrective action involves changes to or development of a procedure, per 200,000 person-hours worked. The objective is to indicate potential problems in conduct of operations and process safety performance.

Reporting Interval: Annual targets will be set and actualities will be tracked quarterly. For the first submission, please provide the annual target in the appropriate cell. Quarterly tracking, including the most recent available four quarters, will begin in October 1997.

Data Collection and Reporting Guidelines: For quarterly reporting, the ORPS database should first be screened by date range (using the first and last dates of the calendar quarter) by the Operations/Field Office. The resulting set of occurrence reports should be screened for any of the events meeting the reporting thresholds of DOE M 232.1-1 Section 8.3 Group 1.F, or any events involving a violation, non-compliance, failure to use or deficiency with any one or more of the following types of procedures (even if reported under a different ORPS group than 1.F):

- Operations procedures for systems or equipment
- Standard operating procedures
- Abnormal or emergency operating procedures
- Administrative procedures
- Shift or night orders
- Operations orders
- Radiological work permits
- Lockout/tagout procedures
- Electrical safety procedures
- Maintenance procedures
- Surveillance procedures
- Quality assurance procedures
- Work procedures, work permits, or work instructions
- Job hazards analysis
- Environmental restoration procedures

After determining the number of events meeting any of the above thresholds, complete the appropriate portion of the attached data sheet.

O.7.4. S&H Indicator #4 - ORPS Corrective Action Status

This measure tracks the number of open corrective actions which have passed their initial target completion date divided by the total number of open corrective actions (expressed as percentage). The objective of this measure is to indicate management commitment to promptly fixing deficiencies and Site/Operations Office performance in timely completion of ORPS corrective actions.

Reporting Interval: A target will be set annually. Actualities will be tracked quarterly as of the last day of the quarter. For the first submission, enter the annual target in the appropriate cell.

Data Collection and Reporting Guidelines: The data for quarterly reporting is easily obtained by screening the ORPS database by Operations/Field Office and for the quarter of interest. Next, select "Print/View Reports" and choose report number seven "Corrective Action Status Report". Print or save the report in a computer file, and review the report contents. Count the number of corrective actions which are overdue and the number of open corrective actions. Enter these values in the appropriate space in the attached data sheet.

PART B

O.8. Integrated Priority List Data

The Integrated Priority List (IPL) is integral to each Operations/Field Office's budget formulation. The IPL provides documentation and justification for budget requests on a subproject (IPL element) basis, clearly states the impact of alternative budget scenarios on specific IPL elements, and documents regulatory and compliance issues raised by changes in funding for these IPL elements.

Each Operations/Field Office is required to submit two priority list packages in response to this guidance:

- On November 26, 1997, each Operations/Field Office should submit a REVISED version of the FY 1999 priority list package submitted on June 27, 1997, as part of the Operations/Field Office Data Summary (ODS) submittal. The revised priority lists should align with the information that is being submitted for the Draft National 2006 Plan in order to demonstrate the link between the budget and the Plan. It is important to note that the compliance drivers have changed since the June 27, 1997, submittal. Each Operations/Field Office should also review the priority list narratives that they submitted on June 27, 1997, and update them as required. Each Operations/Field Office should update their FY 1999 priority lists according to the format outlined below, which requires breaking out FY 1999 BA by the revised compliance drivers outlined in Section 10.1 of this guidance.

- In March 1998, each Operations/Field Office will be required to submit an FY 2000 priority list and narratives according to the instructions outlined below. This priority list will be a primary tool for FY 2000 budget formulation. Once again, please remember that the compliance drivers have changed and are outlined in Section 10.1 of this guidance.

Priority lists should contain all projects required to fulfill Operations/Field Office objectives. Although we have the flexibility to prioritize at all funding levels, the overall budget situation will continue to be constrained. Any proposals for funding above the current outyear target level of $5.75 billion will have to be well justified. In order to encourage consistency in your priority setting, all Operations/Field Offices should consider the following EM principles in developing their priority lists:

- Eliminate the most urgent risks;
- Reduce mortgage and support costs to free up funds for further risk reduction;
- Protect worker health and safety;
- Reduce the generation of wastes;
- Create a collaborative relationship between DOE and its regulators, stakeholders, and Tribal Nations;
- Focus science and technology development on cost and risk reduction; and
- Integrate waste treatment and disposal across sites.

Both the November 26, 1997, and the March 1998, ODS priority list submittal will include:

- The Operations/Field Office priority list;
- A brief description at the Operations/Field Office level of the accomplishments and issues at the $5.0 billion, $5.5 billion, $5.75 billion, and $6.0 billion levels (as outlined at the end of this section);
- A brief description of the justification for any additional funding; and
- The name and phone number of an Operations/Field Office point of contact.

Operations/Field Offices should identify those activities on the priority list that will be funded at the $5.0 billion, $5.5 billion, $5.75 billion, and the $6.0 billion levels. This requirement may be fulfilled either by marking each individual element of the list, or by identifying the $5.0 billion, $5.5 billion, the $5.75 billion, and $6.0 billion thresholds (i.e., "draw the lines").

Operations/Field Office priority lists **SHOULD NOT** include National Program activities. Priority lists for these activities will be provided by the appropriate Headquarters contacts.

Capital funding of proposed privatization activities **SHOULD NOT** be included. Operating funds associated with these projects **SHOULD** be included. The current assumption is that adequate funding for already-approved privatization projects will be forthcoming in the requested privatization account. Should that not be the case, we will revisit site priorities in the "traditional" accounts.

All projects that will be funded within the $5.0 billion level can be identified and prioritized at either the PBS or sub-PBS level. Activities that will be funded only if budget authority is provided above the $5.0 billion level must be identified and prioritized in increments smaller than the PBS level (generally the sub-PBS level). Sub-PBSs cannot be composed of elements from more than one PBS.

All priority list information will be completed in the Excel worksheet in Section O.8 of Part B of the ODS. At this time, Excel worksheets are only being distributed for the FY 1999 IPL resubmittal due on November 26, 1997. Excel worksheets for the March 15, 1998, submittal of FY 2000 IPLs will be distributed at a later date.

The following instructions for Section O.8. of Part B of the ODS (Integrated Priority List) are designed to help you complete both the November 26, 1997, resubmittal of your FY 1999 priority list, and the March 15, 1998, submittal of your FY 2000 priority list. Generally, the two lists should be completed in the same manner. Any divergence between the requirements for the two lists will be specifically noted below.

Operations/Field Office Name: Field O.1 has been seeded with the Operations/Field Office name. This field is locked and cannot be updated.

O.8.1. Integrated Priority List Data

IPL Contact/Phone Number: The top of Section O.8.1 contains two fields for entering the name and telephone number of the Operations/Field Office IPL point of contact.

Describe Differences Between this IPL and the IPL Submitted on June 27, 1997: Use this text box to discuss the differences in scope, funding, or schedule (if any) that exist between the FY 1999 priority list submitted on June 27, 1997, and the update to the FY 1999 priority list being submitted on November 26, 1997. This text box only requires completion for the November 26, 1997, submittal. It should be left

blank in the March 15, 1998, submittal.

Beneath the text box described above is the table where priority list data should be entered as described below.

Priority Ranking: This is a locked column. If you require additional rows, contact Marilyn Tolbert-Smith at (301)903-8121.

Unique Site Designated Project ID: In this column, enter the correct Unique Site Designated Project ID (field A.1.2 of the PBS), which is the site-defined identifier for the PBS that encompasses the scope of the priority list element.

Sub-PBS Identifier: If a sub-PBS element is provided, enter a unique sub-PBS identifier in the sub-PBS identifier field. Either use site-designated Operations/Field Office subproject names or use A, B, C, D, etc. to denote subprojects (e.g., for PBS AL-ITRI, enter "AL-ITRI A" where A is the sub-PBS identifier).

Element Title: The Element Title is a unique title for the priority list element consisting of a Project Title and Sub-PBS Title. For example, a Project Title might be "Continue Title I Design Certification Process", and a Sub-PBS Title might be "Accelerated Completion". If you have entered a Unique Site Designated Project ID, the Project Title will appear automatically and will not require any additional entry. If you choose to enter a Project Title, the Unique Site Designated Project ID will be updated automatically if there is any variation.

Project Title: In this column, enter the PBS Title.

Sub-PBS Title: In this column, enter the Sub-PBS Title.

FY 1999/2000 Request: In this column, enter the Fiscal Year 1999 Request (for the November 26, 1997 submittal) or Fiscal Year 2000 Request (for the March 15, 1998, submittal). Please enter the FY 1999 or FY 2000 Congressional Request for each project or sub-PBS. This attachment also includes current FY 1999 targets (the $5.0 billion, the $5.5 billion, the $5.75 billion, and the $6.0 billion cases), by Operations/Field Office, that exclude National Programs. Updated FY 2000 targets will be transmitted to the Field in late December. These targets should be used to identify the respective funding thresholds on priority lists.

FY 1999/2000 Cumulative Total: This column is a locked field that automatically totals the cumulative FY 1999 Request or FY 2000 Request field as each new project is listed. Do not enter anything into this field.

Appropriations Account: In this column, identify the Appropriations Account for each element on the priority list. The only valid entries for this field are D (Defense), N (Non-Defense), and F (Uranium Enrichment D&D Fund).

Regulatory Driver Total: This column contains a calculated total of the next ten regulatory driver columns (1-10). Please remember that these are new regulatory drivers. For a detailed description of each driver, please see Section 10.0 of this guidance. This field is locked and should be used to compare regulatory driver totals to the FY 1999 request or FY 2000 request column. All compliance numbers must add to the total compliance related funding provided in the PBS.

Regulatory Driver Categories: In the columns labeled 1-10, enter the new Regulatory Driver Categories

(see Section 10.0 of this guidance). Identify the regulatory driver categories and the amount of FY 1999 or FY 2000 funding in thousands of current year dollars ($000s) devoted to each category for each element on the priority list.

Impact of a $5.0 Billion Funding Level/Advantage of a $6.0 Billion Funding Level on Affected Data Elements: This column should be used to provide a concise statement about the impacts of eliminating benefits of funding each priority list element between the $5.0 billion and $6.0 billion funding levels. These impact statements will be used to justify each element during the budget formulation process as funding targets may fluctuate. The statement should be sure to address the metric impacts should an element not be funded. Operations/Field Office IPL narratives (Section O.8.2) will address general impacts of the different funding levels.

O.8.2. Integrated Priority List Narratives

Integrated Priority List Narratives: These five text boxes are for discussing general accomplishments and compliance issues at various funding levels, the justification for any additional funding requests, and impacts of differences between different budget scenarios. Provide a brief description of: a) the accomplishments and compliance issues associated with funding levels of $5.0 billion, $5.5 billion, $5.75 billion, and $6.0 billion (as provided in this attachment); and b) the justification for any proposed additional funding. Each description should detail impacts associated with:

- The Department's ability to comply with applicable federal, state, and local statutes and regulations; the terms of permits; administrative orders or judicial decrees; enforceable milestones or schedules contained in agreements negotiated between the Department and environmental regulators; and commitments to the Defense Nuclear Facilities Safety Board;
- Public, worker, or environmental risk; and
- Congressional, stakeholder, and Tribal Nations expectations.

It is important to note that these narratives provide **General Operations/Field Office Level** information about impacts and benefits at different funding levels. The impacts collected in the priority list table itself provide an element-by-element discussion of impacts.

PART C

O.9. Science and Technology Development

In preparing their Draft Site 2006 Plan, each site is encouraged to utilize innovative technologies to the maximum extent possible in achieving the 2006 Plan goals outlined by the Assistant Secretary. Sites must consider basic research and technology development activities and needs and establish an approach to ensure deployment of innovative technologies to meet the National 2006 Plan goals. The data collected in these sections are needed to link science and technology needs and benefits to specific Site 2006 Plan projects.

This section provides guidance for summarizing EM technology deployment plans, needs and benefits at the Operations/Field Office level. This guidance requests that the Field address three aspects: (1) plans for the deployment of innovative technologies and the identification of technologies for Site-Specific Deployment Plans; (2) the identification of the needs for basic research and technology development activities to address site problems; and (3) expected and/or potential benefits from science and technology development activities, including cost savings, risk reduction, and the provision of solutions to problems which are otherwise unsolvable.

Each Site is encouraged to utilize innovative technologies to the maximum extent possible in achieving the 2006 Plan goals outlined by the Assistant Secretary. During FY 1996 and FY 1997, the sites developed a set of Science and Technology Tables for the Field Office 2006 Plans. These tables were comprised of Table O.10.1, Science and Technology Activities Summary; Table O.10.2, Science and Technology Needs Summary; and Table O.10.3, Technology Development Cost Savings Summary. These tables provided a summary of the role played by EM Science and Technology Development programs in helping the Field Offices to meet the goals of their 2006 Plans.

The Table O.10.2 Site Needs were generated from the Site Technology Coordination Groups (STCGs), who completed Needs Templates detailing 537 needs for new/innovative technology solutions at the DOE Sites. For the October 1997 Draft Field Office 2006 Plans, Tables O.10.1 will be replaced with O.9.1 - Innovative Technology Deployment Tables, which are described in the following section. Tables O.10.2 (Science and Technology Needs Summary) and O.10.3 (Technology Development Cost Savings Summary) will be retained as O.9.2 and O.9.3 respectively, with some modifications described below. A summary of the role of science and technology for the environmental management program at each site should also be included in Attachment F, Section O.9.4. In addition, Attachment M describes the outline for site-specific Technology Deployment Management Plans, which are based on the Assistant Secretary's memo of July 3, 1997.

Operations/Field Office Name: Field O.1 has been seeded with the Operations/Field Office name. This field is locked and cannot be updated.

O.9.1. Innovative Technology Deployment

Table O.9.1 is expected to contain a listing of those technologies which meet site needs and have either been selected for deployment or are strong candidates for such a selection in the future. The intent is to identify those technologies where specific plans for deployment can now be developed (see Attachment M) and those technologies where additional development is most likely to lead to deployment.

Draft Technology Linkage Tables have been developed in conjunction with the STCGs and provide a starting point for the generation of Table O.9.1 by each Operations/Field Office. They compile for each Focus Area and Crosscut Program relevant information on the match between EM-50 technologies and the Draft National 2006 Plan. The Linkage Tables outline the key information on each technology, the Site project (PBS) where the technology will be implemented, and the STCG Need it is intended to address. Each match between a Technology and a STCG Need is listed. Thus, the Linkage Tables provided a crosswalk between the STCG Needs Templates, the Site PBSs, and the technology information in the EM-50 Technology Management System (TMS). Specific instructions for completing each field in the Innovative Technology Deployment Table are as follows:

How many Waste Type/Problem Area rows are required?
From the choices provided, select the appropriate range of rows expected for this table. Any data entered in rows higher than the range selected will be deleted from the spreadsheet. Data in rows beyond the selected range will be deleted.

Waste Type/Problem Area: This information describes the nature of the problem using codes corresponding to the Waste Type/Problem Area definitions in Attachment D (see line-by-line instructions to Table A.4). Only one Waste Type/Problem Area (e.g., HLW, TRU, Rem. Action, D&D) can be entered for each deployment opportunity/linkage. Note that, when applicable, entries such as Remedial Action or D&D should be made rather than the types of waste present at the site (e.g., a linkage for soil contaminated with a mixture of low-level and mixed low-level wastes should be listed as "Rem. Action"). If more than one Waste Type/Problem Area is applicable (e.g., both MW and TRU), enter only one and indicate additional applicable Waste Types/Problem Areas in the Comments field.

STCG Need: The STCG Need ID # and Title should be consistent with the STCG Needs Templates. Note that a need listed in this table should also be listed in Table O.9.2.

ID #: In this column, enter an STCG Need ID# that is consistent with the current STCG Needs Templates and describes the site's identified technology needs.

Title: In this column, enter the STCG Need Title associated with each identified ID#.

Science/Technology Data: describes the project, related to the need, that is developing, demonstrating, or deploying the innovative technology. All science and innovative technology activities that are proposed for deployment or likely candidates for future deployment should be included, regardless of the source of that innovative technology (e.g., industry, EM-30, EM-40, EM-50, EM-60, or other organizations).

Innovative Technology Name: identifies the Name of the technology (not the title of the TTP or other activity which is developing/demonstrating the technology) which is anticipated to address the Need in the previous section. For those technologies which have been funded by OST, enter the technology name corresponding to the primary name in the TMS (online technology inventory) matching the OST Tech ID number. Specific technologies should be identified, rather than classes of technologies.

TTP or Project ID #: identifies the TTP number which is/has supported the development of the innovative technology (if no TTP applies, a reference must be included to allow tracking of that technology's funding and the responsible program, such as "Funded by EM-30 under ADS

#XXXXX in FY 1996, or for cases where the development has not yet been funded, but is anticipated in the future, enter appropriate information, such as "Planned FY 1998 New Start in CMST").

OST Tech ID: identifies, for those technologies which have been funded by OST, the unique OST Tech ID number corresponding to the primary name in the TMS (that used in the "Innovative Technology" field).

Projected Deployment Date: In this column, identify the year in which the first deployment of the technology at your site is anticipated. Valid entries are FY 1998, FY 1999, FY 2000, and FY 2000+ (for projected deployment dates after FY 2000).

Site Deployment Plan: provides a link to the Site Deployment Plans by specifying those technologies being identified in Deployment Plans and possible candidates for future updates. Enter either D or P as follows: D indicates that *deployment* of this technology is expected and a Technology Opportunity/Fact Sheet (see Attachment M) will be submitted in May 1998; P indicates that this technology appears to have benefit for site problems and has the *potential* to be deployed at the site; however, additional information is required before a decision can be made. The Operations/Field Office will complete a Technology Opportunity/Fact Sheet at a future date should this technology be selected for deployment.

PBS: This section is for identifying all projects (PBSs) where the innovative technology will be deployed. For cases where the technology will be used to meet the same need in more than one project, provide separate entries for each PBS.

Site Designated Project ID#: In this column, enter a currently valid Site Designated Project ID# for all projects (PBSs) where the innovative technology will be deployed. A current list of valid Site Designated Project ID Numbers is provided in Appendix B.

Project Title: In this column, enter the title associated with each identified Site Designated Project ID#. A current list of valid PBS Titles is provided in Appendix B.

Comments: This field may be used for any additional information or comments the Operations/Field Office wishes to include regarding deployment activities and associated technologies, needs, projects, etc.

O.9.2. Science and Technology Needs

The "Science and Technology Needs" summary table (Table O.9.2) will provide an overview of the major thrust areas where EM should make investments in research and fund technology development efforts. Accordingly, the Needs Summary table should address near term needs, where innovative technologies are necessary to help meet or accelerate the Draft Site 2006 Plans, as well as longer-term needs where basic science can be directed to address technical problems in later stages of the ten-year planning window. Table O.9.2 will reference the Needs Documents developed by the site programs and the STCGs, and should be consistent with entries made in Table O.9.1. Specific instructions for completing each field in the Science and Technology Needs Table are as follows:

How many Waste Type/Problem Area rows are required?
From the choices provided, select the appropriate range of rows expected for this table. Any data entered

in rows higher than the range selected will be deleted from the spreadsheet. Data in rows beyond the selected range will be deleted.

Waste Type/Problem Area should be completed as per instructions for Table O.9.1.

STCG Needs: STCG Needs reference the specific need identified by the STCG or through site surveys or workshops. This section will be seeded with existing information on needs for most sites. This seeded information may be deleted and/or modified as appropriate if needs have changed. Note that a need listed in O.9.1 should also be listed in Table O.9.2.

Geographic Site: In this column, enter the specific site where the need exists.

ID# and Title: These columns describe the site's identified technology needs, and will be seeded for most Operations/Field Offices (consistent with current STCG Needs Templates). Note that a need listed in Table O.9.1 should also be listed in this table.

ID#: In this column, enter an STCG Need ID# (as necessary) that is consistent with the current STCG Needs Templates and describes the site's identified technology needs.

Title: In this column, enter the STCG Need Title (as necessary) associated with each identified ID#.

Timing In Years: Enter a specific year or range of years that identifies when the project's need must be addressed to support National 2006 Plan objectives or other cleanup goals. Valid ranges are as follows: FY 1998 to FY 2000, FY 2001 to FY 2006, and FY 2006+ (for needs that do not need to be addressed until after FY 2006). Where specific project milestones are known, they should be included with other PBS Milestones and noted in the following Needs Comments field. The general timing associated with basic science needs should also identified here.

2006 Plan Priority: Enter "1" (critical to the success of the 2006 Plan); "2" (provides substantial benefit for 2006 Plan projects, e.g., in moderate to high life-cycle cost savings or risk reduction, increases the likelihood of compliance, provides assurance to avoid schedule delays, etc.); or "3" (provides opportunities for significant but lower cost savings or risk reduction, may reduce the uncertainty in project success, etc.) to assess the impact of each STCG Need relative to the current Draft National 2006 Plan baseline.

PBS: This section is for identifying all projects (PBSs) having this need. For cases where the need applies to more than one project, provide separate entries for each PBS.

Site Designated Project ID #: In this column, enter a currently valid Site Designated Project ID # for all projects (PBSs) having this need. A current list of valid Site Designated Project ID Numbers is provided in Appendix B.

Project Title: In this column, enter the title associated with each identified Site Designated Project ID #. A current list of valid PBS Titles is provided in Appendix B.

Comments: This field may be used for any additional information or comments the Field Office wishes to include regarding science or technology needs, specific timing (i.e., milestones) associated with those needs, projects, etc.

O.9.3. Technology Development Cost Savings and Other Benefits

This table will identify both cost savings already included in the PBS budget (baseline) data by the selection of innovative technologies in the Site baseline plans, and the potential cost savings (enhanced performance) from new technologies not yet included in the baseline. Using information provided by the Focus Areas and Cross-cutting Programs, Site Cost Savings Analyses, and the calculations used in the 1996 BEMR, each Field Office should prepare potential cost savings that could be realized through the use of innovative technologies.

In order to clarify and facilitate analysis of the cost savings information, entries should be made under "Technology Status" as being either: (1) Current Baseline - savings that have been anticipated in the current PBS budget estimate, using innovative technologies that are now in the Site baseline; or (2) Enhanced Performance - savings that are projected in addition to the current Draft Site 2006 Plan, based on the use of technologies which are being developed and/or demonstrated, or solutions to longer-term needs for which technologies are not yet identified.

Table O.9.3 may also be used to document additional details on other benefits from the use of innovative technologies (e.g., where an innovative technology has allowed the Site to meet a compliance requirement. As noted below, this information can be included in the Comment field, regardless of whether or not cost savings data is provided). Specific instructions for completing each field in the Cost Savings and Other Benefits Table are as follows:

How many Waste Type/Problem Area rows are required?
From the choices provided, select the appropriate range of rows expected for this table. Any data entered in rows higher than the range selected will be deleted from the spreadsheet. Data in rows beyond the selected range will be deleted.

Waste Type/Problem Area: follow the same instructions as for Table O.9.1.

Technology Savings Data:

Geographic Site: follow the same instructions as for Table O.9.2.

Innovative Technology Name: identifies the Name of the technology (not the title of the TTP or other activity which is developing/demonstrating the technology) which is anticipated to address the STCG Need in the previous section. For those technologies which have been funded by OST, enter the technology name corresponding to the primary name in the TMS (online technology inventory) matching the OST Tech ID number. Specific technologies should be identified, rather than classes of technologies.

OST Tech ID: identifies, for those technologies which have been funded by OST, the unique OST Tech ID number corresponding to the primary name in the TMS (that used in the "Innovative Technology" field).

Life-cycle Cost Savings: either provide a specific estimate, if one exists, or an estimate in one of the following ranges: $1 - 10M; $11 - 30M; $31 - 100M; $101 - 300M; >$300M.

Confidence: Enter "High", "Medium", or "Low" as a measure of the relative confidence of cost savings. In general, the better the documentation of the savings, the higher the confidence level

should be.

Source/Reference: Provide reference to a specific source document, if available, related to savings. For savings estimates without specific documentation enter "Estimate".

PBS: This section is for identifying all projects (PBSs) to which the savings have been or could be assigned. For cases where the savings apply to more than one project, provide separate entries for each PBS.

Site Designated Project ID #: In this column, enter a currently valid Site Designated Project ID # for all projects (PBSs) to which the savings have been or could be assigned. A current list of valid Site Designated Project ID Numbers is provided in Appendix B.

Project Title: In this column, enter the title associated with each identified Site Designated Project ID #. A current list of valid PBS Titles is provided in Appendix B.

Technology Status: In this column, enter "Baseline" to indicate that the projected savings associated with an innovative technology have already been incorporated into the PBS baseline cost; or "Enhanced Performance" to indicate that the projected savings could be identified as a way of enhancing performance in the future.

Comments: This field may be used to provide any additional information or comments regarding savings or other benefits from the use of innovative technologies.

O.9.4. Science and Technology Development Narrative

This section is for the Operations/Field Office to present an overview of the role of science and technology for their Site environmental management programs, including:

- How science and technology development and deployment functions are addressed by your site(s);
- How science and technology development is supporting the basic needs of your site(s);
- Requirements for and commitment to science and technology development and deployment; and
- How STCGs and SSABs are working with stakeholders, regulators, and Tribal Nations in the development and deployment of science and technologies.

Attachment G. Disposition Maps and Consolidated PBS Quantity Table

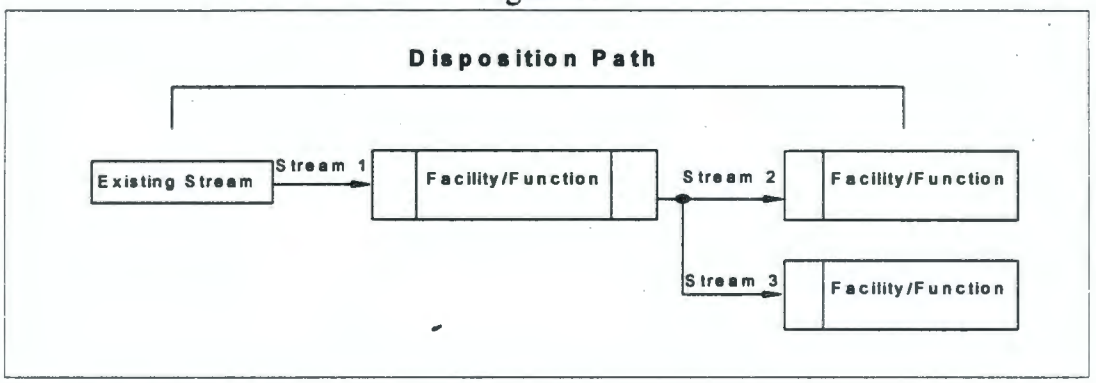
G.1. Disposition Maps

G.1.1 Introduction

Disposition maps are graphical representations of a site's conceptual approach for managing wastes, nuclear materials, and contaminated media from current status through storage, treatment, and disposal, including shipping and off-site treatment and disposal. A disposition map depicts the facilities, activities and inventory transfers required to disposition a site's nuclear material, waste, or contaminated environmental media streams and achieve the end state described in the Draft Site 2006 Plan. Disposition maps are a required deliverable for the 2006 Plan. Additional data will be collected to support the information presented on the maps (described in Section G.2.). Both the map information and the supporting data are required to fully understand, communicate, and implement the 2006 Plan. Disposition maps also will be used as the basis for reporting several existing EM Performance Measures (e.g., material stabilized, waste treated and disposed). Life-cycle baselines are derived directly from disposition maps.

Disposition maps represent the life-cycle management of waste, nuclear material, and environmental media. These environmental programs are organized into "streams", which are defined as a group of materials, media, or wastes having similar origins, management requirements, or barriers to disposition. Figure G.1 below shows how streams and their dispositions are depicted.

Figure G.1



Figures G.2, G.3, and G.4 provide examples of site disposition maps for a waste type (TRU), Nuclear Material and Facility Disposition program, and Environmental Restoration program, respectively. Note that Figure G.3 is a draft map prepared at Headquarters that still needs additional detail.

A stream is dispositioned (and any associated performance measures reported) when it enters the next facility/function box, or is transferred (goes off the map) to another site, program, or waste type. For example, as seen on Figure G.2, when the stream of "Suspect TRU Drums" enters the characterization facility, that stream is dispositioned. The resulting TRU and LLW streams coming out of characterization have new identities and associated volumes that are dispositioned when they enter the next facility/function box in their respective disposition paths.

When a stream is transferred to another waste type, program, or DOE site, an interface to another map is shown. That stream then belongs to a different waste type, program, or site which is responsible for accomplishing the next step(s) in the disposition path.

G.1.2 Required Submittal

The enclosed draft disposition maps were prepared by the contractor-led Complex-Wide EM Integration Project (EMI) and the EM Integration Core Team. These maps will represent the EM baseline after they are reviewed by site personnel and revised to reflect the Draft Site 2006 Plan. **The disposition maps supplied with this package are to be redlined and returned.** To ensure consistency and minimize field effort, the EM Integration Core Team will provide sites with the polished graphics needed for the final Site Plans. On-site technical support (2 to 3 days) can be arranged by contacting Jonathan Kang (301) 903-7178 or Doug Tonkay (301) 903-7212. If you have difficulties following any instruction, please call for technical assistance. Exceptions to the guidance need to be coordinated through Jonathan or Doug.

Draft maps should be reviewed and updated to reflect the Draft Site 2006 Plan in accordance with this guidance. Please note that in some instances an Environmental Restoration map has been prepared for the same site by both EMI and the EM Integration Core Team. Both are provided as input. Figure G.4 is an example of a final Environmental Restoration map. Recent changes in nuclear material stewardship plans require that draft nuclear material disposition maps be reviewed carefully. Maps for some sites, and some nuclear materials and waste types do not exist and will have to be developed. Detailed sketches will suffice when new maps are required. The EM Integration Core Team will then provide the sites with the polished graphics.

G.1.3 Instructions for Drawing Disposition Maps

1. Determine the Number of Maps Required. One disposition map must be prepared for each waste type managed at a site; one map is required for each site managing nuclear materials; and one map is required for each site with contaminated media.

Waste Management	Nuclear Material	Environmental Restoration
One map for each of the following waste types at each site:	One map for each site managing any of the following:	One map for each site with contaminated media.
- High Level - Transuranic - Mixed Low Level - Low Level	- Spent Nuclear Fuel - Plutonium - Uranium - Special Isotopes and Other Nuclear Materials	Identify applicable waste types from the WM column at left, as well as other waste types tracked in the ER Core database, as appropriate.

2. Determine the Number of Streams for Each Map. Divide existing inventories and expected generation according to the following criteria:

   - same characteristics, or management / regulatory requirements
   - same next disposition facility / function
   - same barriers impeding progress toward the next step in the disposition path

Streams may resemble waste treatability groups or stream divisions used in the Complex-Wide Integration report. For example, if some of your existing inventory of waste will be going directly to the TSCA incinerator at Oak Ridge, group all of this waste into a single stream.

Note: There was a common error on the original draft disposition maps; a stream was split before entering the first facility/function box. This illustrates incorrectly that some unspecified function or decision (e.g., characterization) had occurred segregating the incoming stream into two or more "new" streams. The inventory should have been divided into two or more streams at the start.

Environmental Restoration: Each contaminated media stream has two components, a waste type and an environmental media group. A number of waste types are appropriate for the Environmental Restoration map, including LLW, MLLW, TRU, demolition waste, PCBs, radioactive PCBs, asbestos, radioactive asbestos, 11e(2), mixed 11e(2), and hazardous waste. These waste types could be illustrated on the Environmental Restoration maps as separate streams or rolled up as appropriate. Further organize contaminated media streams as follows:

- soil/sediment
- sludge/residues
- rubble/debris
- groundwater, surface water, and waste water
- other liquids

Further define contaminated media streams based on the environmental response and destination facility. For example, LLW soils being collected and sent to an off-site disposal cell are a separate stream from LLW soils being collected and disposed at an on-site cell. If the Environmental Restoration site also has waste in storage, rather than contaminated media, describe the waste stream as stored waste.

3. Lay Out Disposition Path for Each Stream. The Waste Management map has three columns, Waste Stream, Processing, and Disposition; the Nuclear Materials map has four columns, Material Category, Stabilize, Make Disposition Ready, and Disposition; and the Environmental Restoration map has four columns, Contaminated Media, Restoration Strategy, Processing, and Disposition. Follow the instructions below to layout the disposition path for each stream.

   a. In the left most column, identify each stream with an existing inventory with a box, and any stream being transferred from another site or program with the appropriate interface symbol identified in the key at the bottom of each map.

   b. In the middle or right column, identify the first facility/function in the disposition path. Waste streams typically go to a treatment box centered under the "Processing" header, contaminated media streams first pass through a restoration strategy box under the "Restoration Strategy" header, and nuclear materials typically go to a stabilization box under the "Stabilize" header. Pretreatment, characterization, or other intermediate function boxes should be illustrated slightly to the left of primary treatment or processing functions to help illustrate the step-wise progression.

      Environmental Restoration: The contaminated media streams should be grouped according to the following response strategies:

- Collect and Dispose
- Collect and Treat/Recycle
- Collect and Store
- In-situ Treatment
- In-situ Containment
- Access/Institutional control
- No Action
- To Be Determined

c. Identify the subsequent steps in the disposition path. Each facility/function box (except final disposition boxes) will generate or produce one or more streams that will continue on to another disposition step. Generally, these are represented by additional facility/function boxes located under the "Disposition" header to the far right of the map.

d. A box that belongs to another site, program, or map should be identified by placing an interface symbol to the left of that box. There should not be a line coming out of the box.

Note: Once the material or waste is transferred to another site, program or map, their site disposition map will handle the waste from this point. See Section 9.5 for instructions on coordinating with the other site, program, or waste type manager to ensure they agree with this "hand-off," and that they are aware that it should be illustrated appropriately on their disposition map.

4. Label Arrows, Stream Boxes, and Function Boxes. Quantities are reported to no more than two significant figures and in appropriate units for each waste or material type.

a. Arrows. Each arrow coming from a stream box, facility/function box or a transfer symbol will be a data record in the 2006 database and must be given a unique field identification code (e.g., AA, AB, AC).

Arrows exiting the stream boxes are labeled with both the current inventory and the expected life-cycle generation, even if it is zero. For Environmental Restoration, the arrows exiting the stream boxes are labeled only with life-cycle generation. No waste is generated by in-situ treatment, access/institutional control, capping, or no action response strategies.

Arrows exiting function boxes are labeled with life-cycle quantities. Quantities expected from another site, program, or waste type are listed to the left of their respective transfer symbols at the left of the map.

b. Stream Boxes. Write the name of the stream in the stream box. A recommended naming convention would include the site, program, map, and sequential stream number as follows: RL-WM-TRU-15, SR60PU03, LBL/ER/LLW/01. Other naming conventions may be equally or more effective for a given site or stream. For example, Disposal Ready TRU, RF-TSCA-Ash, WAG7-MLLW. For Environmental Restoration media streams, the volume of contaminated media is listed to the left of the media stream box.

c. Facility/Function Boxes. Each facility/function box should be labeled with both the facility name and its function (e.g., WERF-Incineration). These boxes should also be

labeled with the total incoming and outgoing life-cycle quantities, on the left and right sides, respectively.

5. To Be Determined Boxes. A stream without a disposition plan or with significant uncertainty or barriers in the disposition path should be represented by an arrow leaving an existing inventory or facility/function box and going to a box labeled "TBD" with a dashed border. *See Section 9.5.2 for more detailed instructions on depicting disposal options where decisions have not been made.* Similarly, if the stream has not been inventoried or there is no reasonable quantity estimate available, the stream arrow should be labeled with "?" to represent uncertain or unknown quantities. .

6. Volumes of aqueous and non-aqueous media should be summed in the bottom left corner of the map. Aqueous media are groundwater, surface water, and waste water. The life-cycle waste generation should be summed at the bottom of the map.

Figure G.2. Waste Disposition Map

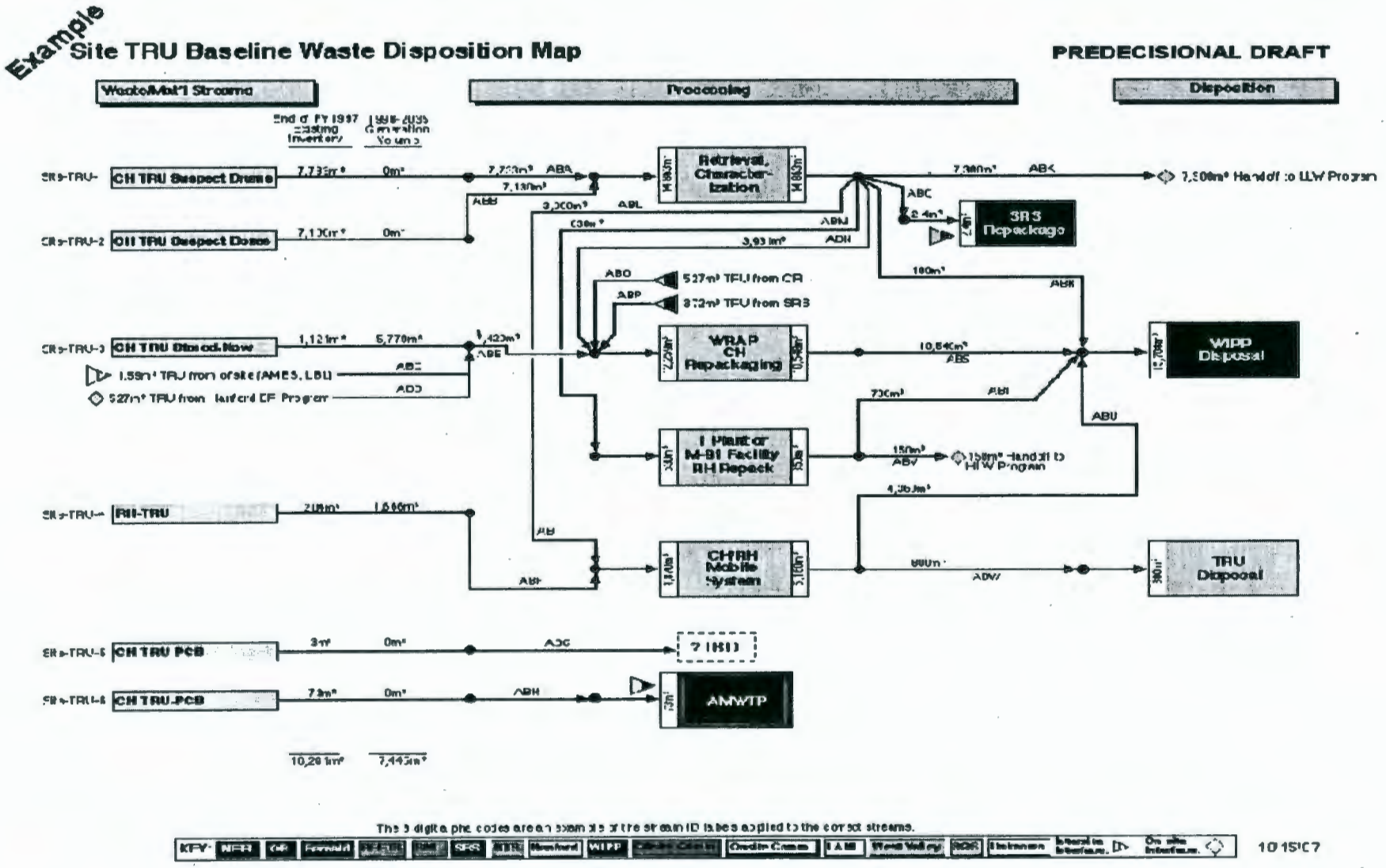
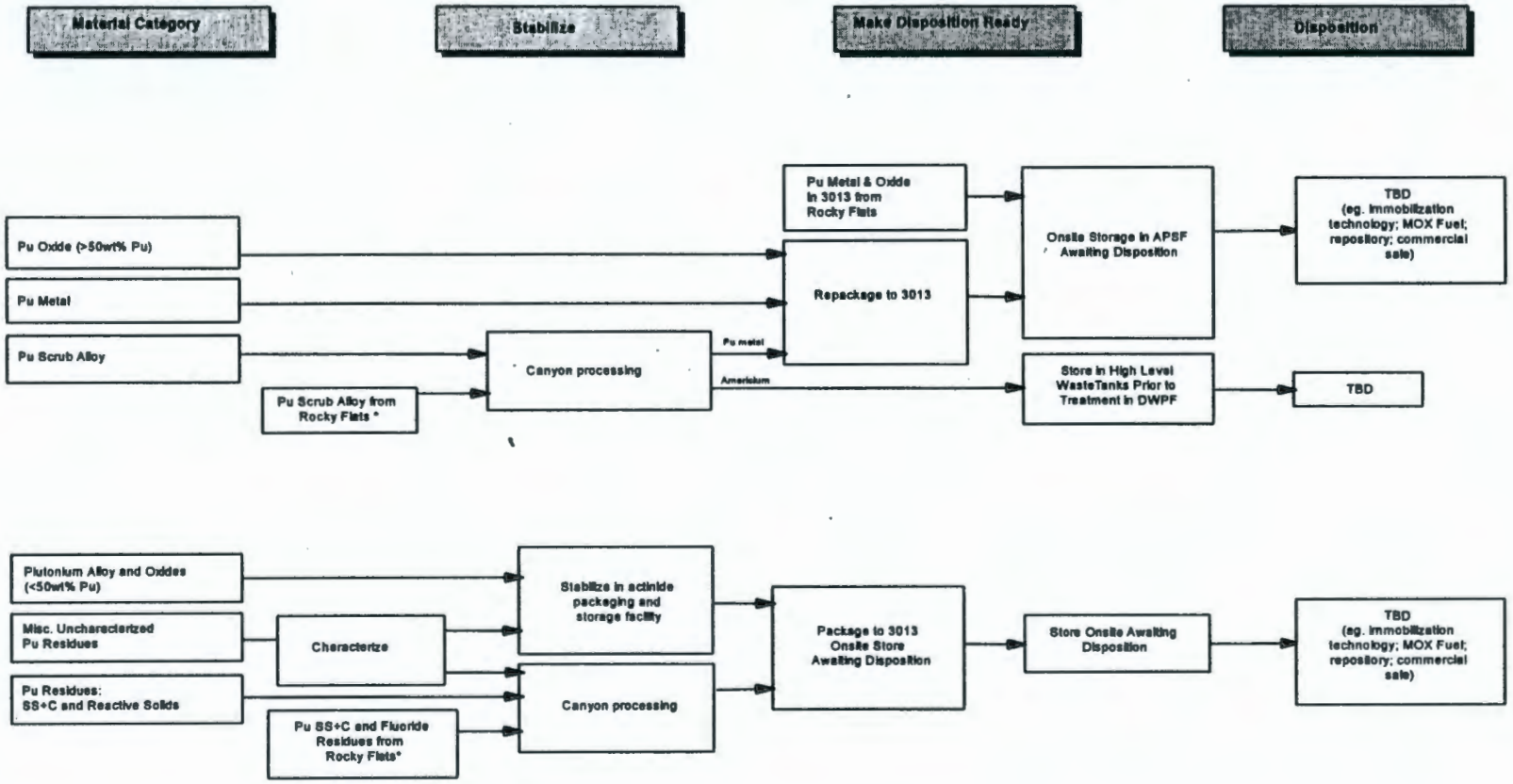
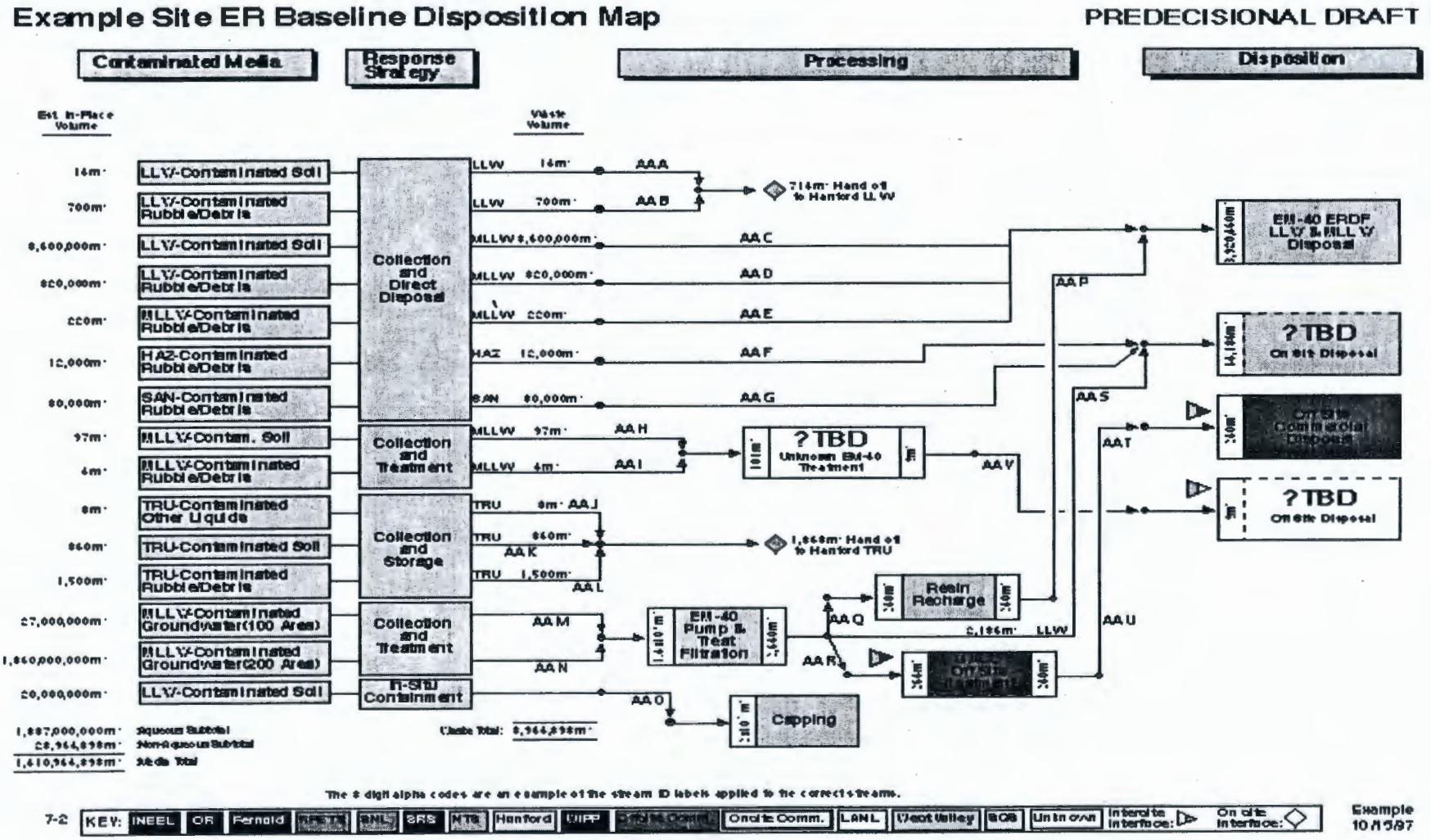


Figure G.3. Nuclear Material Disposition Map



*Proposed action in Draft "Rocky Flats Residues EIS."

Figure G.4. Environmental Restoration Disposition Map



G.2. Instructions for Completing the Consolidated PBS Quantity Table

G.2.1. Introduction

The Consolidated PBS Quantity Table captures the quantity and related data, by PBS, for each stream (i.e., waste stream, material stream, contaminated media) depicted on the disposition maps. This table can only be completed after the draft disposition map(s) described in section G.1 have been updated based on current guidance, to reflect the Draft Site 2006 Plan.

This table replaces the previous PBS quantity table (Table A.4.a in the 2/28/97 PBS) for wastes and materials. In combination with the disposition maps, it satisfies all the waste and material quantity information needs of the 2006 Plan, including the collection of performance measures for the three budget years. Environmental Restoration performance measures (e.g., assessments completed, buildings decommissioned, etc.) will continue to be collected in Table A.4. The corporate waste performance measures, volume of waste treated by waste type, volume of waste disposed by waste type, and inventory by waste type, will be derived from the annualized data entered in the Consolidated PBS Quantity Table spreadsheets as follows:

Waste Management and Nuclear Material Performance Measures

- Volume of Waste Treated will be the sum of waste stream volumes that show a disposition activity of *Treatment (On-Site), Treatment (Off-Site Commercial),* or *Treatment (TBD),* rolled up to the Site and Operations/Field Office level.

- Volume of Waste Disposed will be the sum of waste stream volumes that show a destination activity of *Disposal (On-Site), Disposal (Off-Site Commercial),* or *Disposal (TBD),* rolled up to the Site and Operations/Field Office level. The number of disposal-ready HLW canisters produced and the volume of TRU made disposal-ready will be extracted from appropriate waste stream quantity tables.

- Annual Planned Inventory will be rolled up to the Site and Operations/Field Office level from the *Inventory* data field from each quantity table.

  Note that only volumes specifically designated for treatment or disposal (either on site, off-site commercial, or TBD) are included in the corporate measures. Volumes shipped to another DOE site for treatment and/or disposal are not counted in the corporate measures and therefore should not be included in Site or Operations/Field Office treatment and disposal commitments.

- Nuclear Material performance measures are calculated directly in a similar fashion.

G.2.2. Table Overview

The Consolidated PBS Quantity Table is based on Excel spreadsheets. Each site will receive an Excel file (i.e., workbook) for each draft disposition map appropriate to the site. Each file is named according to the appropriate site code and type of disposition map that the file represents (e.g., "INEL_HLW"; "FEMP_ER"; "SARS_NM"). For smaller sites with disposition maps spanning multiple waste types, the file is named with the site code followed by "ALL" (e.g., "BRNL_ALL").

The spreadsheets are constructed such that the data for a given stream are reported in three rows, as follows, according to quantity type:

Quantity Type: Additions
These data fields capture the projected quantities to be added (e.g., generated, received from off-site, collected for disposal or treatment, etc.) to the stream inventory during the reporting periods. This row also includes data fields for identification and descriptive information about the stream and to identify the PBS(s) associated with the quantity additions.

Quantity Type: Disposition
These data fields capture the projected quantities of the stream to be dispositioned (e.g., treated, disposed, etc.), or subtracted from the stream inventory, during the reporting periods. This row also includes data fields to describe the planned disposition path of the stream and identify the associated PBS(s).

Quantity Type: Inventory
These data fields calculate the stored inventory of the stream at the end of each reporting period. The only period for which the inventory is reported is the end of 1997. The inventory for the remaining periods is automatically calculated by the spreadsheet based on the quantities added and dispositioned. This row also includes data fields to identify the PBS(s) associated with storage of the stream.

Note that some data fields (i.e., spreadsheet columns) are not applicable to all three quantity type rows. Cells which are not appropriate for data entry are not surrounded by borders and are locked.

G.2.3. Specific Instructions

This section provides the guidance and specific instructions for completing the Consolidated PBS Quantity Table spreadsheet. The section is organized to address the data fields (i.e., spreadsheet columns) according to quantity type. Only the applicable columns for each quantity type row are addressed. Specific guidance is provided for waste, material, and contaminated media streams where needed. Wherever possible, lists of valid responses have been provided.

For all quantity types, volume data for waste streams are to be reported in cubic meters (m^3), with the exception of hazardous waste (metric tons) and vitrified HLW streams (canisters). Contaminated media volumes for all quantity types are to be reported in cubic meters. Appropriate units for spent nuclear fuel and materials are addressed separately below.

G.2.3.1 Quantity Type: Additions

Stream ID -- Unique identification number assigned by the site to each stream and entered on a disposition map above the stream arrow. (Refer to Section G.1 for recommended ID conventions.) The primary purpose of this field identification number is to correlate a specific stream on a disposition map with its data in the quantity table. Note that since treatment outputs constitute new waste/material/ media streams, the Stream ID of the output must be different than that of the original (input) stream.

Stream Name -- Name assigned by the site to each stream. For primary waste/material/media streams, this field should reflect the descriptive information contained in the left-most box on the disposition map. Note that since treatment outputs constitute new waste/material/media streams, the Stream Name of the output must be different than that of the original (input) stream.

Waste/Material Type

Waste and Material Streams -- Select the appropriate stream type from the list of valid responses provided below. Enter the appropriate code for the selected waste/material type. Definitions of the waste and material types are provided in Attachment D of the Draft National 2006 Plan Guidance.

Contaminated Media -- Assign contaminated media to one of the waste types listed below, based on the radiological and hazardous characteristics of the media.

Waste/Material Type Valid Responses

Waste Streams/Contaminated Media		Material Streams	
HLW	High Level Waste	**SNF**	Spent Nuclear Fuel
TRU	Transuranic Waste	**U**	Nuclear Materials - Uranium
MLLW	Mixed Low Level Waste	**Pu**	Nuclear Materials - Plutonium
LLW	Low Level Waste	**Other NM**	Nuclear Materials - Special Isotopes and Other
HAZ	Hazardous Waste		
11e(2)	11e(2) Byproduct Waste		
ASB, RASB, PCB, RPCB, DEM, etc. (ER Tables only) If waste streams of these types are tracked separately in the Environmental Restoration Disposition Map, please use these standard Core Database abbreviations.			

Media Type (ER Only)

Contaminated Media -- Assign contaminated media to the most appropriate category listed below. Use the two-character code for the appropriate category.

- RD - (Rubble/Debris)
- GW - (Groundwater/Surface Water)
- SR - (Sludges/Residues)
- SS - (Soil/Sediment)
- OL - (Other Liquids)

Primary PBS -- Identify the primary PBS associated with the quantity additions over the life cycle of the stream. Depending on the stream, quantity additions could result from either; 1) generation (e.g. new generation or treatment/processing outputs), 2) off-site receipts, or 3) on-site program transfers. For generation, the primary PBS should be that which funds the activities resulting in the majority of waste generated. For quantity additions resulting from off-site receipts or on-site program transfers, the PBS(s) should be those which provide funds associated with receiving the waste/material. Select the PBS from the pick-list of valid PBSs for your site. This pick-list, showing PBS identification numbers, will be programmed into the spreadsheet for your convenience.

There may be more than one PBS which funds the activities resulting in the quantity additions. This is particularly true for new generation. Additional PBSs that contribute significantly to the quantity additions should be identified in the Comments/Additional PBS Links field.

Contaminated Media -- If the PBS for treatment or disposal is different from the PBS for the initial restoration response (e.g., where the PBS of a disposal cell differs from the remedial action PBS), identify the cleanup PBS in this field. In most cases, these two activities are covered in the same PBS.

Related Program -- The purpose of this field is to identify the programmatic source of the quantity additions and whether they are the result of on-site program transfers (e.g., an EM-40 waste stream transferred to EM-30 for disposition). Select the appropriate response from the list of valid responses below:

- **WM** (Waste Management)
- **ER** (Environmental Restoration)
- **NM** (Nuclear Material and Facility Stabilization)
- **DP** (Defense Programs)
- **EN** (Energy Research)
- **MD** (Materials Disposition)
- **RW** (Radioactive Waste)
- **NE** (Nuclear Energy)
- **NR** (Naval Reactors)
- **OT** (Non-DOE sources)

Leave this field blank where not applicable.

Related Site -- The purpose of this field is to identify the originating site for streams identified as off-site receipts. For streams with no projected quantity additions, or for which projected quantity additions are from on-site generation/process outputs or program transfers, this field should be left blank. Where applicable, enter the four-character geographic site code for the originating site from list of valid sites provided in Attachment C. If the related site is not on the list, enter "OTHR" to indicate other and provide details in the Comments/Additional PBS Links field.

NM Quantity Units

Material Streams -- For plutonium, uranium, and other nuclear material streams, indicate the units in which all three quantity types are reported. Valid units are listed below. Field is not applicable for spent nuclear fuel streams.

- Kg
- No. of Items

SNF MTHM to m^3 Conversion Factor -- For spent nuclear fuel streams, please provide the appropriate factor for converting the quantities reported from metric tons of heavy metal (MTHM) to cubic meters (m^3). Quantities are to be reported in MTHM; the conversion factor will be used to satisfy requirements to report in cubic meters.

Quantity Additions: 1998 to 2070 -- Beginning with 1998, provide the projected quantity additions to the stream, in the appropriate reporting units, for each reporting period. Annualization of quantity additions for all periods is required; however, the initial submission of the Consolidated PBS Quantity Table should focus on the years 1998 through 2000.

> ***Contaminated Media*** -- For contaminated media for which the restoration response (defined in the Destination Activity -- see description below) is in-situ treatment, in-situ containment, access/institutional controls, no action, or "TBD," do not enter values in these fields. These responses involve no actual removal of the contaminated media, and therefore reflect no annual quantity additions. For restoration responses which involve *ex situ* action, enter the volume which is collected for treatment, disposal, storage, recycling, or transfer in the appropriate year.

In the case of an interface from another site or program, the additions row will represent the annualized schedule of expected receipts.

G.2.3.2 Quantity Type: Disposition

Primary PBS -- Identify the primary PBS associated with the destination activity (e.g., treatment, disposal, etc.) over the life cycle of the stream. This PBS should be that which provides the operating funds for performing the destination activity. For example:

- If the destination activity for an Oak Ridge stream is treatment at the TSCA Incinerator, the PBS should be that which provides the funds for operating the incinerator;
- If the destination activity for a stream is shipment to another DOE site, the PBS should be that which provides the funds for shipping the stream.

Select the primary PBS from the pick-list of valid PBSs for your site. This pick-list, showing PBS identification numbers, will be programmed into the spreadsheet for your convenience. Identify any other PBSs responsible for performing the destination activity in the Comments/Additional PBS Links field.

It is important to make sure this information is complete and accurate. Performance measure quantities will be tied to PBSs based on this information.

Related Program -- The purpose of this field is to identify the programmatic destination, if applicable, of the disposition quantity. This field is applicable only if the response in the Destination Activity field is "Program Transfer (On Site)" (see Destination Activity field below). Select the appropriate response from the list of valid responses below:

- **WM** (Waste Management)
- **ER** (Environmental Restoration)
- **NM** (Nuclear Material and Facility Stabilization)
- **DP** (Defense Programs)
- **EN** (Energy Research)
- **MD** (Materials Disposition)
- **RW** (Radioactive Waste)
- **NE** (Nuclear Energy)
- **NR** (Naval Reactors)

Related Site -- The purpose of this field is to identify the destination site for streams in which the Destination Activity involves shipment of the stream to another site. As such, this field only applies when the response for Destination Activity (see Destination Activity below) is either Treatment (Off-Site Commercial), Disposal (Off-Site Commercial), or Ship to DOE Site. Otherwise, this field should be left blank. Where the Destination Activity is Ship to DOE Site, enter the four-character geographic site code for the destination site from list of valid sites provided in Attachment C. Where the Destination Activity is treatment or disposal at an off-site commercial facility, enter the appropriate four-letter code for the commercial facility from the table below. If the related commercial site is not on the list, enter "COTH" to indicate other and provide details in the comment field.

Related Site - Commercial Facility Names and Codes

Site Code	Commercial Site
APTS	Aptus Environmental
COMM	Commercial Facility (TBD)
DSSI	Diversified Scientific Services Inc.
ENVR	Envirocare
NSSI	Nuclear Sources and Services Inc.
COTH	Other Commercial Facility
QDRX	Quadrex
SEGP	Scientific Ecology Group
UUTH	University of Utah

Destination Activity -- The purpose of this field is to identify the planned destination, or disposition, activity for the stream. Select the appropriate activity from the list of valid responses provided below. A pick list containing the entire list of valid responses is provided in the spreadsheet for this field.

Destination Activity - Valid Responses

Valid Responses	Explanation	Waste	Media	Materials
TRTON: Treatment (On-Site)	treatment at an on-site facility.	X	X	
TRCOM: Treatment (Off-Site Commercial)	treatment at an off-site, commercial facility.	X	X	
TRTBD: Treatment (TBD)	treatment, but no agreement has been reached on the actual site and/or facility.	X	X	
DISON: Disposal (On-Site)	disposal at an on-site facility.	X	X	
DICOM: Disposal (Off-Site Commercial)	disposal at an off-site, commercial facility.	X	X	

Destination Activity - Valid Responses

Valid Responses	Explanation	Waste	Media	Materials
DITBD: Disposal (TBD)	disposal, but no agreement has been reached on the actual site and/or facility.	X	X	
SHIPD: Ship to DOE Site	shipment to another DOE site for subsequent management.	X	X	X
PRTRF: Program Transfer (On-Site)	transfer to another on-site program for subsequent management.	X	X	X
XXTBD	to be determined.	X	X	X
STABL: Stabilize	stabilization at an on-site facility.			X
STTBD: Stabilize (TBD)	stabilization at an on-site facility, but no agreement has been reached on the actual facility and/or process.			X
DRTRT: Make Disposition Ready	further processing, beyond stabilization, to render the material disposition ready (e.g., packaging, dry storage, etc.)			X
DRTBD: Make Disposition Ready (TBD)	to make disposition ready, but no agreement has been reached on the actual facility and/or process.			X
STMDR: Stabilize and Make Disposition Ready	a combined process for stabilization and making disposition ready.			X
ACCIC: Access/Institutional Controls	to place access and/or institutional controls on contaminated media in-place (e.g., monitoring).		X	
NOACT: No Action	a decision of no action.		X	
ISTRT: In-Situ Treatment	treatment of contaminated media in-place.		X	
ISCON: In-Situ Containment	containment of contaminated media in-place (e.g., capping).		X	
CLRCY: Collect and Recycle	collection and recycling of contaminated media.		X	
CLSTR: Collect and Store	collection and storage of contaminated media.		X	

Destination Activity - Valid Responses

Valid Responses	Explanation	Waste	Media	Materials
ERTBD: TBD (List Options in Comment)	to be determined. List options for the disposition in the comment field.		X	

STCG Needs Code -- For those streams with a Technological Programmatic Risk score of 4 or 5 (see Programmatic Risk description below), identify the appropriate Science & Technology Coordination Group Needs Identification Number(s) associated with the disposition of this stream. Valid numbers for each site's Operations/Field Office are provided in the seeded Table O.9.2 ("Science and Technology Needs").

Programmatic Risk -- These three data fields help highlight barriers in the disposition path. Refer to Section 8, Table 8.0 of this guidance for a more detailed explanation of programmatic risk factors. For each of the risk categories listed below, evaluate/estimate programmatic risk on a scale from 1 to 5, and enter this number into the corresponding field.

- **Technological**
- **Work Scope Definition**
- **Inter-Site Dependency**

Shipping Details -- The following four data fields provide information to support transportation planning and analysis. These fields should be filled out for any stream where transportation is being planned.

Material Classification -- This field identifies the expected DOT material classification for this stream. Enter the three-letter code representing the appropriate classification. The choices are restricted to:

- NRD: Non-radioactive
- NRH: Non-radioactive hazardous
- EXS: Exempted/special form
- LMQ: Limited quantity
- SCO
- LSA
- NLA: Non-LSA Type A quantity
- NLB: Non-LSA Type B quantity

There may be more than one DOT material classification associated with each stream. Additional material classifications and the associated package type should be identified in the Comments/Additional PBS Links field. Provide the percent contribution of each, including that identified as the primary DOT material classification, and the package type associated with each material classification. For example, 85% NRD/PONR and 15% LSA/INDP.

Package Type -- This field identifies the planned or most probable package type for this stream. Enter the four-letter code which represents the appropriate type. The valid choices are:

- PONR: Performance Oriented Packaging (Non-rad)

- SHMP: Special Hazardous Material Packaging (Non-rad)
- STPK: Strong Tight Packaging/Excepted Packaging (Rad)
- INDP: Industrial Packaging (Rad)
- TYPA: Type A Packaging (Rad)
- TYPB: Type B Packaging (Rad)

Mode of Transport -- This field identifies the planned or most probable mode of transport for this stream. The valid choices are:

- Air
- Ship/Barge
- Truck
- Rail
- Truck & Rail (Intermodal)
- Other Intermodal

Number of Vehicle Trips -- Provide the best life cycle estimate of the number of vehicle trips required to disposition this stream.

Best Current Estimate of Remaining Contaminated Media -- Enter the best current estimate for volume of contaminated media in-place. This volume will be used to further describe the in-situ treatment, in-situ-containment, access/institutional controls, no action, and "TBD", restoration responses.

Quantities Dispositioned 1998 to 2070 -- Beginning with 1998, provide the projected quantity of the stream to be dispositioned (in the appropriate reporting units) via the destination activity during each reporting period. Annualization of dispositioned quantities for all periods is required; however, the initial submission of the Consolidated PBS Quantity Table should focus on the years 1998 through 2000.

Contaminated Media -- For contaminated media for which the restoration response is in-situ treatment, in-situ-containment, access/institutional controls, no action, or "TBD," do not enter values in these fields. These responses involve no actual removal of the contaminated media, and therefore reflect no annual quantity additions. For restoration responses which involve *ex situ* action, enter the volume which is being dispositioned through treatment, disposal, storage, recycling, or transfer in the appropriate year. In most cases, the quantity dispositioned will be equal to the quantity additions in the same year, assuming all contaminated media volumes will be dispositioned in the same year without a period of interim storage.

In the case of an interface from another site or program, the additions row will represent the annualized schedule of expected receipts. The disposition row will be used show the expected processing/disposition schedule of the stream. If the stream is processed/dispositioned as it is received, both schedules will be the same.

G.2.3.3 Quantity Type: Inventory

Primary PBS -- Identify the primary PBS associated with managing the inventory (i.e., storage, inspections, surveillance, etc.) prior to disposition. Select the primary PBS from the pick-list of valid PBSs for your site.

Identify any other PBSs associated with managing the inventory in the Comments/Additional PBS Links field.

Quantity in Inventory 1997 to 2070 -- Provide the total inventory of a waste or material stream at the end of FY 1997. The inventory at the end of the subsequent reporting periods will be automatically calculated based on the quantities added and dispositioned during each period.

Contaminated Media-- Do not enter the initial volume of contaminated media in place in the FY 1997 Inventory field. For environmental restoration disposition maps, enter a volume in this field only if the disposition stream involves an inventory of waste. For most streams on an environmental restoration disposition map, the Inventory row will remain at a total of zero throughout the table, unless there are planned periods of interim storage (years in which quantity additions exceed quantity dispositioned).

Nuclear Material and SNF -- Under the Destination Activity field header, in the Inventory row, select the appropriate (performance measure) category from the pick list to describe the status of the nuclear material or SNF stream. Valid choices are:

- INSTB: Inventory Not Stabilized
- ISNDR: Inventory Stabilized, Not Disposition Ready
- IDRXX: Inventory Disposition Ready

Comments/Additional PBS Links -- Use this text box to provide additional details such as: TBD options, alternatives, preferences; programmatic risk assumptions; status of nuclear material being transferred; additional DOT material classifications and package types, etc. Also, use this field to identify PBSs other than that identified in the Primary PBS field which are responsible for Quantity Additions, Dispositions, or Inventory. If possible, assign the relative percentages of management responsibility to each PBS identified, including the primary PBS.

Contaminated Media -- In addition to providing additional PBS links, where the Destination Activity for an environmental restoration response is "ERTBD," use the Comments field to list the options under consideration for dispositioning the contaminated media.

The Comments field may also be used for any additional information which would be helpful in understanding the disposition path of a waste/material/media stream.

Consolidated P Quantity Table:

Transuranic Waste

How many waste streams are contained in this site's Transuranic Waste disposition map?

(All data in rows beyond selection will be deleted)

1-25 | 26-50 | 51-75

Site Element Header Information

Quantity Type	Stream ID	Stream Name	Waste/ Material Type	Primary PBS	Related Program	Related Site	Destination Activity
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							

Consolidated Pi[illegible] Quantity Table:
Transuranic Waste

Site Element Header Information				*Programmatic Risk*			*Shipping Details*			
Quantity Type	**Stream ID**	**Stream Name**	**STCG Needs Code**	**Tech.**	**Work Scope Definition**	**Inter-Site Dependency**	**Material Classification**	**Package Type**	**Mode of Transport**	**No. of Vehicle Trips**
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										

Consolidated P Quantity Table: Transuranic Waste

Site Element Header Information

Quantity Type	Stream ID	Stream Name	1997	1998	1999	2000	2001	2002	2003	2004
Additions										
Disposition										
Inventory				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory				0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory				0.0	0.0	0.0	0.0	0.0	0.0	0.0

Consolidated F Quantity Table: Transuranic Waste

Site Element Header Information

Quantity Type	Stream ID	Stream Name	2005	2006	2007	2008	2009	2010	2011-2015	2016-2020
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Consolidated P Quantity Table:
Transuranic Waste

Site Element Header Information

Quantity Type	Stream ID	Stream Name	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Consolidated F Quantity Table: Transuranic Waste

Site Element Header Information

Quantity Type	Stream ID	Stream Name	2061-2065	2066-2070	Comments/Additional PBS Links
Additions					
Disposition					
Inventory			0.0	0.0	
Additions					
Disposition					
Inventory			0.0	0.0	
Additions					
Disposition					
Inventory			0.0	0.0	
Additions					
Disposition					
Inventory			0.0	0.0	
Additions					
Disposition					
Inventory			0.0	0.0	
Additions					
Disposition					
Inventory			0.0	0.0	
Additions					
Disposition					
Inventory			0.0	0.0	
Additions					
Disposition					
Inventory			0.0	0.0	
Additions					
Disposition					
Inventory			0.0	0.0	

Consolidated P Quantity Table: Nuclear Materials

How many waste streams are contained in this site's Nuclear Materials disposition map?

(All data in rows beyond selection will be deleted)

1-25 | 26-50 | 51-75

Site Element Header Information

Quantity Type	Stream ID	Stream Name	Waste/ Material Type	Primary PBS	Related Program	Related Site	Destination Activity
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							
Additions							
Disposition							
Inventory							

Consolidated F Quantity Table: Nuclear Materials

Site Element Header Information				*Programmatic Risk*			*Shipping Details*				
Quantity Type	**Stream ID**	**Stream Name**	**STCG Needs Code**	**Tech.**	**Work Scope Definition**	**Inter- Site Dependency**	**Material Classification**	**Package Type**	**Mode of Transport**	**No. of Vehicle Trips**	**NM Quantity Units**
Additions											
Disposition											
Inventory											
Additions											
Disposition											
Inventory											
Additions											
Disposition											
Inventory											
Additions											
Disposition											
Inventory											
Additions											
Disposition											
Inventory											
Additions											
Disposition											
Inventory											
Additions											
Disposition											
Inventory											
Additions											
Disposition											
Inventory											

Consolidated P Quantity Table: Nuclear Materials

Site Element Header Information

Quantity Type	Stream ID	Stream Name	SNF MTHM to m3 Conversion Factor	1997	1998	1999	2000	2001	2002
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0

Consolidated F Quantity Table: Nuclear Materials

Site Element Header Information

Quantity Type	Stream ID	Stream Name	2003	2004	2005	2006	2007	2008	2009	2010
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Consolidated P Quantity Table: Nuclear Materials

Site Element Header Information

Quantity Type	Stream ID	Stream Name	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Consolidated F Quantity Table: Nuclear Materials

Site Element Header Information

Quantity Type	Stream ID	Stream Name	2051-2055	2056-2060	2061-2065	2066-2070
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0

Consolidated P Quantity Table: Nuclear Materials

Site Element Header Information

Quantity Type	Stream ID	Stream Name	Comments/Additional PBS Links
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			

qua

Consolidated F Quantity Table: Environmental Restoration

How many contaminated media streams are contained in this site's Environmental Restoration disposition map? (All data in rows beyond selection will be deleted)

1-25 | 26-50 | 51-75

Site Element Header Information

Quantity Type	Stream ID	Stream Name	Waste/ Material Type	Media Type	Primary PBS	Related Program	Related Site	Destination Activity
Additions								
Disposition								
Inventory								
Additions								
Disposition								
Inventory								
Additions								
Disposition								
Inventory								
Additions								
Disposition								
Inventory								
Additions								
Disposition								
Inventory								
Additions								
Disposition								
Inventory								
Additions								
Disposition								
Inventory								
Additions								
Disposition								
Inventory								

Consolidated P Quantity Table: Environmental Restoration

Site Element Header Information				*Programmatic Risk*			*Shipping Details*			
Quantity Type	**Stream ID**	**Stream Name**	**STCG Needs Code**	**Tech.**	**Work Scope Definition**	**Inter-Site Dependency**	**Material Classification**	**Package Type**	**Mode of Transport**	**No. of Vehicle Trips**
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										
Additions										
Disposition										
Inventory										

Consolidated P Quantity Table: Environmental Restoration

Site Element Header Information

Quantity Type	Stream ID	Stream Name	Best Current Estimate of Remaining Contaminated Media	1997	1998	1999	2000	2001	2002
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0
Additions									
Disposition									
Inventory					0.0	0.0	0.0	0.0	0.0

Consolidated P Quantity Table: Environmental Restoration

Site Element Header Information

Quantity Type	Stream ID	Stream Name	2003	2004	2005	2006	2007	2008	2009	2010
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Consolidated F Quantity Table: Environmental Restoration

Site Element Header Information

Quantity Type	Stream ID	Stream Name	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additions										
Disposition										
Inventory			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Consolidated P Quantity Table: Environmental Restoration

Site Element Header Information

Quantity Type	Stream ID	Stream Name	2051-2055	2056-2060	2061-2065	2066-2070
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0
Additions						
Disposition						
Inventory			0.0	0.0	0.0	0.0

Consolidated P Quantity Table: Environmental Restoration

Site Element Header Information

Quantity Type	Stream ID	Stream Name	Comments/Additional PBS Links
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			
Additions			
Disposition			
Inventory			

Attachment H. B&R Codes, Category and Subcategory Definitions, and Budget Template

B&R Codes

	EW	DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
	EW01	SITE CLOSURE FUND (RF, OH)
	EW0120	Remediation Activities
	EW012010	Remedial Action/Release Sites
*	EW0120101	Assessments
*	EW0120102	Cleanups
	EW012011	Facility Decommissioning
*	EW0120111	Assessments
*	EW0120112	Cleanups
*	EW0120113	Pre-Decommissioning S&M
	EW0130	Stabilization and Deactivation
	EW013010	Facilities Deactivation
*	EW013010A	Surveillance and Maintenance
*	EW013010B	Deactivation
	EW013020	Nuclear Materials Stabilization
*	EW013020A	Surveillance and Maintenance
*	EW013020B	Stabilization
	EW013030	Spent Nuclear Fuel Stabilization
*	EW013030A	Surveillance and Maintenance
*	EW013030B	Stabilization
*	EW013040	Landlord
	EW013040A	General Purpose Site-Wide Infrastructure Services
	EW013040B	General Site-Wide Non-Infrastructure
	EW013040C	Intergovernmental/Stakeholder Outreach Services
	EW013050	Long-Term Monitoring
*	EW013050A	Nuclear Materials
*	EW013050B	Spent Nuclear Fuel
*	EW013050C	Facilities
	39EW0130	Construction
*	39EW01301	Facilities Deactivation
*	39EW01302	Nuclear Materials Stabilization
*	39EW01303	Spent Nuclear Fuel Stabilization
*	39EW01304	Landlord
*	39EW01305	Long-Term Monitoring
	EW0110	Waste Activities
*	EW011010	High-Level Waste

	EW0110101	Storage
	EW0110102	Treatment
	EW0110103	Disposal Ready
*	EW011020	Transuranic Waste
	EW0110201	Storage
	EW0110202	Treatment
	EW0110203	Disposal
*	EW011030	Mixed Low-Level Waste
	EW0110301	Storage
	EW0110302	Treatment
	EW0110303	Disposal
*	EW011040	Low-Level Waste
	EW0110401	Storage
	EW0110402	Treatment
	EW0110403	Disposal
*	EW011050	Hazardous Waste
	EW0110502	Treatment
	EW0110503	Disposal
*	EW011060	11e(2) Byproduct Waste
*	EW011070	All Other Waste Types
*	39EW0110	Construction
	39EW0110A	Albuquerque
	39EW0110B	Carlsbad
	39EW0110C	Chicago
	39EW0110D	Idaho
	39EW0110E	Nevada
	39EW0110F	Oakland
	39EW0110G	Oak Ridge
	39EW0110H	Ohio
	39EW0110J	Richland
	39EW0110K	Savannah River
	EW0190000	Operational Activities
*	EW0190100	Program Support
*	EW0190200	Post-Remediation Long-Term S&M
*	EW0190300	Conceptual Design
*	EW0190400	Other Project-Related [Bridge] Costs
*	EW0190500	Uranium Leasing

	EW02	LONG-TERM CLEANUP AND WASTE MANAGEMENT (CAO, OR, SR, ID, OAK, RL, HQ, CC)
	EW0220	Remediation Activities
	EW022010	Remedial Action/Release Sites
*	EW0220101	Assessments
*	EW0220102	Cleanups
	EW022011	Facility Decommissioning
*	EW0220111	Assessments
*	EW0220112	Cleanups
*	EW0220113	Pre-Decommissioning S&M
	EW0230	Stabilization and Deactivation
	EW023010	Facilities Deactivation
*	EW023010A	Surveillance and Maintenance
*	EW023010B	Deactivation
	EW023020	Nuclear Materials Stabilization
*	EW023020A	Surveillance and Maintenance
*	EW023020B	Stabilization
	EW023030	Spent Nuclear Fuel Stabilization
*	EW023030A	Surveillance and Maintenance
*	EW023030B	Stabilization
*	EW023040	Landlord
	EW023040A	General Purpose Site-Wide Infrastructure Services
	EW023040B	General Site-Wide Non-Infrastucture
	EW023040C	Intergovernmental/Stakeholder Outreach Services
	EW023050	Long-Term Monitoring
*	EW023050A	Nuclear Materials
*	EW023050B	Spent Nuclear Fuel
*	EW023050C	Facilities
	39EW0230	Construction
*	39EW02301	Facilities Deactivation
*	39EW02302	Nuclear Materials Stabilization
*	39EW02303	Spent Nuclear Fuel Stabilization
*	39EW02304	Landlord
*	39EW02305	Long-Term Monitoring
	EW0240	Crosscutting Operational Activities
*	EW024041	Transportation and Packaging
	EW024041A	Transportation Management
	EW024041B	Packaging Management
	EW024041C	Liaison and Communications
*	EW024042	Emergency Management Program
*	EW024043	Analytical/Characterization Services
*	EW024044	Pollution Prevention
	EW024044A	Complex-Wide Activities
	EW024044B	Site-Wide Activities

	EW024044C	Facility Specific Activities
	EW0210	Waste Activities
*	EW021010	High-Level Waste
	EW0210101	Storage
	EW0210102	Treatment
	EW0210103	Disposal Ready
*	EW021020	Transuranic Waste
	EW0210201	Storage
	EW0210202	Treatment
	EW0210203	Disposal
*	EW021030	Mixed Low-Level Waste
	EW0210301	Storage
	EW0210302	Treatment
	EW0210303	Disposal
*	EW021040	Low-Level Waste
	EW0210401	Storage
	EW0210402	Treatment
	EW0210403	Disposal
*	EW021050	Hazardous Waste
	EW0210502	Treatment
	EW0210503	Disposal
*	EW021060	11e(2) Byproduct Waste
*	EW021070	All Other Waste Types
*	39EW0210	Construction
	39EW0210A	Albuquerque
	39EW0210B	Carlsbad
	39EW0210C	Chicago
	39EW0210D	Idaho
	39EW0210E	Nevada
	39EW0210F	Oakland
	39EW0210G	Oak Ridge
	39EW0210H	Ohio
	39EW0210J	Richland
	39EW0210K	Savannah River
	EW0290000	Operational Activities
*	EW0290100	Program Support
*	EW0290200	Post-Remediation Long-Term S&M
*	EW0290300	Conceptual Design
*	EW0290400	Other Project-Related [Bridge] Costs
*	EW0290500	Uranium Leasing
*	EW0290600	Contribution to the UE D&D Fund
*	EW0290700	***BLANK***
*	EW0290800	Environmental Regulatory Analysis

	EW04	PROJECT COMPLETION FUND (AL, CH, NV)
	EW0420	Remediation Activities
	EW042010	Remedial Action/Release Sites
*	EW0420101	Assessments
*	EW0420102	Cleanups
	EW042011	Facility Decommissioning
*	EW0420111	Assessments
*	EW0420112	Cleanups
*	EW0420113	Pre-Decommissioning S&M
	EW0430	Stabilization and Deactivation
	EW043010	Facilities Deactivation
*	EW043010A	Surveillance and Maintenance
*	EW043010B	Deactivation
	EW043020	Nuclear Materials Stabilization
*	EW043020A	Surveillance and Maintenance
*	EW043020B	Stabilization
	EW043030	Spent Nuclear Fuel Stabilization
*	EW043030A	Surveillance and Maintenance
*	EW043030B	Stabilization
*	EW043040	Landlord
	EW043040A	General Purpose Site-Wide Infrastructure Services
	EW043040B	General Site-Wide Non-Infrastructure
	EW043040C	Intergovernmental/Stakeholder Outreach Services
	EW043050	Long-Term Monitoring
*	EW043050A	Nuclear Materials
*	EW043050B	Spent Nuclear Fuel
*	EW043050C	Facilities
	39EW0430	Construction
*	39EW04301	Facilities Deactivation
*	39EW04302	Nuclear Materials Stabilization
*	39EW04303	Spent Nuclear Fuel Stabilization
*	39EW04304	Landlord
*	39EW04305	Long-Term Monitoring
	EW0410	Waste Activities
*	EW041010	High-Level Waste
	EW0410101	Storage
	EW0410102	Treatment
	EW0410103	Disposal Ready
*	EW041020	Transuranic Waste
	EW0410201	Storage
	EW0410202	Treatment
	EW0410203	Disposal
*	EW041030	Mixed Low-Level Waste
	EW0410301	Storage

	EW0410302	Treatment
	EW0410303	Disposal
*	EW041040	Low-Level Waste
	EW0410401	Storage
	EW0410402	Treatment
	EW0410403	Disposal
*	EW041050	Hazardous Waste
	EW0410502	Treatment
	EW0410503	Disposal
*	EW041060	11e(2) Byproduct Waste
*	EW041070	All Other Waste Types
*	39EW0410	Construction
	39EW0410A	Albuquerque
	39EW0410B	Carlsbad
	39EW0410C	Chicago
	39EW0410D	Idaho
	39EW0410E	Nevada
	39EW0410F	Oakland
	39EW0410G	Oak Ridge
	39EW0410H	Ohio
	39EW0410J	Richland
	39EW0410K	Savannah River
	EW0490000	Operational Activities
*	EW0490100	Program Support
*	EW0490200	Post-Remediation Long-Term S&M
*	EW0490300	Conceptual Design
*	EW0490400	Other Project-Related [Bridge] Costs
*	EW0490500	Uranium Leasing

EW10	PROGRAM DIRECTION
EW40	SCIENCE AND TECHNOLOGY Technology SystemsDevelopment Mixed Waste Focus Area Tank Focus Area Subsurface Contaminant Focus Area Decontamination and Decommissioning Focus Area Plutonium Focus Area Technology Acceptance & Deployment Technology Acceptance Technology Deployment Basic Science and Risk Policy Program Basic Science Risk Policy

	EW03	DEFENSE EM PRIVATIZATION
	EW0320	Remediation Activities
	EW032010	Remedial Action/Release Sites
*	EW0320101	Assessments
*	EW0320102	Cleanups
	EW032011	Facility Decommissioning
*	EW0320111	Assessments
*	EW0320112	Cleanups
*	EW0320113	Pre-Decommissioning S&M
	EW0330	Stabilization and Deactivation
	EW033010	Facilities Deactivation
*	EW033010A	Surveillance and Maintenance
*	EW033010B	Deactivation
	EW033020	Nuclear Materials Stabilization
*	EW033020A	Surveillance and Maintenance
*	EW033020B	Stabilization
	EW033030	Spent Nuclear Fuel Stabilization
*	EW033030A	Surveillance and Maintenance
*	EW033030B	Stabilization
*	EW033040	Landlord
	EW033040A	General Purpose Site-Wide Infrastructure Services
	EW033040B	General Site-Wide Non-Infrastructure
	EW033040C	Intergovernmental/Stakeholder Outreach Services
	EW033050	Long-Term Monitoring
*	EW033050A	Nuclear Materials
*	EW033050B	Spent Nuclear Fuel
*	EW033050C	Facilities
	EW0310	Waste Activities
*	EW031010	High-Level Waste
	EW0310101	Storage
	EW0310102	Treatment
	EW0310103	Disposal Ready
*	EW031020	Transuranic Waste
	EW0310201	Storage
	EW0310202	Treatment
	EW0310203	Disposal
*	EW031030	Mixed Low-Level Waste
	EW0310301	Storage
	EW0310302	Treatment
	EW0310303	Disposal
*	EW031040	Low-Level Waste
	EW0310401	Storage
	EW0310402	Treatment
	EW0310403	Disposal

*	EW031050	Hazardous Waste
	EW0310502	Treatment
	EW0310503	Disposal
*	EW031060	11e(2) Byproduct Waste
*	EW031070	All Other Waste Types
	EW0390000	Operational Activities
*	EW0390100	Program Support
*	EW0390200	Post-Remediation Long-Term S&M
*	EW0390300	Conceptual Design
*	EW0390400	Other Project-Related [Bridge] Costs
*	EW0390500	Uranium Leasing

	EX	ENVIRONMENTAL MANAGEMENT (Non-Defense)
	EX01	SITE CLOSURE FUND (RF, OH)
	EX0120	Remediation Activities
	EX012010	Remedial Action/Release Sites
*	EX0120101	Assessments
*	EX0120102	Cleanups
	EX012011	Facility Decommissioning
*	EX0120111	Assessments
*	EX0120112	Cleanups
*	EX0120113	D&D S&M
	EX0130	Stabilization and Deactivation
	EX013010	Facilities Deactivation
*	EX013010A	Surveillance and Maintenance
*	EX013010B	Deactivation
	EX013020	Nuclear Materials Stabilization
*	EX013020A	Surveillance and Maintenance
*	EX013020B	Stabilization
	EX013030	Spent Nuclear Fuel Stabilization
*	EX013030A	Surveillance and Maintenance
*	EX013030B	Stabilization
*	EX013040	Landlord
	EX013040A	General Purpose Site-Wide Infrastructure Services
	EX013040B	General Site-Wide Non-Infrastructure
	EX013040C	Intergovernmental/Stakeholder Outreach Services
	EX013050	Long-Term Monitoring
*	EX013050A	Nuclear Materials
*	EX013050B	Spent Nuclear Fuel
*	EX013050C	Facilities
	39EX0130	Construction
*	39EX01301	Facilities Deactivation
*	39EX01302	Nuclear Materials Stabilization
*	39EX01303	Spent Nuclear Fuel Stabilization
*	39EX01304	Landlord
*	39EX01305	Long-Term Monitoring
	EX0110	Waste Activities
*	EX011010	High-Level Waste
	EX0110101	Storage
	EX0110102	Treatment
	EX0110103	Disposal Ready
*	EX011020	Transuranic Waste
	EX0110201	Storage
	EX0110202	Treatment
	EX0110203	Disposal

*	EX011030	Mixed Low-Level Waste
	EX0110301	Storage
	EX0110302	Treatment
	EX0110303	Disposal
*	EX011040	Low-Level Waste
	EX0110401	Storage
	EX0110402	Treatment
	EX0110403	Disposal
*	EX011050	Hazardous Waste
	EX0110502	Treatment
	EX0110503	Disposal
*	EX011060	11e(2) Byproduct Waste
*	EX011070	All Other Waste Types
*	39EX0110	Construction
	39EX0110A	Albuquerque
	39EX0110B	Carlsbad
	39EX0110C	Chicago
	39EX0110D	Idaho
	39EX0110E	Nevada
	39EX0110F	Oakland
	39EX0110G	Oak Ridge
	39EX0110H	Ohio
	39EX0110J	Richland
	39EX0110K	Savannah River
	EX0190000	Operational Activities
*	EX0190100	Program Support
*	EX0190200	Post-Remediation Long-Term S&M
*	EX0190300	Conceptual Design
*	EX0190400	Other Project-Related [Bridge] Costs
*	EX0190500	Uranium Leasing

	EX02	LONG-TERM CLEANUP AND WASTE MANAGEMENT (CAO, OR, SR, ID, OAK, RL, HQ, CC)
	EX0220	Remediation Activities
	EX022010	Remedial Action/Release Sites
*	EX0220101	Assessments
*	EX0220102	Cleanups
*	EX0220103	FUSRAP Assessments
*	EX0220104	FUSRAP Cleanups
	EX022011	Facility Decommissioning
*	EX0220111	Assessments
*	EX0220112	Cleanups
*	EX0220113	D&D S&M
	EX0230	Stabilization and Deactivation
	EX023010	Facilities Deactivation
*	EX023010A	Surveillance and Maintenance
*	EX023010B	Deactivation
	EX023020	Nuclear Materials Stabilization
*	EX023020A	Surveillance and Maintenance
*	EX023020B	Stabilization
	EX023030	Spent Nuclear Fuel Stabilization
*	EX023030A	Surveillance and Maintenance
*	EX023030B	Stabilization
*	EX023040	Landlord
	EX023040A	General Purpose Site-Wide Infrastructure Services
	EX023040B	General Site-Wide Non-Infrastructure
	EX023040C	Intergovernmental/Stakeholder Outreach Services
	EX023050	Long-Term Monitoring
*	EX023050A	Nuclear Materials
*	EX023050B	Spent Nuclear Fuel
*	EX023050C	Facilities
	39EX0230	Construction
*	39EX02301	Facilities Deactivation
*	39EX02302	Nuclear Materials Stabilization
*	39EX02303	Spent Nuclear Fuel Stabilization
*	39EX02304	Landlord
*	39EX02305	Long-Term Monitoring
	EX0240	Crosscutting Operational Activities
*	EX024045	Pollution Prevention
	EX024045A	Complex-Wide Activities
	EX024045B	Site-Wide Activities
	EX024045C	Facility Specific Activities
*	EX024046	Packaging Certification & Transportation Safety

	EX0210	Waste Activities
*	EX021010	High-Level Waste
	EX0210101	Storage
	EX0210102	Treatment
	EX0210103	Disposal Ready
*	EX021020	Transuranic Waste
	EX0210201	Storage
	EX0210202	Treatment
	EX0210203	Disposal
*	EX021030	Mixed Low-Level Waste
	EX0210301	Storage
	EX0210302	Treatment
	EX0210303	Disposal
*	EX021040	Low-Level Waste
	EX0210401	Storage
	EX0210402	Treatment
	EX0210403	Disposal
*	EX021050	Hazardous Waste
	EX0210502	Treatment
	EX0210503	Disposal
*	EX021060	11e(2) Byproduct Waste
*	EX021070	All Other Waste Types
*	39EX0210	Construction
	39EX0210A	Albuquerque
	39EX0210B	Carlsbad
	39EX0210C	Chicago
	39EX0210D	Idaho
	39EX0210E	Nevada
	39EX0210F	Oakland
	39EX0210G	Oak Ridge
	39EX0210H	Ohio
	39EX0210J	Richland
	39EX0210K	Savannah River
	EX0290000	Operational Activities
*	EX0290100	Program Support
*	EX0290200	Post-Remediation Long-Term S&M
*	EX0290300	Conceptual Design
*	EX0290400	Other Project-Related [Bridge] Costs
*	EX0290500	Uranium Leasing

	EX04	PROJECT COMPLETION FUND (AL, CH, NV)
	EX0420	Remediation Activities
	EX042010	Remedial Action/Release Sites
*	EX0420101	Assessments
*	EX0420102	Cleanups
	EX0420103	***BLANK***
	EX0420104	***BLANK***
*	EX0420105	UMTRA Assessment
*	EX0420106	UMTRA Cleanup
	EX042011	Facility Decommissioning
*	EX0420111	Assessments
*	EX0420112	Cleanups
*	EX0420113	D&D S&M
	EX0430	Stabilization and Deactivation
	EX043010	Facilities Deactivation
*	EX043010A	Surveillance and Maintenance
*	EX043010B	Deactivation
	EX043020	Nuclear Materials Stabilization
*	EX043020A	Surveillance and Maintenance
*	EX043020B	Stabilization
	EX043030	Spent Nuclear Fuel Stabilization
*	EX043030A	Surveillance and Maintenance
*	EX043030B	Stabilization
*	EX043040	Landlord
	EX043040A	General Purpose Site-Wide Infrastructure Services
	EX043040B	General Site-Wide Non-Infrastructure
	EX043040C	Intergovernmental/Stakeholder Outreach Services
	EX043050	Long-Term Monitoring
*	EX043050A	Nuclear Materials
*	EX043050B	Spent Nuclear Fuel
*	EX043050C	Facilities
	39EX0430	Construction
*	39EX04301	Facilities Deactivation
*	39EX04302	Nuclear Materials Stabilization
*	39EX04303	Spent Nuclear Fuel Stabilization
*	39EX04304	Landlord
*	39EX04305	Long-Term Monitoring
	EX0410	Waste Activities
*	EX041010	High-Level Waste
	EX0410101	Storage
	EX0410102	Treatment
	EX0410103	Disposal Ready
*	EX041020	Transuranic Waste
	EX0410201	Storage

	EX0410202	Treatment
	EX0410203	Disposal
*	EX041030	Mixed Low-Level Waste
	EX0410301	Storage
	EX0410302	Treatment
	EX0410303	Disposal
*	EX041040	Low-Level Waste
	EX0410401	Storage
	EX0410402	Treatment
	EX0410403	Disposal
*	EX041050	Hazardous Waste
	EX0410502	Treatment
	EX0410503	Disposal
*	EX041060	11e(2) Byproduct Waste
*	EX041070	All Other Waste Types
*	39EX0410	Construction
	39EX0410A	Albuquerque
	39EX0410B	Carlsbad
	39EX0410C	Chicago
	39EX0410D	Idaho
	39EX0410E	Nevada
	39EX0410F	Oakland
	39EX0410G	Oak Ridge
	39EX0410H	Ohio
	39EX0410J	Richland
	39EX0410K	Savannah River
	EX0490000	Operational Activities
*	EX0490100	Program Support
*	EX0490200	Post-Remediation Long-Term S&M
*	EX0490300	Conceptual Design
*	EX0490400	Other Project-Related [Bridge] Costs
*	EX0490500	Uranium Leasing

	EU	URANIUM ENRICHMENT D&D FUND
	EU02	LONG-TERM CLEANUP AND WASTE MANAGEMENT
	EU0220	Remediation Activities
	EU022010	Remedial Action/Release Sites
*	EU0220101	Assessments
*	EU0220102	Cleanups
	EU022011	Facility Decommissioning
*	EU0220111	Assessments
*	EU0220112	Cleanups
*	EU0220113	D&D S&M
	EU0210	Waste Activities
*	EU021010	High-Level Waste
	EU0210101	Storage
	EU0210102	Treatment
	EU0210103	Disposal Ready
*	EU021020	Transuranic Waste
	EU0210201	Storage
	EU0210202	Treatment
	EU0210203	Disposal
*	EU021030	Mixed Low-Level Waste
	EU0210301	Storage
	EU0210302	Treatment
	EU0210303	Disposal
*	EU021040	Low-Level Waste
	EU0210401	Storage
	EU0210402	Treatment
	EU0210403	Disposal
*	EU021050	Hazardous Waste
	EU0210502	Treatment
	EU0210503	Disposal
*	EU021060	11e(2) Byproduct Waste
*	EU021070	All Other Waste Types
	EU0230	Stabilization and Deactivation
*	EU023040	Landlord
	EU023040A	General Purpose Site-Wide Infrastructure Services
	EU023040B	General Site-Wide Non-Infrastructure
	EU023040C	Intergovernmental/Stakeholder Outreach Services
	EU0290000	Operational Activities
*	EU0290100	Program Support
*	EU0290200	Post-Remediation Long-Term S&M
*	EU0290300	Conceptual Design
*	EU0290400	Other Project-Related [Bridge] Costs

*	EU0290500	Uranium Leasing
	EU0290600	***BLANK***
*	EU0290700	Uranium/Thorium Reimbursement

Remediation Activities

Remedial Action/Release Sites

Includes operating, capital equipment, and general plant project costs associated with remedial action of release sites. A "release site" is generally defined as a unique location where a hazardous, radioactive, or mixed waste release has occurred or is suspected to have occurred. It is usually associated with an area where wastes or substances contaminated with wastes have been disposed of, treated, stored, and/or used. Sites include both source areas and areas of migration where hazardous substances have come to be located.

Assessments

Includes, but is not limited to, expenditures for confirmation of the presence or absence of hazardous materials, characterization of the release or potential for release, as required, to determine if a basis exists for further action, accurate determination of the future and extent of problems at the site, preliminary/conceptual engineering assessment of remedial action criteria and standards, preparation of documentation, including NEPA, required by environmental statutes and derivative regulations, and selection of preferred remedial action alternatives.

Cleanups

Includes, but is not limited to preparation of detailed design and engineering plans, implementation of the selected remedial action alternatives, verification of completion of remedial actions and prior interim actions, and preparation of final documentation for completed remedial actions. It also includes, recycling, minimization, treatment, storage, and disposal of all radioactive, hazardous or mixed wastes where those costs are logically associated with the specific remedial action/release site.

Facility Decommissioning

Includes operating, capital equipment, and general plant project costs associated with decommissioning activities within a facility. Decommissioning costs include, but are not limited to, developing engineering plans, implementing projects, disposing of contamination or contaminated waste, verifying project completion, issuing completion reports, and conducting surveillance and maintenance of surplus facilities awaiting decommissioning. A "facility" refers to a building or walled structure; its functional, systemized equipment; and other fixed systems and equipment installed therein. "Facility" refers to a single building, not a group of buildings. Facilities can be stand alone tanks if the tanks service several buildings; require significant deactivation/decommissioning efforts; and/or are being managed as a deactivation/decommissioning effort separate from nearby facilities. A facility may be a portion of a building (e.g., vault area, storage pool, fuel washing room, etc.) if that is the only section of the building to be deactivated/decommissioned.

Remediation Activities (cont'd)

Facility Decommissioning (cont'd)

Assessments
Includes, but is not limited to, expenditures for confirmation of the presence or absence of hazardous materials, characterization of the release or potential for release, as required, to determine if a basis exists for further action, accurate determination of the future and extent of problems at the site, preliminary/conceptual engineering assessment of remedial action criteria and standards, preparation of documentation, including NEPA, required by environmental statutes and derivative regulations, and selection of preferred remedial action alternatives.

Cleanups
Includes, but is not limited to, preparation of detailed design and engineering plans, implementation of the selected remedial action alternatives, disposing of contamination or contaminated waste, verification of completion of remedial actions, and preparation of final documentation for completed remedial actions.

Pre-Decommissioning S&M
Includes costs for inspections and environmental monitoring of sites awaiting decontamination and decommissioning activities.

Stabilization and Deactivation

Facilities Deactivation
Includes operating, capital equipment, and general plant project costs associated with activities performed to reduce costs associated with a surplus facility prior to its ultimate disposition and include surveillance and maintenance actions required to achieve that condition.

Surveillance and Maintenance: These activities directly associated with deactivation, maintenance of safety basis as required by the material or facility, compliance activities, contaminated facility radiation protection, configuration management, sampling/monitoring, emergency response, security, material control and accountability, training and certification, conduct of operations, utilities, maintenance, etc.

Deactivation: Includes costs associated with activities undertaken with the intent to both reduce the physical risks and hazards at these facilities and to decrease costs associated with facility mortgage. This includes planning, removal of surplus materials, chemicals, supplies, classified equipment and documents, stabilization of radioactive contamination, and removal of hazardous, mixed and radioactive wastes.

Specific examples include: Nuclear Materials programs and operations, including surplus material management; Surplus facility conversion programs; Removal of radioactive, hazardous or mixed wastes; Classified material removal activities; and Deactivation related activities specifically undertaken in response to binding commitments (including compliance orders, court decisions or consent agreements) with Federal, state and local authorities.

Nuclear Materials Stabilization
Includes operating, capital equipment, and general plant project costs associated with activities performed to stabilize surplus nuclear material and place it in a disposition ready condition prior to its ultimate disposition, including surveillance and maintenance actions required to achieve that condition.

Surveillance and Maintenance: Activities directly associated with nuclear material stabilization, maintenance of safety basis as required by the material (e.g., documenting), specific nuclear material, compliance activities, contaminated facility radiation protection, configuration management, sampling/monitoring, emergency response, security, material control and accountability, training and certification, conduct of operations, utilities, maintenance of stabilization system, etc.

Stabilization: Activities intended to convert or move surplus nuclear materials to a form/condition or location that is safe for interim storage or to maintain those nuclear materials in a stable state. Encompasses activities conducted to make these materials disposition ready. Included in this category are activities directed under the implementation plan for DNFSB Recommendation 94-1, the Plutonium Vulnerability Management Plan, and other directives related to nuclear materials.

Specific examples include: Start-up of facilities to perform stabilization activities; Design and procurement of stabilization equipment; Repackaging of nuclear materials to meet storage standards and criteria; Research and technology development to support stabilization activities; Processing of materials to forms suitable for safe interim and long-term storage; and maintenance of material prior to long-term storage.

Spent Nuclear Fuel Stabilization
Includes operating, capital equipment, and general plant project costs associated with activities performed to stabilize spent nuclear fuel and place it in a disposition ready condition prior to its ultimate disposition, including surveillance and maintenance actions required to achieve that condition.

Surveillance and Maintenance: Activities directly associated with SNF stabilization, specific SNF compliance activities, radiation protection, sampling/monitoring, emergency response, security, SNF inventory control and accountability, training and certification, conduct of operations, utilities, maintenance of SNF systems, etc.

Spent Nuclear Fuel Stabilization (cont'd)

Stabilization: The intent of spent nuclear fuel (SNF) stabilization activities is to stabilize vulnerable SNF and store or process it into a safe condition for an interim period of time (assumed to be 40 years) which is compatible with the permanent repository (i.e. disposition ready) until they are transferred to a permanent repository.

Specific examples include: National Fuel Characterization; Technology Development; Project Procedure Review; Other SNF Related Drivers and Activities; Vulnerability / Risk Assessment Support; and Foreign Research Reactor EIS ROD.

Landlord

Includes planning, operating, maintenance, construction and capital equipment design and procurement costs, associated with: (1) general purpose site-wide infrastructure services, (2) general site-wide non-infrastructure, and (3) Intergovernmental/Stakeholder Outreach Services.

General Purpose Site-Wide Infrastructure Services: Provide expense funding for the basic facilities, equipment, installations and related services, not tied directly to Environmental Management missions, that are essential to occupy and operate a site. Examples of general purpose site-wide infrastructure systems include: transportation (buses, motor pools, railroads, etc.), roads, utilities (electricity, water, steam, fuels, sanitary & industrial wastewater), environmental monitoring, communications, information management, analytical laboratories, emergency facilities, safeguards and security, integrated databases, offices, warehouses, fabrication and maintenance and grounds keeping. Maintenance includes both corrective and preventive maintenance. Corrective maintenance includes the repair and restoration of equipment or components that have failed or malfunctioned so that they are not performing their intended function. Preventive maintenance includes predictive, periodic, and planned maintenance actions taken to maintain a piece of equipment within design operating conditions and extend its life and is performed prior to equipment failure or to prevent equipment failure.

General Site-Wide Non-Infrastructure: Provide on-site operating activities, not related to general purpose infrastructure, that are needed to either occupy and operate a site, or to standardize and integrate work from multiple Environmental Management programs. Examples non-infrastructure services include site-wide environmental, ecological, geological, meteorological, cultural and historical work.

Landlord (cont'd)

Intergovernmental/Stakeholder Outreach Services: Provide operating activities for other government agencies or off-site organizations that may be affected by DOE activities. Examples of Intergovernmental/Stakeholder Outreach Services include: payments-in-lieu-of-taxes, oversight/state permits, down winder litigation, site specific advisory boards, health information and screening, the Hazardous Materials Management and Emergency Response (HAMMER) training project, support for geologic surveys, support for National Monuments or museums, and other activities of a similar nature. This does NOT include costs associated with grants.

Long-Term Monitoring
Includes operating, capital equipment, and general plant project costs associated with activities performed following facility deactivation and surplus nuclear material stabilization including long-term surveillance & maintenance performed at a site or facility.

Nuclear Materials: Intent of long-term monitoring activities for stabilized, disposition ready nuclear material is to safely maintain these materials and related facilities in a form, condition, or location that is safe for interim storage.

Specific examples include: maintenance of fire, safety and life support systems specific to a nuclear material storage facility; maintenance of vital safety systems which are specific to a nuclear material storage facility; compliance with national fire codes (e.g., NAPA) & national electric codes as required for nuclear material storage facility; radiation protection requirements; and material/facility security support.

Spent Nuclear Fuel: Intent of long-term monitoring activities for stabilized, disposition ready spent nuclear fuel is to safely maintain the spent fuel and related facilities in a form, condition, or location that is safe for interim storage.

Specific examples include: maintenance of fire, safety and life support systems specific to a spent nuclear fuel storage facility; maintenance of vital safety systems which are specific to a spent nuclear fuel storage facility; compliance with national fire codes (e.g., NAPA) & national electric codes as required for a spent nuclear fuel storage facility; radiation protection requirements; and Material/Facility security support.

Facilities: Intent of long-term monitoring activities for facilities is to safely maintain the facility in a condition or location that is safe.

Specific examples include: maintenance of fire, safety and life support systems; maintenance of vital safety systems; compliance with national fire codes (e.g., NAPA) & national electric codes; radiation protection requirements; and facility security support.

Crosscutting Operational Activities

Transportation and Packaging

Includes costs for developing, in conjunction with Department of Energy Program Offices, the policy and framework for ensuring the safe, secure, and economical transportation and logistical needs of DOE materials, including hazardous materials (particularly radioactive), hazardous substances, and hazardous and mixed wastes to meet the needs of the DOE programs. This program assures the uniformity in the implementation of regulatory requirements as they pertain to the packaging safety and transportation of DOE materials. Specific areas include assessments associated with operational policy analysis and development, productivity and safety enhancements through improved operations technology and methods, the development and implementation of operational systems, performing explosives classification reviews and maintenance of the Explosive Classification Tracking System, maintaining a nationwide baseline transportation regulatory compliance training program.

Transportation Management: Includes activities associated with the management of DOE-wide transportation management program including development and implementation of policies and procedures for all DOE unclassified shipping activities, develops technologies to foster safe, efficient, and cost effective transportation systems. Activities include resolution of transportation issues, engineering analysis, advanced technology development certification support, regulatory support, and safety and systems assessment. Also, includes Department-wide coordination of transportation in two major areas: (1) transportation operations and traffic management which includes technology systems and data bases, and policy analysis; (2) training in the area of regulations and operations.

Packaging Management: Includes activities for providing Departmental support in the areas of transportation and packaging operations, packaging and transportation systems development and packaging operations, focusing on design support and general packaging management.

Liaison and Communications: Includes activities associated with developing, coordinating, and implementing processes to facilitate effective understanding and interactions among DOE decision-makers and the affected and interested public with regard to the transportation program. Also, includes costs to develop informational products, activities, and resources to explain the transportation program and to respond to public inquires.

Emergency Management Program
Includes all costs for activities related to independent monitoring and assessment, programmatic guidance and policy, integrated and independent performance analysis and technical assistance for DOE-wide activities in the area of transportation and Environmental Management activities for facilities emergency management.

Analytical/Characterization Services
Includes activities related to the enhancement and effective management of DOE's analytical resources and assuring technical validity and cost-effectiveness of EM sampling and analysis programs. The scope includes the establishment and implementation of and EPA-acceptable QA/QC system; establishment and maintenance of the necessary standards, methods, interfaces, and manuals; identification and implementation of techniques to improve efficiency; coordination and interfacing with private sector commercial analytical laboratory groups; and identification of environmental sampling and analysis services requirements and strategies.

Pollution Prevention
Includes costs for the Department-wide pollution prevention program crosscutting all sites, including planning, policy development, technical support, tracking and reporting, implementation, and other activities associated with the DOE pollution prevention program.

Complex-Wide Activities: Includes costs for activities whose purpose is to facilitate the application of pollution prevention across the complex including uniform methodologies and training, crosscutting planning, coordination, outreach, information exchange, progress tracking, complex-wide tools development, policy development, and pilot programs.

Site-Wide Activities: Includes costs for implementation of Site-wide program including goal setting, progress tracking and reporting, pollution prevention opportunity assessments, recycling, affirmative procurement, and activities necessary to comply with regulatory requirements, Executive Orders, and DOE Orders relating to pollution prevention.

Facility Specific Activities: Includes costs for assisting implementation of specific measures that will reduce the generation of waste/pollutants and will reduce the long-term cost of environmental operations to the Department (such as the high return on investment projects and projects identified by pollution prevention opportunity assessments).

Crosscutting Operational Activities (cont'd)

Packaging Certification and Transportation Safety
Includes costs for activities for ensuring that Departmental and contractor personnel and hazardous materials substances, and wastes are transported safely to ensure worker health, public safety, and environmental protection. This program provides the Department with the corporate level (cross-cutting) tools to oversee the safety in transportation and packaging activities. Activities include performing evaluations and analyses of safety analysis reports for packaging, as required by the Department of Transportation and developing analytical tools for these analyses in cooperation with the Nuclear Regulatory Commission; providing external coordination between the Department and other governmental, commercial, and international bodies regarding transportation safety and packaging certification; participating in the development of transportation safety and packaging standards by national and international organizations; coordinating within the Department all matters pertaining to hazardous materials package certification and transportation safety; oversees field aviation, maritime, rail, highway, and pipeline safety implementation activities as they relate to the transportation of personnel and hazardous materials. Packaging Certification and Transportation Safety manages the transportation and hazardous materials packaging safety programs to ensure safety in all modes of transport, including air, rail, water, highway, and pipeline.

Waste Activities

Includes all operating, capital equipment, and general plant project costs for activities connected with the treatment, storage, and disposal of radioactive, hazardous, or mixed wastes generated as a result of ongoing operations of active facilities.

High-Level Waste
Includes all costs for activities connected with the treatment, storage, and disposal of high-level waste, which is the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid waste derived from the liquid that contains a combination of transuranic waste and fission products in concentrations requiring permanent isolation.

Storage: Includes all costs for storage (defined as the retention and monitoring of waste)of High-Level Waste that is not disposal ready. Also included in the cost of storage (as applicable):

- waste documentation for, and acceptance by, storage facilities;
- on-site collection of waste from generators;
- transportation to storage facilities (including emergency truck operations), waste tracking and data recording;
- characterization of waste management generated waste and process chemicals and verification of program generated waste;
- operations, surveillance and maintenance of storage facilities such as ancillary components such as tank cooling and ventilation systems, piping, and diversion boxes and pits;
- inspections and record keeping;
- environment, safety, and health including Conduct of Operations, National Environmental Policy Act (NEPA), procedures, training, quality assurance, permits,

High-Level Waste (cont'd)

safety analysis reports (SARS), occurrence reporting, and technical support;
- capital equipment and general plant projects to maintain storage facilities;
- and generator fees paid and received.

Treatment: Includes all costs for treatment of High-Level Waste, including preparation of waste going directly to treatment. Treatment is any activity that alters the chemical or physical nature of waste to reduce its toxicity, volume, mobility or to render it amenable for transport, storage, further treatment or disposal. It includes:

- any additional characterization waste conditioning, pretreatment, actual treatment;
- laboratory analysis for pre-treatment;
- characterization and preparation required for transport to treatment activities;
- waste documentation for, and acceptance by, treatment facilities;
- transportation to treatment facilities including emergency truck operations, waste tracking and data recording;
- verification/characterization of waste before treatment or pretreatment, waste for development operations process chemicals, surveillance and maintenance (preventive and corrective) of facilities including safety support systems, outfall monitoring and sample and analysis, inspections and assessment, repackaging, spill cleanup, waste containers, record keeping, ES&H including health physics and industrial hygiene;
- Conduct of Operations, NEPA, procedures, training, Permits, SARS, ORPs, quality assurance (both in support of OCRWM requirements and to meet 10 CFR 834.120), and technical support;
- capital equipment and general plant projects to maintain treatment facilities;
- identification and evaluation of treatment options;
- treatability studies;
- and generator fees paid and received.

During the HLW treatment process, a low-activity fraction of waste is produced, which is treated and disposed. This "incidental" waste is disposed as low-level waste under a separate B&R.

High-Level Waste (cont'd)

Disposal Ready: Disposal-ready is the final packaging and transporting for final disposal. It begins with any additional packaging required for disposal and certification so that the material meets the disposal facilities waste acceptance criteria (WAC). Disposal costs includes long-term storage of WAC-ready waste in inventory. Disposal-ready certified waste that meets current waste acceptance criteria (WAC) for disposal or repository emplacement but remains in EM's inventory because a permanent repository is not available. Also, included in the cost of disposal:

- storage and shipping records;
- preparation and packaging for transportation to disposal facilities; on-site manifesting, as required;
- verification/characterization when required for disposal;
- operations/surveillance and maintenance (preventive and corrective) facilities including inspections, spill cleanup, record keeping, leachate monitoring, assays of packaging or repackaging materials, and closure activities;
- ES&H including Conduct of Operations, NEPA, procedures, training, permits, quality assurance, SARS, ORPs, technical support;
- capital equipment and general plant projects to maintain disposal ready facilities;
- identification and evaluation of disposal options.

Environmental Management does not pay for transportation to and disposal in the Federal HLW repository.

Transuranic Waste

Includes all costs related to transuranic waste, which is waste that is contaminated with alpha-emitting transuranic radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of the assay, without regard to source or form. Mixed transuranic waste is also included in this definition.

Waste Activities (cont'd)

Transuranic Waste (cont'd)

Storage: Includes all costs for storage (defined as the retention and monitoring of waste in a retrievable manner pending final disposal) of Transuranic Waste. Includes costs for long-term storage of WAC-ready waste in inventory. Long-term storage is disposal-ready certified waste that meets current waste acceptance criteria for disposal. Also included in the cost of storage (as applicable):

- waste documentation for, and acceptance by, storage facilities;
- on-site collection of waste from generators;
- transportation to storage facilities including truck operations, on-site manifesting and unloading;
- waste tracking and data recording;
- characterization TRU in inventory and verification of program generated waste;
- operations, surveillance and maintenance of facilities including inspections, repackaging, spill cleanup, waste containers and record keeping;
- environment, safety, and health including Conduct of Operations, NEPA, procedures, training, quality assurance, permits, safety analysis reports, occurrence reporting, and technical support;
- capital equipment and general plant projects to maintain storage facilities;
- and generator fees paid and received.

Treatment: Includes all costs for treatment of Transuranic Waste, including retrieval and preparation of waste going directly to treatment. Treatment is any activity that alters the chemical or physical nature of waste to reduce its toxicity, volume, mobility or render it amendable for transport, storage, or disposal. It includes any additional characterization, preparation required for waste directly before treatment; the actual treatment; lab packing for pre-treatment; and the sorting, segregation, and characterization required for transport to treatment activities. Also included in the cost of treatment (as applicable):

- waste documentation for, and acceptance by, treatment facilities;
- preparation and packaging for transportation to treatment facilities;
- on-site collection of waste from generators for transportation to treatment facilities;
- transportation to treatment facilities including truck operations, on-site manifesting, as required, and unloading;
- waste tracking and data recording;
- verification/characterization of waste before treatment or pretreatment including RCRA compliance sampling and analysis, assay, surface contamination survey, visual inspection, weight and dose;
- operations, surveillance and maintenance (preventive and corrective) of facilities including safety support systems, outfall monitoring and sample and analysis, inspections (fire, safety and life support systems), repackaging, spill cleanup, waste containers, record keeping, health physics and industrial hygiene;
- ES&H including Conduct of Operations, NEPA, procedures, training, Permits, SARS, ORPs, quality assurance, and technical support;
- capital equipment and general plant projects to maintain treatment facilities;

Transuranic Waste (cont'd)

- identification and evaluation of treatment options; treatability studies; generator fees paid and received, as well as transportation costs of treated waste back to the generator, if applicable.

Disposal: Includes all costs for disposal of Transuranic Waste. Disposal is the final packaging and transporting for final disposal. It begins with any additional packaging required for disposal and certification so that the material meets the disposal facilities waste acceptance criteria (WAC). This includes activities for on-site/off-site disposal. Also included in the cost of disposal (as applicable):

- waste documentation for, and acceptance or certification by, disposal facilities;
- preparation and packaging for transportation to disposal facilities;
- on-site collection of waste from generators for transportation to disposal facilities;
- transportation to disposal facilities including truck operations, on-site manifesting, as required, and unloading;
- verification/characterization when required for disposal;
- operations/surveillance and maintenance (preventive and corrective) facilities including inspections, repackaging;
- spill cleanup, waste containers, record keeping, leachate monitoring, assays packaging or repackaging materials, and closure activities;
- ES&H including Conduct of Operations, NEPA, procedures, training, permits, quality assurance, SARS, ORPs, technical support, performance assessment activities;
- capital equipment and general plant projects to maintain disposal facilities;
- identification and evaluation of disposal options and generator fees paid and received.

Mixed Low-Level Waste

Includes all costs related to mixed low-level waste, which is waste of disposal options. Radiologically meets the definitions for low-level waste and that is also defined as hazardous under RCRA. Also includes TSCA wastes such as PCB-contaminated wastes.

Storage: Includes all costs for storage (defined as the retention and monitoring of waste in a retrievable manner pending final disposal) of Mixed Low-Level Waste. Includes costs for long-term storage of WAC-ready waste in inventory. Long-term storage is disposal-ready certified waste that meets current waste acceptance criteria (WAC) for disposal. Also, included in the cost of storage (as applicable):

- waste documentation for, and acceptance by, storage facilities;
- on-site collection of waste from generators;
- transportation to storage facilities including truck operations, on-site manifesting and unloading; waste tracking and data recording;
- characterization of waste management generated waste and verification of program generated waste; operations, surveillance and maintenance of facilities including inspections, repackaging, spill cleanup, waste containers and record keeping;
- ES&H including Conduct of Operations, National Environmental Policy Act

Mixed Low-Level Waste (cont'd)

(NEPA), procedures, training, quality assurance, permits, safety analysis reports (SARS), occurrence reporting, and technical support;
- capital equipment and general plant projects to maintain storage facilities; and generator fees paid and received.

Treatment: Includes all costs for treatment of Mixed Low-Level Waste, including preparation of waste going directly to treatment. Treatment is any activity that alters the chemical or physical nature of waste to reduce its toxicity, volume, mobility or render it amendable for transport, storage, or disposal. It includes any additional characterization, preparation required for waste directly before treatment; the actual treatment; lab packing for pre-treatment; and the sorting, segregation, and characterization required for transport to treatment activities. Also included in the cost of treatment (as applicable):
- waste documentation for, and acceptance by, treatment facilities;
- preparation and packaging for transportation to treatment facilities;
- on-site collection of waste from generators for transportation to treatment facilities;
- transportation to treatment facilities including truck operations, on-site manifesting, as required, and unloading;
- waste tracking and data recording;
- verification/characterization of waste before treatment or pretreatment including RCRA compliance sampling and analysis, assay, surface contamination survey, visual inspection, weight and dose;
- operations, surveillance and maintenance (preventive and corrective) of facilities including safety support systems, outfall monitoring and sample and analysis, inspections (fire, safety and life support systems), repackaging, spill cleanup, waste containers, record keeping, health physics and industrial hygiene;
- ES&H including Conduct of Operations, NEPA, procedures, training, Permits, SARS, ORPs, quality assurance, and technical support;
- capital equipment and general plant projects to maintain treatment facilities;
- identification and evaluation of treatment options;
- treatability studies;
- generator fees paid and received, as well as transportation costs of the treated waste back to the generator, if applicable.

Disposal: Includes all costs for disposal of Mixed Low-Level Waste. Disposal is the final packaging and transporting for final disposal. It begins with any additional packaging required for disposal and certification so that the material meets the disposal facilities waste acceptance criteria (WAC). This includes activities for on-site/off-site disposal. Also included in the cost of disposal (as applicable):
- waste documentation for, and acceptance or certification by, disposal facilities;
- preparation and packaging for transportation to disposal facilities;
- on-site collection of waste from generators for transportation to disposal facilities;
- transportation to disposal facilities including truck operations, on-site manifesting, as required, and unloading;

Mixed Low-Level Waste (cont'd)

- verification/characterization when required for disposal;
- operations/surveillance and maintenance (preventive and corrective) facilities including inspections, repackaging;
- spill cleanup, waste containers, record keeping, leachate monitoring, assays packaging or repackaging materials, and closure activities;
- ES&H including Conduct of Operations, NEPA, procedures, training, permits, quality assurance, SARS, ORPs, technical support, performance assessment activities; capital equipment and general plant projects to maintain disposal facilities;
- identification and evaluation of disposal options; and generator fees paid and received.

Low-Level Waste

Includes all costs related to low-level waste, which is waste that contains radioactivity and is not classified as high-level waste, transuranic waste, spent nuclear fuel or Atomic Energy Act (AEA) 11e(2) byproduct material as defined in DOE Order 5820.2A. Test specimens of fissionable material irradiated for research and development on, and not for the production of power or plutonium, may be classified as low-level waste, provided the concentration of transuranic is less than 100 nCi/g. Included as low-level waste is alpha-emitting transuranic waste in concentrations equal to or less than 100 nCi/g. Also included is special case waste, Greater than Class C waste, Specific Performance Assessment Required Waste, and sealed sources.

Storage: Includes all costs for storage (defined as the retention and monitoring of waste in a retrievable manner pending final disposal) of Low-Level Waste. Includes costs includes long-term storage of WAC-ready waste in inventory. Long-term storage is disposal-ready certified waste that meets current waste acceptance criteria (WAC) for disposal. Also included in the cost of storage (as applicable):

- waste documentation for, and acceptance by, storage facilities;
- on-site collection of waste from generators;
- transportation to storage facilities including truck operations, on-site manifesting and unloading;
- waste tracking and data recording;
- characterization of waste management generated waste and verification of program generated waste;
- operations, surveillance and maintenance of facilities including inspections, repackaging, spill cleanup, waste containers and record keeping;
- ES&H including Conduct of Operations, National Environmental Policy Act (NEPA), procedures, training, quality assurance, permits, safety analysis reports (SARS), occurrence reporting, and technical support;
- capital equipment and general plant projects to maintain storage facilities;
- generator fees paid and received.

Waste Activities (cont'd)

Mixed Low-Level Waste (cont'd)

Treatment: Includes all costs for treatment of Low-Level Waste, including preparation of waste going directly to treatment. Treatment is any activity that alters the chemical or physical nature of waste to reduce its toxicity, volume, mobility or render it amendable for transport, storage, or disposal. It includes any additional characterization, preparation required for waste directly before treatment; the actual treatment; lab packing for pre-treatment; and the sorting, segregation, and characterization required for transport to treatment activities. Also included in the cost of treatment (as applicable):

- waste documentation for, and acceptance by, treatment facilities;
- preparation and packaging for transportation to treatment facilities;
- on-site collection of waste from generators for transportation to treatment facilities;
- transportation to treatment facilities including truck operations, on-site manifesting, as required, and unloading;
- waste tracking and data recording;
- verification/characterization of waste before treatment or pretreatment including RCRA compliance sampling and analysis, assay, surface contamination survey, visual inspection, weight and dose;
- operations, surveillance and maintenance (preventive and corrective) of facilities including safety support systems, outfall monitoring and sample and analysis, inspections (fire, safety and life support systems), repackaging, spill cleanup, waste containers, record keeping, health physics and industrial hygiene;
- ES&H including Conduct of Operations, NEPA, procedures, training, Permits, SARS, ORPs, quality assurance, and technical support;
- capital equipment and general plant projects to maintain treatment facilities;
- identification and evaluation of treatment options;
- treatability studies;
- generator fees paid and received, as well as transportation costs of the treated waste back to the generator, if applicable.

Disposal: Includes all costs for disposal of Low-Level Waste. Disposal is the final packaging and transporting for final disposal. It begins with any additional packaging required for disposal and certification so that the material meets the disposal facilities waste acceptance criteria (WAC). This includes activities for on-site/off-site disposal. Also included in the cost of disposal (as applicable):

- waste documentation for, and acceptance or certification by, disposal facilities;
- preparation and packaging for transportation to disposal facilities;
- on-site collection of waste from generators for transportation to disposal facilities;
- transportation to disposal facilities including truck operations, on-site manifesting, as required, and unloading; verification/characterization when required for disposal;
- operations/surveillance and maintenance (preventive and corrective) facilities including inspections, repackaging;
- spill cleanup, waste containers, record keeping, leachate monitoring, assays packaging or repackaging materials, and closure activities;
- ES&H including Conduct of Operations, NEPA, procedures, training, permits, quality assurance, SARS, ORPs, technical support, performance assessment

Waste Activities (cont'd)

Mixed Low-Level Waste (cont'd)

activities;
- capital equipment and general plant projects to maintain disposal facilities;
- identification and evaluation of disposal options;
- generator fees paid and received.

During the HLW treatment process, a low-activity fraction of waste is produced, which is treated and disposed. This incidental waste is disposed as low-level waste.

Hazardous Waste
Includes all costs related to hazardous waste, which is material defined as hazardous waste in 40CFR 261.3 or material defined as hazardous by a State.

Treatment: Includes all costs for treatment of Hazardous Waste, including preparation of waste going directly to treatment.

Disposal: Includes all costs for disposal of Hazardous waste. All hazardous waste is disposed off site.

11e(2) Byproduct Waste
Includes all costs related to 11e(2) Byproduct Waste. 11e(2) Byproduct Waste is defined by section 11e(2) of the Atomic Energy Act as tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

All Other Waste Types
Includes all costs not related to high-level, transuranic, mixed low-level, low-level, hazardous, or 11e(2) by product waste. All other waste types may include: sanitary waste, which is waste generated as a result of routine operations of a facility and that is not considered hazardous or radioactive, can be solid or liquid; special case waste, which is radioactive waste that presents unique management concerns relative to the overall, final disposition plans for the major radioactive waste types (e.e., HLW, TRU, LLW); special case waste such as GTCC and SPAR LLW, non-certifiable defense TRU waste and sealed sources; and waste water, which is treated in a waste water treatment facility and discharged under the Clean Water Act permits to the environment. Waste water can have hazardous, radioactive, or mixed constituents, which are separated out in treatment, but the bulk of which is discharged as clean water.

Operational Activities

Includes costs for all direct and indirect activities that provide technical support to assist the Federal staff with its line management and oversight functions.

Program Support
Includes costs for technical support and contract expertise to assist the federal staff in evaluating alternative end-state facility condition, verifying building characterization, developing system

Operational Activities (cont)

Program Support (cont)
modeling and facility data tracking systems, and reviewing transition management plans. It also includes activities related to strategic planning, information activities and field management of technology development tasks by DOE Technical Program Officers and contractor Technical Program Managers. Also included are costs for Agreements-in-Principle, grants, preparation of project baseline summaries, risk data sheet documentation, integrated priority lists, site-wide technical baselines, integrated site-wide facility plans, systems engineering, and complex-wide plans.

Conceptual Design Reports
Includes costs associated with the efforts of the Environmental Management program to develop project scope that will satisfy program needs; assure project feasibility and attainable performance levels; develop reliable cost estimates and realistic schedules to provide a complete description of the project for Congressional consideration; and develop project criteria and design parameters for all engineering disciplines, identification of applicable codes and standards, quality assurance requirements, environmental studies, materials of construction, space allowances, energy conservation features, health, safety, safeguards and security requirements, and any other features or requirements necessary to describe the project.

Other Project-Related (Bridge) Costs
Includes costs associated with the efforts of the Environmental Management program in Pre-Title I activities (except for Conceptual Design) to include preliminary safety analysis reports, preparation of Project Data Sheets, design criteria, National Environmental Policy Act (NEPA) documentation, and formulation of Quality Assurance Criteria; research and development (R&D) necessary for fabrication, testing and rework of prototype equipment; R&D (scale-up or demonstration plants of high-risk technology) required prior to the start of construction; site suitability testing and evaluation; quality assurance related to site suitability and testing; regulation compliance; systems studies and selected engineering services; and institutional activities related to facility siting and external interactions.

Post-Remediation Long-Term S&M
Includes costs for inspections, environmental monitoring, and routine repair and maintenance of completed DOE radioactive disposal sites.

UE D&D Fund Contribution
Includes the annual Defense contribution made into the Uranium Enrichment Decontamination and Decommissioning Fund.

Uranium Leasing
Includes all costs associated with the administration of leases for uranium on land belonging to the United States pursuant to Section 5(b)6 of the Atomic Energy Act of 1954.

Uranium/Thorium Reimbursement
Includes all costs associated with the administration of leases for uranium on land belonging to the United States pursuant to Section 5(b)6 of the Atomic Energy Act of 1954.

Operational Activities (cont)

Environmental and Regulatory Analysis
Includes activities associated with developing EM-wide positions on proposed legislation and regulations and compliance agreements and assisting the Administration on promoting responsible laws; coordinating EM wide positions on environmental and regulatory issues with the Office of General Council, the Assistant Secretary for Environmental Safety and Health; acting as the EM National Environmental Policy Act Compliance Officer; managing the EM contractor workforce restructuring program; and team building and partnering activities to assist EM.

Program Direction

Program Direction is for federal salaries, benefits, support services, travel, and other related expenses (e.g., contracted services related to personnel costs.) Program Direction activities must be located in a single project (PBS) for each Operations/Field Office and Headquarters. No other activities should be contained in the Program Direction PBSs.

Science and Technology

Technology Systems Development
Mixed Waste Focus Area
Tank Focus Area
Subsurface Contaminant Focus Area
Decontamination and Decommissioning Focus Area
Plutonium Focus Area

Technology Acceptance and Deployment
Technology Acceptance: Includes activities that are responsive to OTD efforts to provide a structure that facilitates the application of innovative environmental technologies through collaborative partnerships with U.S. industry, the National Laboratories, other Federal agencies, universities, and appropriate international participants.

Domestic - Includes activities focused on the technology assistance and implementation facilitation of environmental management technologies; technology decision integration; regulatory coordination activities to ensure DOE's compliance with Federal, state, and local regulations and codes; information and communication coordination to enable critical involvement of key participants in decision making process; and public participation activities to develop national linkages with public interest groups, universities, stakeholders, and Tribal Nations to encourage informed awareness of environmental science and technology.

International - Includes activities to establish an international technology transfer system which identifies worldwide needs and available technologies for the purpose of providing foreign technological options for meeting EM needs and establishing a mechanism for transferring U.S. national laboratory, private industry, and university technologies to foreign markets. Also included are activities which will focus on identifying worldwide needs and establishing worldwide contracts, initiation of participation in international cooperative programs and integrated demonstrations and creation of a jointly-sponsored international environmental technology

information system network. Users of the system will be Federal agencies, state, and local governments, environmental groups, industry and trade associations, laboratories and universities, U.S. foreign missions, foreign governments and international organizations and private industry.

Technology Development Program Integration - Includes activities that support managerial decision making, program management, and the integration of functions across the OST program. Activities will also include field management of OST tasks by DOE Focus Area Leads and Technical Program Officers, including associated staff; Headquarters administrative and review of planning tasks coordinated or conducted by support contractors and field organizations; near-term and long range strategic planning; and integration of TD activities with other Environmental Management program offices.

Technology Deployment: Includes activities focused on deploying new and innovative technologies and approaches into widespread use across the DOE complex, and targeting those key areas that will have the largest impact on cleanup cost, risk and/or schedule. Activities will include competitively awarding projects to Operations/Field Offices, involving stakeholder, regulatory, and Tribal Nations acceptance of deployment activities and reinvesting cost savings to accelerate further cleanup at participating sites. Certain management functions in this category include program management and administration of deployment activities, and participation/coordination of working groups, and a number of joint activities with Waste Management and Environmental Restoration.

Basic Science and Risk Policy Program

Basic Science
Risk Policy

Valid Appropriations:
Defense Environmental Restoration and Waste Management
Environmental Management (Non-Defense) [formerly Energy, Supply Research and Development]
Uranium Enrichment Decontamination and Decommissioning Fund

Valid Congressional Control Levels:
Post 2006 Completion Fund [CAO, ID, OR, OK, RL, SR, HQ, Multi-Sites]
Site/Project Completion Fund [AL, CH, NV]
Site Closure Fund [RF, OH]

U.S. DEPARTMENT OF ENERGY
FY 2000 CORPORATE REVIEW BUDGET REQUEST
APPROPRIATION [DEF, NON-DEF or D&D FUND]

CONGRESSIONAL CONTROL LEVEL
[POST 2006 COMPLETION, SITE/PROJECT COMPLETION, OR CLOSURE]
(Dollars in Thousands)

FIELD OFFICE NAME

I. Mission Supporting Goals and Objectives

The narrative will discuss the plans for addressing the environmental site problem through 2006 (or longer). Lifecycle volumes and lifecycle costs must be addressed so the overall size of the problem is concise. It should identify the goals of the 2006 Plan, and how the site plans to achieve. What are the major actions taken to date to achieve the goals. Are there major projects in the budget, and how are they significant? What are the efficiencies the size, complexity, unique organizational, management, and historical nature of the environmental problems.

A separate template must be prepared for each appropriation (if multiple approps).

II. Funding Schedule

Program Activity	FY 1998	FY 1999	FY 2000	$ Change	% Change
Remedial Action/Release Sites	$ 0	$ 0	$ 0	??	??
Facility Decommissioning	0	0	0	??	??
High-Level Waste	0	0	0	??	??
Transuranic Waste	0	0	0	??	??
Mixed Low-Level Waste	0	0	0	??	??
Low-Level Waste	0	0	0	??	??
Hazardous Waste	0	0	0	??	??
11e(2) Byproduct Waste	0	0	0	??	?/
Other Waste	0	0	0	??	??
Facility Deactivation	0	0	0	??	??
Nuclear Material Stabilization	0	0	0	??	??
Spent Nuclear Fuel Stabil.	0	0	0	??	??
Landlord	0	0	0	??	??
Long-Term Monitoring	0	0	0	??	
Program Support	0	0	0	??	
Uranium Leasing	0	0	0	??	
Construction	0	0	0	??	??
FUSRAP or UMTRAP	0	0	0	??	??
Total, Field Office	$ 0	$ 0	$ 0	??	??

Section II is a funding SUMMARY. A lower level of detail at the B&R level must be provided as part of the budget detail submittal.

III. Performance Summary

This section contains a brief narrative description at the B&R level of detail for accomplishments during FY 1998, FY 1999, and FY 2000. Identify specific metrics and quantify these in terms of a lifecycle activity. You may also put narrative in context of compliance agreement milestones, mortgage reduction or other applicable categories.

Example structure is as follows (not all possible sections are included):

	FY 1998	FY 1999	FY 2000
Remedial Action / Release Sites:			
• Conduct remediation activities at ..... - In FY 1998, the ROD for WAGs 1 and 7 will be completed and remedial action activities will be initiated; development of decision documents for WAG 17 will commence, as well as the field work investigation for WAG 6. - In FY 1999, assessment for WAG 6 and construction of remedial action for WAGs 1 and 7 will be completed; ROD for WAG 17 will be completed (No Further Action). - In FY 2000,			
Subtotal, Remedial Action	**$0**	**$0**	**$0**
Facility Decommissioning:			
• Conduct decommissioning activities at..... - In FY 1998, a major contract for ..... The _____ project will be completed. - In FY 1999, major D&D efforts at _____ will continue. - In FY 2000,			
Subtotal, Facility Decommissioning	**$0**	**$0**	**$0**

	FY 1998	FY 1999	FY 2000
Mixed Low-Level Waste	$0	$0	$0
• Conduct Waste Treatment, Storage, and Disposal activities at			
- In FY 1998, waste will continue to be shipped off-site.....			
- In FY 1999, RCRA waste will continue to be shipped off-site.....			
- In FY 2000,			
Subtotal, Mixed Low-Level Waste	**$0**	**$0**	**$0**

AMOUNTS OF WASTE m^3

FY 1997FY 1998FY 1999

Stored0.500.3
Treated0.200.1
Disposed0.500.3

Low-Level Waste	$0	$0	$0
• Conduct Waste Treatment, Storage, and Disposal activities			
- In FY 1998, waste will continue to be shipped off-site.....			
- In FY 1999, RCRA waste will continue to be shipped off-site.....			
- In FY 2000,			
Subtotal, Low-Level Waste	**$0**	**$0**	**$0**

AMOUNTS OF WASTE m^3

FY 1997FY 1998FY 1999

Stored0.500.3
Treated0.200.1
Disposed0.500.3

	FY 1998	FY 1999	FY 2000
Other Waste	$0	$0	$0
• Conduct Waste Treatment, Storage, and Disposal activities at .....:.....			
- In FY 1998, waste will continue to be			
- In FY 1999, RCRA waste will continue to be			
- In FY 2000,			
Subtotal, Other Waste	**$0**	**$0**	**$0**

AMOUNTS OF WASTE m^3

	FY 1997	FY 1998	FY 1999
Stored	0.5	0.0	3.3
Treated	0.2	0.0	1.1
Disposed	0.5	0.0	3.3

Program Support	$0	$0	$0
• Provide for Agreement-in-Principle and grants to States.			
- In FY 1998,			
- In FY 1999,			
- In FY 2000,			
Subtotal, Program Support	**$0**	**$0**	**$0**
TOTAL FIELD OFFICE	$	$	$

Explanation of Funding Changes FY 1999 to FY 2000:
Include each category which funding is described above. This should be a narrative description (in bullet form) emphasizing the changes in scope or pace of work that require additional funding or cause a reduction in funding between FY 1999 and FY 2000. Funding for this section must tie to the Section II summary table.

	$	0
Remedial Action / Release Sites		
Facility Decommissioning		0
Mixed Low-Level Waste		
Low-Level Waste		
Other Waste		
Program Support		
Total Funding Change, Field Office	**$**	**0**

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Attachment I. High Visibility Environmental Management Projects/Systems

Office	Project/System	Project Fieldcode/Title
Albuquerque	• Pinellas	▸ **PIPL-01** Pinellas Plant Closeout
Carlsbad Albuquerque Idaho Rocky Flats	• Transuranic Waste System	▸ **CAO-1** WIPP Base Operations ▸ **CAO-2** WIPP Disposal Phase Certification and Experimentation Program ▸ **CAO-3** WIPP Transportation ▸ **CAO-4** WIPP TRU Waste Site Integration and Preparation ▸ **CAO-6** WIPP TRU Waste Transportation (Privatization) ▸ **AL-013** LANL-Waste Management-Legacy Waste ▸ **ID-WM-103** INEEL TRU Project ▸ **RF002** Waste Management Project
Idaho	• High-Level Waste System	▸ **ID-HLW-101** HLW Pretreatment ▸ **ID-HLW-102** HLW Immobilization Facility ▸ **ID-HLW-103** HLW Treatment and Storage ▸ **ID-HLW-105** Low Activity Waste Treatment Facility
Idaho	• Advanced Mixed Waste Treatment Facility	▸ **ID-WM-104** AMWTP Asset Acquisition Project (Privatization) ▸ **ID-WM-105** AMWTP Production Operations
Idaho	• Pit 9 Federal Facility Agreement/Consent Order Interim Action	▸ **ID-ER-107** Pit 9 Remediation
Idaho	• Spent Nuclear Fuel Program	▸ **ID-SNF-101** National Spent Nuclear Fuel Program ▸ **ID-SNF-102** Integrated SNF Program ▸ **ID-SNF-103** Emptied SNF Facilities ▸ **ID-SNF-104** Constructed New Facilities ▸ **ID-SNF-105** Dry Transfer and Storage Project
Nevada	• Underground Test Area Environmental Restoration	▸ **NV212** Underground Test Area

Office	Project/System	Project Fieldcode/Title
Oakridge	• K-25 Process Deactivation and Decommissioning	▸ **OR44302** K-25 Process Equipment D&D
Ohio	• West Valley Demonstration Project	▸ **OH-WV-01** High-Level Waste Vitrification Processing ▸ **OH-WV-02** Site Transition, Decommissioning, Project Completion, and Return to New York
Ohio	• Fernald Silos	▸ **OH-FN-07** Silos
Ohio	• Miamisburg (Mound)	▸ **OH-MB-01** Facilities Operations and Site Deactivation
Richland	• High-Level Waste System	▸ **RL-TW01** Tank Waste Characterization Project ▸ **RL-TW02** Tank Safety Issue Resolution Project ▸ **RL-TW03** Tank Farm Operations ▸ **RL-TW04** Retrieval Project ▸ **RL-TW05** Process Waste Support ▸ **RL-TW06** Process Waste Privatization Phase I ▸ **RL-TW07** Process Waste Privatization Phase II ▸ **RL-TW08** Process Waste Privatization Infrastructure ▸ **RL-TW09** Immobilized Tank Waste Storage & Disposal Project ▸ **RL-TW10** TWRS Management Support
Richland	• Transition Program	▸ **RL-TP01** B-Plant Subproject ▸ **RL-TP03** PUREX Subproject ▸ **RL-TP05** PFP Deactivation ▸ **RL-TP06** PFP Stabilization ▸ **RL-TP08** 324/327 Facility Transition Project ▸ **RL-TP09** K-Basin Deactivation
Richland	• K-Basin Spent Nuclear Fuel	▸ **RL-WM-01** Spent Nuclear Fuel Project
Rocky Flats	• Special Nuclear Material Stabilization	▸ **RF009** Plutonium Solid Residue Stabilization ▸ **RF012** SNM Shipping

Office	Project/System	Project Fieldcode/Title
Rocky Flats	• 771/774 Cluster Closure	▸ **RF010** Plutonium Liquid Stabilization ▸ **RF018** Building 771/774 Cluster Closure Project Office
Rocky Flats	• Industrial Zone Closure	▸ **RF014** Industrial Zone Closure ProjectOffice
Rocky Flats	• Safeguards and Security	▸ **RF024** Safeguards and Security Project
Rocky Flats	• 779 Cluster Closure	▸ **RF022** Building 779 Cluster Closure Project
Savannah River	• High Level Waste System	▸ **SR-HL03** Waste Removal Project ▸ **SR-HL04** ITP/ESP Operations ▸ **SR-HL05** Vitrification Project
Savannah River	• Canyon Stabilization	▸ **SR-NM-01** F-Area Stabilization ▸ **SR-NM-02** H-Area Stabilization

Attachment J. Baseline Management Attributes and Definitions

The Environmental Management program requires discipline, accountability, and control for the implementation of the Draft National 2006 Plan. Project baseline definition, validation, and management provides the foundation for establishing accountability and control in IPABS. To ensure that baselines contain a reasonable level of detail and are developed consistently throughout the EM complex, attributes of a defensible project baseline are provided. These attributes are not comprehensive by any means and each Site should build upon them in developing more detailed guidance. This attachment also provides attributes of a good field baseline change management process, and attributes of a good Field project validation. In addition, definitions related to baselines are provided.

General Attributes for a Field Project Baseline

- **Projectization:** The Draft National 2006 Plan projects are a result of streamlining to reduce the reporting requirements of the Operations/Field Offices. The Plan projects (i.e., PBSs) are aggregates of Field projects and do not necessarily represent the exact way the work is structured in the Field's work breakdown structure. PBSs do represent the structure for how the Field will report data to Headquarters. Therefore, PBSs should be reasonably defined to support budget justification, prioritization analyses, performance analysis, and to respond to Congressional, stakeholder, and Tribal Nations inquiries. In general, each PBS should:
  - be geographically centered or based on other appropriate rationale (e.g., contracting strategy) consistent with the way the Field manages its work;
  - be outcome-oriented; it should have a discrete and unique objective/end state, defined start and end dates, and metrics to demonstrate quantifiable interim progress;
  - be of a reasonable size for meaningful planning, budgeting, execution and performance reporting; and
  - have an integrated scope, schedule, and cost baseline.

- **Integration:** The site baseline should integrate activities of all programs within a site and with activities at other sites.

- **Graded Baseline Development:** The degree of Field project baseline definition should be appropriate for the project phase. Baselines should address the entire project life cycle.

- **Documentation & Traceability:** All aspects of the integrated site baseline or individual PBS should be presented in a format which is easily understood by the project team and validators. The baseline should be supported by clearly identified assumptions for scope, cost, and schedule; methodology that is consistent with industry accepted standards; and well-documented backup information. The baseline should be clearly traceable to the appropriate program or project strategy, planning or execution documentation.

- **Responsibility:** The DOE and contractor project manager responsible for the data contained within the PBS should be clearly identified.

- **Risk Assessment:** The technical, schedule, cost, regulatory, and other risks related to the projects should be identified, evaluated, quantified, and documented.

- **Contingency:** Contingency and its basis should be clearly identified. Contingencies should be added based on an analysis of a project's risks and uncertainties.

- **Best Practices:** Integrated site baselines should incorporate appropriate benchmarks, best industry practices, proven or low cost technologies, innovative contracting strategies, value engineering, etc.

Scope Attributes for a Field Project Baseline

- **Mission:** The purpose and end state of the PBS should be clearly defined. Where appropriate the mission and end state of the project should be consistent with stakeholder and Tribal Nations buy-in. End-state attributes include land use, cleanup levels, facility disposition, and special nuclear materials and waste disposition.

- **Regulatory Requirements:** Regulatory requirements should be clearly identified. This includes identification of applicable laws, regulations, and regulatory agreements.

- **Technical Requirements:** Characterization information, including the inventory and characteristics of contaminated media and release sites, facilities, legacy waste, operations waste, and special nuclear material should be defined in the baseline.

- **Technical Approach:** The technical approach (including planned technology) to clean up should be defined. This may be done in regulatory or planning documents, such as Records of Decision, Remedial Design Documents, Title I/Title II design reports, etc. Safety and Health requirements should be built into the technical approach.

- **Scope Definition:** The life-cycle scope of the project should be based on activity based planning and expressed in appropriate measurable terms.

- **Performance Measures:** Performance measures (e.g., the life-cycle metrics including release site and facility inventory, special nuclear material inventory, and legacy waste inventory) along with their planned status over time should be defined as part of the baseline.

- **Work Breakdown Structure:** A work breakdown structure that identifies the products to be produced or activities and subactivities to be performed in the execution of the baseline work scope should be established. The WBS is typically used to integrate scope, schedule, and cost information in the baseline.

- **Acquisition Strategy:** Based on the work activities or subactivities, it should be determined what methods will be used to conduct the various activities and subactivities (e.g., what work will be conducted in-house and that which will be performed by contract).

Schedule Attributes for a Field Project Baseline

- **Project Prioritization and Sequencing:** Activities within a project should be sequenced and

prioritized to meet DOE's, stakeholders', and Tribal Nations' priorities. Prioritization and sequencing considerations include regulatory compliance, risk reduction, mortgage reduction, critical path dependencies within the project and with other site/EM projects, and availability of efficient technologies.

- **Critical Path Schedule:** Schedule information presented in the Integrated Site Baselines or individual project baselines should be supported with descriptions of discrete activities, including associated durations and activity dependencies (predecessor/successor relationship). The critical path to achieving the end state should also be determined.

- **Milestones:** Key and other interim milestones for contractor, DOE Field, and DOE HQ (as appropriate) performance measurement should be identified. Milestone descriptions, completion criteria, and planned date should be defined as necessary.

Cost Attributes for a Field Project Baseline

- **Cost Estimates:** Consistent with the project-phase or the degree of project definition, an appropriate activity based cost estimating methodology should be utilized (e.g., bottoms-up, parametric, estimating models, expert opinion, market quotations, etc.). The estimating methodology should be clearly specified along with any assumptions made for determining the life-cycle cost estimates.

- **Escalation factors:** Escalation factors should be clearly identified and consistent with either OMB-specified escalation rates or DOE-approved rates.

- **Time-Phased Cost Profile:** The schedule of project activities should be resource loaded to determine annual funding requirements. Resource leveling should be employed as required so that the project planning is consistent with realistic outyear funding expectations.

Baseline Elements Evaluated During Validation

In order to be valid, the baseline must have a cost estimate basis that is traceable to the lowest task or activity level. In accordance with the IPABS, the Project Officer should determine the schedule for validation and, in consultation with Headquarters managers, the appropriate organizations and expertise to assist in the validation. Validation reports are required and should present the findings of the review and recommendations for any changes or corrections.

Baseline validations should evaluate the following elements while recognizing that the degree of Field project baseline definition should be appropriate for the project phase:

1. Scope of Work
   - Reason for the project, technical approach, regulatory requirements and assumptions
   - Quantification of all work items (labor, materials, services and subcontracts)
   - Technologies to be employed or assumed as a basis for cost

2. Cost
   - Methodology for cost estimating
   - Traceability of costs of the work from summary level down to activity or task basis

- Documentation of source and date of cost at the activity or task level
- Summary level cost for all projects
- Documented assumptions

3. Schedule
   - Master schedule showing sequencing of all projects
   - Detailed, resource loaded schedule for each project
   - Critical path analysis and milestone log
   - Regulatory milestones

4. Work Breakdown Structure (WBS)
   - WBS index and dictionary
   - Traceability of all work elements up to Draft National 2006 Plan Project (PBS) level

5. Escalation rate

6. Contingency
   - Methodology for developing both cost and schedule contingency

7. Baseline Management and coordination
   - Change control procedures
   - Baseline change proposals
   - Documentation
   - Coordination with other site plans and documents and the Draft National 2006 Plan

Attributes for a Good Baseline Management Process

- **Systematic:** Changes to technical, schedule, or cost components of established baselines should be described, evaluated, approved, and implemented through a rigorous and systematic process to ensure: (1) decisions are based on complete and accurate information; (2) consistency in decision-making and implementation; and (3) documentation of approved changes provide for effective implementation and program/project analysis.

- **Documentation:** All aspects of change requests from initial submission to ultimate disposition should be thoroughly documented to create a complete audit trail and to provide a mechanism for communicating approved changes to all affected parties.

- **Timeliness:** Submission of change requests, action by reviewing and approving authorities, and implementation of approved changes should be performed in a timely manner.

- **Definitions:** Categories of types of changes should be established to permit assessment of the impact of changes on baselines. Consistent definitions for changes resulting in enhanced performance are essential. Definitions should distinguish among changes that result in cost improvement through scope deletions, scope avoidance, increased efficiencies, accelerated schedules, etc. These cost improvements must also be categorized by the enhanced performance initiatives described in the 2006 Plan Discussion Draft. It is anticipated that this information will be tracked and reported to Headquarters on a quarterly basis.

- **Authorities:** Decisions on change requests should be made by the appropriate approval authority.
- **Integration:** Change management processes should include procedures to ensure approved baseline changes are linked with appropriate configuration control systems.

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Attachment K. Changing the 2006 Plan Project Structure

Changes to the Project Baseline Summary (PBS) structure will be subject to the Headquarters change management process. The first opportunity to change the project structure (i.e., the number of PBSs) will occur over the next three to four weeks. Specifically, we would like all PBS project structure change requests to be submitted by September 10, 1997. Prior to finalization of the PBS project structure, each site will be required to submit additional information to support the FY 1999 budget process. Specifically, sites that have a different project structure than was used to develop the Discussion Draft will have to provide a crosswalk for FY 1997, FY 1998, and FY 1999 performance metrics and budget authority along with an ADS crosswalk where appropriate. This information will need to be provided in the near term to support discussion with the Office of Management and Budget. EM-1 will reach tentative decisions concerning 2006 Plan project restructuring by the end of September.

For any PBSs being added, deleted, combined, or split, the protocol outlined below for changing the PBSs needs to be followed. The Field should not address changes within the existing PBS structure at this time. These changes should be requested through the change control process when submitting PBSs this fall.

To change the current PBS project structure, the Field must send a letter requesting the change to Gene Schmitt by September 10, 1997. The letter should briefly state the reason for requesting the change. A PBS crosswalk table should be attached to the letter using the format prescribed on page 3. This table should be completed for all sites that plan ANY changes to their existing PBS project structure. If a site is proposing only a simple addition or deletion of a project or projects, that site is not required to list all of its existing projects in the table, just the additions or deletions. If a site is planning any other changes, the site must include only the affected PBSs in the table. Gene Schmitt will forward the requests to the Lead Deputy Assistant Secretary (DAS) for review and coordination with all appropriate Headquarters personnel. The Lead Site DAS will provide a recommendation to Al Alm, who will tentatively approve the change by the end of September. Lead site DASs are as follows:

EM-30	Carlsbad, Idaho, Nevada, Richland
EM-40	Albuquerque, Chicago, Oak Ridge, Ohio
EM-50	Oakland
EM-60	Rocky Flats, Savannah River

Existing projectization criteria will be considered when Headquarters reviews a PBS project structure change proposal. In general, each Draft National 2006 Plan project should:

- be geographically centered or based on other appropriate rationale (e.g., contracting strategy, etc.) consistent with the way Field manages its work;
- be outcome-oriented - it should have a discrete and unique objective/end state, defined start and end dates, and metrics to demonstrate quantifiable interim progress;
- be of a reasonable size for meaningful planning, budgeting, execution, and performance reporting; and
- have an integrated scope, schedule, and cost baseline.

Other criteria will be considered as well:

- Is the proposed PBS structure consistent with site management practices? (e.g., work breakdown structures, revised planning assumptions, etc.)
- Does the proposal include an appropriate crosswalk from existing structure?

Keep in mind that the Draft National 2006 Plan projects will represent how the Field reports baseline and budget data to Headquarters. Performance (cost, management commitments, metrics) will also be tracked within the project construct. The Plan projects should be reasonably defined to support budget justification, prioritization analyses, performance analysis, and to respond to Congressional, stakeholder, and Tribal Nations queries.

The following data elements will be required for PBS restructuring finalization. Seeded spreadsheets will be provided for each site. Sample formats are shown starting on page 4. Sites will be asked to provide this information at a later date.

- Project-level data for the proposed PBSs, including:
  - A crosswalk linking old PBS BA for FY 1997, FY 1998, and FY 1999 to new PBS BA for the same years, arranged by B&R code and expense type, consistent with current budget targets
  - A crosswalk linking old PBS metrics for FY 1997, FY 1998, and FY 1999 to new PBS metrics for the same years, arranged by project, consistent with current commitments

- A revised ADS/PBS funding crosswalk

Finalization of the proposed PBS project structure will not occur until each of these crosswalks has been reviewed and approved by Headquarters staff in EM-23 (budget), EM-24 (performance metrics), Line Programs, and the 2006 Plan Data Team. During the fall PBS update, all additional PBS data will need to be submitted in the new PBS project structure.

For the table below, the Field must explicitly indicate whether each project is identical in scope to an existing PBS; new; a result of combining one or more February 1997, PBSs; or a result of splitting one or more February 1997, PBSs. Any projects deleted from the February 1997, project structure must be noted. The approximate life-cycle cost of each proposed PBS must also be included within the table so that Headquarters can determine whether the PBS is a reasonable size for meaningful planning, budgeting, execution, and performance reporting. The approximate start and end date must be provided for the project as well.

Sample PBS Change Request Form

Operations/Field Office Name

2/28/97 PBS	Status or Proposed Change to 2/28/97 PBS	Proposed PBS (Including New Naming Convention) and Approximate Life-Cycle Cost (K$)	Reason for Change	Start and End Date
Project A	deleted	NA	Revised site planning no longer requires building this storage facility.	
		New Project, now Project 1 (K$)	Revised site planning requires the decommissioning of several facilities.	1998/2015
Project B	no change	Old Project B, now Project 2 (K$)	NA	2000/2010
Project C	no change	Old Project C, now Project 3 (K$)	NA	1994/2001
Project D	combined with E	Old Projects D&E, now Project 4 (K$)	Activities can be more efficiently managed if work scope is combined. Potential savings of > $100M.	1995/2016
Project E	combined with D	Deleted		
Project F	split	Part of Old Project F, now Project 5 (K$)	Break out disposal from other waste management activities.	1993/2016
		Part of Old Project F, now Project 6 (K$)	Break out disposal from other waste management activities.	1993/2016

In the following table, the Field must provide budget data for FY 1997, FY 1998, and FY 1999. Headquarters requires this data for scope and data accountability and continuity. Budget dollars must be broken out by B&R code and expense type. The Operations/Field Office budget figures should be consistent with FY 1997 appropriation, FY 1998 Congressional Request, and FY 1999 totals after adjustments were made to the August 1, 1997, Limited Update submittals. Totals by Appropriations Account, Fund, Budget and Reporting Category, and Expense Type must be the same for the new PBS structure as they were for the old PBS structure.

The following template is for informational purposes. A spreadsheet seeded with old PBS data will be provided for each site that is changing its PBS project structure.

Operations/Field Office budget rollups will be provided by Headquarters upon request.

Sample PBS Change Request: Budget Data

Operations/Field Office Name

BUDGET								
Old PBS	B&R Code/Expense Type	FY 1997	FY 1998	FY 1999	Proposed PBS (Including New Naming Convention)	FY 1997	FY 1998	FY 1999
Project 1	EW0220111 - operating	$K	$K	$K	Project A	$K	$K	$K
					Project B	$K	$K	$K
	EW0220112 - operating	$K	$K	$K	Project A	$K	$K	$K
					Project B	$K	$K	$K

BUDGET								
Old PBS	B&R Code/Expense Type	FY 1997	FY 1998	FY 1999	Proposed PBS (Including New Naming Convention)	FY 1997	FY 1998	FY 1999
Project 2	EW0210302 - operating	$K	$K	$K	Project C	$K	$K	$K
	EW0210303 - operating	$K	$K	$K	Project D	$K	$K	$K
Project 3	EW0220102 - operating	$K	$K	$K	Project E	$K	$K	$K

In the following table, the Field must provide metric data for FY 1997, FY 1998, and FY 1999. Headquarters requires this data for scope and data accountability and continuity. Metrics must be arranged by metric category/subcategory. See Attachment B for a complete list of metric categories and subcategories. The Operations/Field Office metric totals for each category/subcategory must be identical to those submitted within the FY 1999 Limited PBS Update.

The following template is for informational purposes. A spreadsheet seeded with old PBS data will be provided for each site that is changing its PBS project structure.

Operations/Field Office metric rollups will be provided by Headquarters upon request.

Sample PBS Change Request: Metric Data

METRICS								
Old PBS	Metric Category/Subcategory	FY 1997	FY 1998	FY 1999	Proposed PBS (Including New Naming Convention)	FY 1997	FY 1998	FY 1999
Project 1	XIII.A) Facilities Decommissioning - Assessments	3 fac.	5 fac.	1 fac.	Project A	2 fac.	3 fac.	0 fac.
					Project B	1 fac.	2 fac.	1 fac.
	XIII.B) Facilities Decommissioning - Completions	0 fac.	3 fac.	6 fac.	Project A	0 fac.	0 fac.	6 fac.
					Project B	0 fac.	3 fac.	0 fac.
Project 2	III.D) MLLW - Treatment	120 m^3	300 m^3	(none)	Project C	120 m^3	300 m^3	(none)
	III.E) MLLW - Disposal - On site, Commercial	(none)	100 m^3	(none)	Project D	(none)	100 m^3	(none)
	III.F) MLLW - Disposal - Shipped to DOE Site	(none)	300 m^3	(none)	Project D	(none)	300 m^3	(none)
Project 3	XI.B) Remedial Action - Completions	5 rs	3 rs	10 rs	Project E	5 rs	3 rs	10 rs

As this is the first year that EM's budget will be formulated using PBSs, an ADS/PBS crosswalk is essential to do a comparable budget. A valid ADS/PBS crosswalk will be maintained for FY 1997 and FY 1998 through the completion of the execution year. The ADS/PBS crosswalk will become a temporary part of the PBS database and will be removed once it is no longer needed for budget formulation.

The ADS/PBS Crosswalk should follow the same format as the ADS/PBS Crosswalk submitted to Headquarters as part of the FY 1999 Limited PBS Update. Refer to the FY 1999 Limited PBS Update guidance for more details on completing the crosswalk.

Sample PBS Change Request: ADS/PBS Crosswalk

Operations/Field Office Name

ADS #	Program	Title	Account	B&R Code	FY 1997 Approp	FY 1998 Request	Proposed PBS #	Account	B&R Code	FY 1997 Approp	FY 1998 Request

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Attachment L. EM Site-Specific Contracting Strategies

1.0 Objective

The Office of Environmental Management (EM) intends to improve the acquisition and execution of its contracts through the development of a comprehensive blueprint that enhances the performance of work in the Draft National 2006 Plan. We expect to stay abreast of contract reform initiatives within EM; develop a cross-cutting, analytical, and continuous improvement process; and define specific work products that will reflect implementation of the site contracting strategy.

Contract strategies and data collected from the Field sites for accomplishment of EM activities will be used to establish planning objectives to ensure achievement of enhanced performance goals, contract reform, and EM workout results.

2.0 Key Concepts of a Successful Contracting Strategy

EM has determined that particular emphasis should be applied to the areas of acquisition planning, contract management and administration, and cost reduction.

As each site considers and prepares acquisition plans for current and future requirements special attention should be applied to the establishment of a contracting approach, the selection of the type of contract, the accomplishment of outcome and completion oriented activities as identified in the Draft National 2006 Plan, and the reward system to be implemented to focus and incentivize the contractor(s) and subcontractor(s). As a minimum, the following questions should be considered during this process in order to provide a focus on meeting Draft National 2006 Plan objectives.

Are current contracts adequate?
Are current contracts the most cost-effective?
Are there contracting alternatives, such as privatization, that should be explored?
Assuming the site has a contracting strategy in place, is it the most efficient?

The answers to these and related questions will assist the site in establishing its contracting strategy profile, the attributes of contract reform being/to be utilized, appropriate selection of a type of contract, organizational responsibilities for improved contract management and administration, and approaches that result in enhanced productivity and reduction of costs.

The application of this process should assist the site in establishing a strategic plan for addressing issues such as, alternatives to existing practices, and near- and long-term solutions/recommendations for meeting Draft National 2006 Plan objectives.

3.0 Data Requirements

As the Office of Environmental Management (EM) concentrates on what is required to accomplish the goals set out in the EM National Plan *Accelerating Cleanup: Focus 2006*, the need to look at contracting strategies and the information required to monitor accomplishments under EM contracts is evident. With the implementation of the Integrated Planning, Accountability, & Budgeting System (IPABS), EM has embarked on a process that relies on strategic planning, and the setting and accomplishment of goals. EM

will have to monitor and analyze detailed status and performance information in addition to the usual spending progress against budget and fixed milestone accomplishments to understand progress toward the sites' implementation of their respective contracting strategy.

Some of the key information necessary to accomplish this monitoring and analysis is available through existing systems, such as the DOE Procurement and Assistance Data System (PADS). However, to enable the analysis of the effectiveness of site specific contract strategy/contract performance, and track best practices or lessons-learned at the project level, it will be necessary for each site to provide additional data through the 2006 planning process. This additional data is requested in the Draft Site 2006 Plan Guidance (Attachment A) and the Operations/Field Office Data Summary (ODS) Guidance (Attachment F).

4.0 Performance Measures

In order to stay abreast of contract strategy and privatization initiatives within EM, it will be necessary to perform cross-cutting analysis of the status of their implementation. This analysis will focus on a continuous improvement process that will enhance the performance of work in the Draft National 2006 Plan. The following initial performance measures will assist in defining the status of implementation of the contracting strategy and privatization initiatives.

A. Increase Competitive Contracts and Subcontracts
Utilize a measure of both the number and value of contracts and subcontracts awarded using competitive procurement processes in comparison to the number and value of contracts and subcontracts using non-competitive procurement practices. This secondary measure will gauge the extent to which EM is using competitive procurement practices to improve overall productivity of the EM program.

B. Increase Fixed Price Contracts and Subcontracts
Utilize a measure of both the number and value of fixed price type contracts and subcontracts awarded in comparison to cost reimbursement type contracts and subcontracts. This secondary measure will gauge the extent to which EM is using fixed price type contracts to improve the overall productivity of the EM program.

5.0 Basic Elements of Contract Reform

The following Department of Energy Basic Elements of Contract Reform have been developed in response to the requirement of the Secretary of Energy that Department contracts incorporate "the full range of applicable contract reform provisions." Many of the key contract reform attributes are reflected in these elements. They constitute a guide for the development of acquisition strategy, and provide a basis for review and approval of contract actions. Furthermore, they signal the Department's contract reform expectations to present and potential contractors.

Increased Competition

The Department has a strong and consistent commitment to competition at all prime and subcontract tiers, thereby encouraging new offerors to participate in the Department's activities. The Department will seek to mitigate the impacts on workers and communities of Department actions that cause workforce restructuring.

Protection of the Worker, the Public, and the Environment

The safety and health of workers and the public, and the protection and restoration of the environment, are fundamental to the responsibilities of the Department and its contractors, and critical to the success of all of the Department's activities.

Diversity

Individual and institutional diversity is promoted and facilitated through solicitations, contracts, and contract administration, such diversity to involve human resources, contractors, subcontracting with and mentoring of small disadvantaged business and women-owned businesses, etc.

Results-Oriented Statement of Work

Statements of contract work focus on the purposes and outcomes of the work to be performed, and facilitate the development of specific performance criteria and measures to be included in the contract.

Performance Criteria and Measures

Clear, results-oriented statements of programmatic, business management, and ES&H contract performance requirements and quality standards, together with objective measurements of their accomplishment.

Performance Based Incentives

Monetary incentives (e.g., fee) and nonmonetary incentives (e.g., contract duration) are linked to performance criteria, encourage and reward accomplishment of stated performance requirements, and discourage substandard performance.

Greater Financial Accountability

Contractor accountability is based upon a more equitable and rational allocation of costs and risks of performance between the Department and the contractor, particularly in the areas of reimbursement of fines and penalties, third party claims, and loss of or damage to government property.

Improved Financial Management

Department and contractor systems provide the full range of financial information needed for sound decision-making, and clear policies foster improved methods of unallowable cost recovery, and appropriate use of advance funding mechanisms.

Increased Use of FAR-Based Cost Principles

Greater use is made of applicable FAR-based cost principles in Department cost-reimbursement contracts, including non-profit contracts.

Increased Use of Fixed-Price Contracts

Where appropriate and cost-effective, the use of fixed-price prime contracts and subcontracts is maximized

Cost Reduction

Contractors are encouraged and, where appropriate, incentivized to propose and carry out detailed plans and programs to reduce contract costs.

6.0 Contract Reform Features Utilized To Date in Solicitations/Contracts

This section identifies contract reform features utilized to date in competitive and non-competitive EM solicitations and contracts.

A. Competitive Contract Actions

- Combining into one contract work that has historically been performed under separate contracts
- Results oriented statement of work
- Performance measures - standard and "stretch"
- Performance based fee plan
- Incentive fee plan that provides for the incentive fee portion to increase as a percentage of total fee over the life of the contract
- Incorporation of Make/Buy requirements with a preference for Buy
- Privatization initiatives, e.g., commitment to privatize certain portions of the work
- Incentives for cost savings, cost sharing
- Stakeholder and Tribal Nations review of draft solicitation
- Use of "NOPR" clauses
- Federal Acquisition Regulation (FAR) contract
- Use of an "Integration" contractor
- Qualification criteria emphasize use of incentives, fee plan and assumption of risk
- Contract negotiated before award
- "Best in class" subcontractors; maximize fixed-price subcontracting
- Establishment of socioeconomic business support goals
- Sharing of performance incentive fee and cost reduction savings with employees
- No letter of credit
- Significant portion of fee at risk; small or no base fee
- Reduced Personnel Appendix
- Fixed-price transition plan
- Use of "Model" contract clauses
- Limited response time for proposals
- Shorter, simpler solicitation format; minimize written proposals; oral proposal presentation
- Sample performance criteria and measures in the solicitation
- Clear statement that prior DOE or site experience or knowledge unnecessary
- Movement away from award fee toward incentive fee
- Elimination of "federal norm" and use of commercial practices; encourage use of best available commercial practices and "necessary and sufficient" standards
- Emphasize outsourcing
- Cost Reduction Incentive Program

B. Non-Competitive Contract Actions

- Results-oriented statement of work
- Performance Measures
- Cost-sharing, cost reduction/productivity saving, cost avoidance and performance-based (objective and subjective) incentives
- Cost savings shared with contractor
- Incentive share arrangement - Contractor gets share of costs saved over target; contractor pays share of cost overages
- Performance based fee plan
- Use "NOPR" clauses
- Contract contains fixed-price elements
- Significant percentage of fee based on objective standards
- Use of FAR cost principles
- No base fee
- Dollar targets for subcontracting
- Extensive use of fixed-price subcontracts
- One year contract extension
- "Killer" clause applicable to all but base fee
- Encourage use of commercial procurement practices
- Use of "Model" contract clauses
- Order Reduction Pilot Program
- Caps on some liabilities
- Total Compensation Cost Containment Pilot Program
- Draft solicitation reviewed by stakeholders and Tribal Nations
- Option to extend for up to five years based on superior performance
- Incorporation of Make/Buy requirements with a preference for Buy
- Reduced base fee percentage
- Fee earned only for outstanding rating

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Attachment M. Technology Deployment

Objective

This section provides guidance for the preparation of Site Technology Deployment Plans. Additional management attention is needed to accelerate the use of innovative technologies, including those developed by the Environmental Management, Office of Science and Technology. In the July 3, 1997 memorandum from Assistant Secretary Al Alm on Technology Deployment, ten major points were outlined in an action plan to catalyze the use of technology. As part of the 2006 planning process, each Operations/Field Office is required to develop site technology deployment plans for their installations addressing the relevant elements of the July 3, 1997, Technology Deployment Action Plan.

These plans will have two parts: a management plan, outlining the approach to accelerating deployment at the Site, and a set of Technology Opportunity/Fact Sheets, which will identify specific opportunities for deployment. The management plan will be developed through a two phase process: (1) an outline of the proposed plan, identifying the approach to be taken in accelerating deployment, will be submitted as an attachment to the December 5, 1997, Draft Site 2006 Plan submission; (2) the complete management plan and the Technology Opportunity/Fact Sheets will be due May 1, 1998. This two part approach is to allow additional time for sites to fully consider innovative technologies and to refine their resource requirements. The Site Technology Deployment Plans will also be used to support the development of the FY 1999 execution budget.

This guidance provides the key elements that will be expected in the management plan and the Technology Opportunity/Fact Sheets. The Field has flexibility in the format of the plans and in including additional elements that may enhance their plans. To encourage the exchange of information as this process evolves, Headquarters intends to coordinate an ongoing dialogue with the sites through venues such as conference calls, TeleVideo, and meetings, and to share information from other initiatives associated with the Action Plan.

Guidance

A. Technology Deployment Management Plans

The Technology Deployment Management Plans will address the relevant elements of the July 3, 1997 memorandum from Al Alm. These Management Plans, due May 1, 1998, are intended to be brief (10-20 page) documents which establish the key strategies and the management structure in the Field to accelerate technology deployment. These plans should include the following information:

1. Objectives and Scope

2. Overview of potential opportunities for the deployment of new technologies. This section will include: identification of key areas of the opportunities; schedule for key technology deployments, including major decision and implementation dates; and, a summary of potential benefits (e.g., reduced life-cycle cost, reduced risk, enabling solutions to unsolved problems, supporting compliance)

3. Management Strategy: Including management actions to enhance the deployment of innovative technologies; approach and responsibilities (how the site organizations manage deployment initiatives); and an estimate of required Field resources (including the commitment of existing manpower and funding from federal employees and contractors)

4. Overall Site approach to enhancing technology deployment. This section will include: process for identification of opportunities; Site plan for overcoming barriers to deployment; plans for stakeholder, regulator, and Tribal Nations involvement; Site level performance measures for technology deployment; Site approach to providing opportunities for industry involvement; e.g., award or incentive fees, will they use a model such as the Technology Deployment Initiative, Vendor Forums, etc.; methodology for estimating technology related cost savings and specific estimates; complex-wide integration, where appropriate; and, new technology associated with privatization activities

5. Barrier Reduction Efforts: Description of anticipated barriers to deployment and approach to overcoming these barriers, e.g., approach for regulatory, stakeholder, and Tribal Nations participation, use of performance specification based contracting approach for involving commercial sector partners, technology transfer approach within the Field site, among other DOE sites, and transfer of technologies external to the Department. The plan will address the general barriers to technology deployment as well as specific barriers that must be overcome to implement the opportunities identified.

6. Key information requirements: include approaches to provide life-cycle cost savings analysis, information collection dissemination and transfer requirements

B. Management Plan Outline

In order to identify key issues and opportunities for cross-site integration to enhance the deployment of innovative technologies, each Operations/Field Office will submit an annotated outline of the proposed Management Plan as an attachment to the December 5, 1997, Draft Site 2006 Plan input. This attachment will be brief (approximately 5 pages), but should identify the overall approach that will be taken by the sites. Key barriers to implementation should be identified and briefly addressed, as well as policy issues, particularly those requiring Headquarters attention. In addition, opportunities for deployment will be identified, in conjunction with Table O.9.1, so that resources can be efficiently applied to ensure deployment of these near-term opportunities.

C. Technology Opportunity/Fact Sheets

The final aspect will focus on specific opportunities that have been identified for the deployment of new technologies. These opportunities will be detailed in a set of "Technology Deployment Opportunity" fact sheets which can be added to as additional opportunities are developed.

These will elaborate on the information provided in the Draft National 2006 Plan PBS and provide information at the PBS level or problem level identified by the Operations/Field office. These are anticipated to be ~1 page summaries of the opportunities, and will contain the following information:

1. Identifying Information: Provides information to cross reference information on the Technology Deployment with the EM integrated database so information related to problems such as waste characteristics, contaminants, volumes, quantities, baseline cost estimates, and end states can be easily accessed. Other information could include the PBS title and number, STCG Need title and number, WBS title and number, release site, facility or waste stream designation

2. Definition of the Problem: Briefly identifies the problem, technology needs, and system interfaces required to successfully utilize a technology.

3. Technology Baseline Information: Briefly describes the current baseline technology(ies) and describes the innovative technology opportunity

4. System Performance Requirements: Provides or references the end-state requirements to solve the problem and any unique performance requirements for each of the technologies

5. Projected Benefits for Technology

6. Unique Barriers: Describes barriers that impede deployment of innovative technologies.

7. Funding and Resource Requirements

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Attachment N. Action Plan Guidance

With the release of the Discussion Draft, DOE developed an Action Plan process to identify potential issues/opportunities to the Draft National 2006 Plan. As issues/opportunities continue to be identified, they will flow through three steps in the Action Plan process:

- New issues/opportunities will be identified by stakeholders, sites, Tribal Nations, and DOE for evaluation;
- For issues/opportunities that can not be easily resolved, Action Plans will be developed to define the path forward, clarifying the decision to be made, the decision maker, opportunities for public involvement in the decision process, and the schedule for resolution; and
- Issues/opportunities that have been resolved will be incorporated into sites' baselines for subsequent versions of the 2006 Plan or rejected. If there is significant programmatic risk associated with implementing the issue/opportunity in the baseline (ranking 4 or 5 in programmatic risk) a Programmatic Risk Management Plan must be developed.

This attachment summarizes issues/opportunities identified to date which require Action Plans and/or updates to previously submitted Action Plans. It is not anticipated that any Action Plan will be longer than 1-2 pages. Table A is organized by the Headquarters or Operations/Field Office responsible for issue resolution and provides both a brief description of the issue and the Action Plan which captured the issue. Each site's Status Plan must address the status of those Action Plans for which it is responsible. Headquarter's status will be included in the Draft National 2006 Plan, as appropriate.

Table A
Issues/Opportunities Requiring Status of Action Plans

OFFICE	ISSUE STATEMENT	STATUS
Headquarters	DOE needs an overall, consistent approach to address national policy issues relating to programmatic or cross-programmatic, intersite decisions including but not limited to: plutonium disposition; transportation; Comprehensive Environmental Response, Compensation, and Liability Act and DOE Order on Radioactive Waste Management; and Greater-Than-Class C Waste.	
Headquarters	Use Combination of DOE and Commercial Mixed Low-Level Waste Disposal Capacity by continuing disposal at existing commercial facilities and initiating centralized disposal at Hanford Site with Nevada Test Site, as backup, to achieve cost efficiencies.	

Headquarters	Consolidate Low-Level Waste Disposal Operations at Nevada Test Site and Hanford Site to obtain cost efficiencies.	
Headquarters	Establish De Minimus Radioactivity Levels for Mixed Low-Level Waste levels for radionuclide content in mixed low-level waste to enhance capability to segregate "below-regulatory-concern" hazardous-only and mixed low-level waste.	
Headquarters	Transportation should be minimized whenever possible, with more wastes managed at their point of origin to reduce both the number of shipments and the overall risk incurred from transportation. Accident risk and the need for adequate waste acceptance criteria and procedures should be evaluated.	
Headquarters	Establish Complex-Wide Uniform Radiological Cleanup Standards for Environmental Restoration to reduce costs and schedules associated with remedial activities at each site and accelerate cleanup. Promulgate 10 CFR 834 with clear unambiguous "as low as reasonably achievable" criteria. Have a formal, mutually acceptable land-use agreement with stakeholders and Tribal Nations and have remedial action based on an established set of future land-use assumptions.	
Headquarters/ National Trans-portation Program	Effective planning and management of nuclear waste transportation programs require structured and regular interaction within DOE and among government agencies, stakeholder groups, and Tribal Nations (including Transportation Protocol Working Group) to address policy, planning institutional and operational issues.	
Headquarters	Implement Accelerated Remedial Process for Environmental Restoration to reduce costs and schedules associated with remedial action reports/plans, streamline report/plan preparation, review, and approval cycles for environmental restoration activities across the complex.	
Headquarters	Share Environmental Restoration Expertise and Resources through an established system across DOE installations.	

Headquarters	Treatment, storage, and disposal decision for Environmental Restoration are being made independently at the Operations/Field Office Level, as opposed to being integrated system-wide.	
Albuquerque	Albuquerque has previously assumed existing mixed low-level waste would be "treated and disposed within a five year window" yet there is no facility to do so. There is strong opposition to using the controlled air incinerator for that purpose.	
Albuquerque	Albuquerque has previously assumed Los Alamos National Laboratory would save $76 million and accelerate completing transuranic waste shipments to Waste Isolation Pilot Plant by 20 years. Clarify the implications of this assumption to environmental and transuranic waste characterization requirements.	
Carlsbad, Richland, Rocky Flats	Transuranic waste residue treatment and potential repackaging requirements should be clarified with regards to the Waste Isolation Pilot Plant Safeguards Termination Limits.	
Carlsbad/ National TRU Program	Revisit the Idaho assumption that the Advanced Mixed Waste Treatment Facility will treat all transuranic waste to meet Waste Isolation Pilot Plant Waste Acceptance Criteria given 1996 amendment which exempts mixed transuranic from treatment standards and land disposal prohibitions under Resource Conservation and Recovery Act.	
Carlsbad/ National TRU Program	Ensure complex-wide transuranic disposal needs do not exceed Waste Isolation Pilot Plant currently allowed capacity. Define disposal options for non-defense, commercial and newly generated transuranic waste.	
Carlsbad/ National TRU Program	EM needs to work towards the timely development of a transuranic strategy that includes the economics of treatment vs. characterization.	
Carlsbad/ National TRU Program	DOE needs to decide on a consistent transuranic waste policy that considers waste acceptance criteria and treatment standards, consistency of definitions, retrieval of pre-1970 buried waste, Pu-238 bearing transuranic waste, and Waste Isolation Pilot Plant disposal capacity.	

Carlsbad/ National TRU Program	The disposition of Pu-238 bearing wastes and the impact on transuranic waste packaging and shipment to Waste Isolation Pilot Plant must be resolved by the transuranic waste sites, Carlsbad Area Office, and HQ.	
Carlsbad/ National TRU Program	Consolidate Transuranic Waste Storage from sites with small inventories to sites with greater inventories.	
Carlsbad/ National TRU Program	Improve Transportation Systems for Transuranic Waste by expanding or developing improved transportation methodologies for the shipment of both contact-handled and remote-handled transuranic waste to improve efficiency, avoid large-scale fixed-plant operations, and overcome current limitations.	
Idaho	Idaho should define the cleanup process, end state, facility integration, and significant issues to complete Waste Area Group 3 (i.e., the Idaho Chemical Processing Plan) restoration past 2006.	
Idaho	Idaho's Discussion Draft should include delisting/partial delisting and release of portions of the Idaho National Engineering and Environmental Laboratory from Environmental Management control; release should be accelerated from 2010 to 2006.	
Idaho	EM should continue to calcine liquid high-level waste as the near-term strategy, while analyzing potential accelerated separations and final waste form alternatives to the use of vitrified glass.	
Idaho	Idaho National Engineering and Environmental Laboratory's Discussion Draft should evaluate the storage of EBR-II spent nuclear fuel safely in dry interim monitored storage facilities or in long-term repositories.	
Idaho	Key milestones should be developed for the decontamination and decommissioning of the Experimental Test Reactor and Materials Test Reactor at Waste Area Group 2 [i.e. the Test Reactor Area].	
Idaho	Idaho National Engineering and Environmental Laboratory should incorporate a schedule for development and operation of a site-wide soil repository pursuant to Comprehensive Environmental Response, Compensation, and Liability Act.	

Idaho, Carlsbad	DOE should evaluate acceptability of grouting of high activity non-transuranic, transuranic, and high-level waste, and revise transuranic waste estimates to include waste deposited in pits/trenches before 1979.	
Idaho/National M/LLW Center	Maximize Use of Existing DOE Operating Facilities for Mixed Low-Level Waste Treatment to achieve the best cost efficiency.	
Idaho/Richland	Transport and Store Idaho National Engineering and Environmental Laboratory High-Level Waste at Hanford to expedite completion of Idaho National Engineering and Environmental Laboratory high-level waste vitrification, and Use Hanford Vitrification Capabilities for Idaho National Engineering and Environmental Laboratory High-Level Waste to minimize new facilities.	
Idaho/Richland	Reduce Hanford High-Level Waste Volume disposal costs by obtaining significant volume reduction of Hanford Site high-level waste through aggressive pretreatment similar to a process proposed for the Idaho National Engineering and Environmental Laboratory. This enables better separation of the low-activity waste fraction reducing volumes and better dissolution of solids in the high-activity sludge.	
Idaho/National M/LLW Center	Use Consolidated Procurement for Mixed Low-Level Waste Analytical Services to obtain necessary characterization and certification of mixed low-level waste in lieu of individual site contracts, thereby minimizing the number of audits conducted at the same facility.	
Idaho/National M/LLW Center	Standardize Mixed Low-Level Waste Characterization based on common characterization standards which satisfy requirements that are necessary and sufficient to allow mixed low-level waste to be accepted at any treatment, storage, or disposal facility in the complex without multiple characterization steps.	
Idaho/National M/LLW Center	Expand Use of National Procurement Contracts for Mixed Low-Level Waste to enable treatment of mixed low-level waste that can not be treated through existing DOE capabilities.	
Idaho	Accelerate calcine Separation of Idaho National Engineering and Environmental Laboratory high-level waste.	

Idaho/Richland	Implement Risk-Based High-Level Waste Retrieval and Tank Closure (e.g., remove waste from tanks that pose highest health and safety risks first) primarily at Hanford Site and Idaho National Engineering and Environmental Laboratory	
Idaho/National SNF Program	Establish Performance-Based Spent Nuclear Fuel Storage and Disposal requirements for geological disposal of spent nuclear fuel based on assessment of fuel groups that verify acceptable performance during interim storage and enable direct disposal as a viable alternative for a significant portion of the unprocessed spent nuclear fuel. This will minimize repackaging and enable cost-effective repository acceptance of the majority of DOE-owned spent nuclear fuel.	
Nevada	The uses of the Nevada Test Site for activities not directly related to the original nuclear testing mission need to be officially and legally determined by the proper agency or entity.	
Nevada	Waste not suitable for shallow-land burial at the Nevada Test Site needs to be addressed and defined under the Nevada Division of Environmental Protection process with analysis for a national program.	
Nevada	There is inadequate provision for life-cycle funding in perpetuity for the Nevada Test Site waste management program.	
Nevada	Develop strategy for bringing the mixed low-level waste disposal facility at Nevada Test Site on-line for use by the DOE complex.	
Nevada	The definition of "cleanup" in the Accelerated Cleanup Plan is misleading and not acceptable to stakeholders.	
Nevada	The extent and duration of radioactive contamination at the Nevada Test Site is inadequately understood for determining appropriate remedial actions. Existing information is not sufficiently communicated to stakeholders.	
Oakland	Resolve interpretation difference between DOE and state on California's non-degradation policy that a plume must be cleaned up or hydraulically controlled so that it will not act as a continuing source of pollution.	

Oakland	EM must resolve funding issues related to the Accelerated Cleanup Initiative for reducing source area contamination and testing technologies at the Livermore Site.	
Ohio, Oak Ridge, Richland, Savannah River	The use of on-site disposal cells under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to dispose of cleanup wastes to reduce costs needs regulator, stakeholder, Tribal Nations and OMB and the appropriate requirements and procedures need to be identified (DOE Order 5820 vs. CERCLA).	
Ohio	Current and projected funding levels for the Columbus Environmental Management Project need to be consistent with the 1993 U.S. Nuclear Regulatory Commission approved Decommissioning Plan.	
Ohio	DOE needs to get community and US Environmental Protection Agency agreement before changing the treatment for Silo 3 from the treatment defined in the Record of Decision for Operable Unit 4.	
Ohio	Resolve the question of storage and disposition of spent fuel and vitrified high level waste at West Valley.	
Ohio	Finalize waste-type and acceptance criteria for the Fernald On-Site Disposal Facility. Local stakeholders oppose acceptance of waste from off-site sources.	
Ohio	Ensure that focusing on an accelerated deadline does not cause issues to be missed or inadequate attention paid to the long-term impact of decisions currently being made. Involve Tribal Nations and stakeholders in discussions (e.g. free release of contaminated metals and the on-site disposal cell).	
Oak Ridge	Continue to pilot programs where other DOE organizations will accept responsibility for waste management.	
Oak Ridge	DOE should specify how it will achieve a free release criteria by 1999.	
Oak Ridge	Oak Ridge previously assumed that remote-handled solids would not be retrieved from Solid Waste Storage Area 5N; the State of Tennessee expects this material to be retrieved and transported to the Waste Isolation Pilot Plant.	

Oak Ridge	DOE should detail how it will address the conflicting requirements of Order 5820.2A (i.e., requirement for 100-year institutional control of its disposal facilities) and site flexibility to pursue on-site disposal cell and brownfield remedial action alternatives that include institutional control where necessary based on the level of cleanup.	
Oak Ridge	DOE should acknowledge its obligations to continue post closure monitoring and associated operations and maintenance requirements.	
Oak Ridge	Oak Ridge needs to consider Natural Resource Damage Act and the responsibility of the Natural Resource Trustees including DOE,Tennessee Valley Authority, Department of Interior, and the State of Tennessee.	
Oak Ridge	Oak Ridge's Mixed-Waste Site Treatment Plan and Order directs disposal of mixed transuranic waste at Waste Isolation Pilot Plant. DOE should evaluate whether the definition of transuranic waste should be revised to include isotopes such as Cm224, U233, and Cf 252 for acceptance at the Waste Isolation Pilot Plant.	
Oak Ridge	Address institutional control as a major Federal action at Oak Ridge.	
Oak Ridge	On-site disposal of low-level waste generated from Oak Ridge environmental restoration programs and from active operations should meet on-site waste acceptance criteria.	
Oak Ridge	Oak Ridge previously assumed remote-handled solids would not be retrieved from Storage Area 5N; the State of Tennessee expects this material to be retrieved and transported to Waste Isolation Pilot Plant.	
Rocky Flats	Rocky Flats' end state is dependent on a solution for plutonium and highly enriched uranium storage and moving materials off site.	
Rocky Flats, Savannah River	Provide more detail on Rocky Flats' baseline case for shipping Rocky Flats scrub alloy to Savannah River for processing and interim storage.	
Rocky Flats	Rocky Flats should maintain the baseline proposal for the treatment and shipment of sand slag and crucible and salts, but also review and evaluate technical reviews and Environmental Protection Agency activities to determine impacts to the current baseline.	

Rocky Flats, Savannah River	Rocky Flats and Savannah River should assume that existing Rocky Flats scrub alloy will be received at Savannah River for stabilization and interim storage, until ongoing studies, analyses, discussions and subsequent Records of Decision are complete.	
Rocky Flats, Savannah River	Savannah River should include receipt of sand slag, and crucible as well as scrubbed salts from Rocky Flats as an alternative.	
Richland, Savannah River	Richland should evaluate shipment of plutonium to Savannah River and other options for potential mortgage reduction savings.	
Richland/Idaho	Use Existing Idaho National Engineering and Environmental Laboratory Cesium/Strontium Storage Capacity for long-term storage of separated cesium/strontium wastes from Hanford Site (includes both existing cesium/strontium capsules and cesium/strontium wastes resulting from potential future pretreatment) to minimize new facilities.	
Savannah River	Savannah River should consider storage and disposal of commercial Greater-than-Class-C waste.	
Savannah River	Savannah River should assume implementation of the highly enriched uranium blend down mission and should assume (and identify) that the programmatic sponsor responsible for this activity will assume management and funding responsibilities for the associated facilities after completion of the EM mission (94-I). If negotiations with Tennessee Valley Authority do not provide Department of Energy with sufficient recovery of total program costs or if discussion with affected stakeholders preclude this proposed alternative reflect an advanced deactivation date of H-Canyon.	
Savannah River	Savannah River's baseline should reflect ramp down of the landlord program as EM missions are completed, and the resultant savings if no new missions are assigned to EM (highly enriched uranium blend down, disposition of weapons plutonium, consolidated storage of plutonium, etc.).	

Savannah River	Include the disposition of weapons plutonium and consolidated storage of plutonium missions as alternative opportunities to the baseline pending Environmental Protection Agency and Secretarial mission decisions, as well as issuance of a Record of Decision.	
Savannah River	Chemical processing should remain a viable alternative in the Draft National 2006 Plan until a dry storage method is fully developed.	
Savannah River	Spent Fuel must not be processed.	
Savannah River	Stakeholders oppose the movement of materials and waste to Savannah River Site for temporary, interim, and long-term storage without provision for final disposition.	
Savannah River	Need to have general public participation for the Draft National 2006 Plan concerning transportation routes.	
Savannah River	High activity transuranic waste should be treated on an aggressive schedule as suggested by the Savannah River Citizens Advisory Board and independent peer reviews.	
West Valley/ Savannah River	Move West Valley Demonstration Project High-Level Waste Canisters to Savannah River Site by developing and deploying a process for shipment of vitrified high-level waste canisters from West Valley to Savannah River Site for interim storage.	

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