



Department of Energy
National Nuclear Security Administration
Washington, DC 20585

February 7, 2003

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DNF SAFETY BOARD

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW
Washington, DC 20004

Dear Mr. Chairman:

As committed in my September 24, 2002, letter to you, the National Nuclear Security Administration (NNSA) is providing our strategy to improve the characterization, storage and disposition of inactive actinides. It is clear to me that we need an organized approach that will ensure senior Headquarters managers are continuously involved in the programmatic and safety aspects of this work. Accordingly, I am undertaking a three-part effort.

First, as always, we will continue to address imminent public and worker safety concerns associated with actinide storage immediately as they are identified. Appropriate corrective actions will eliminate or mitigate the risk.

Second, I will be directing the creation of an inactive actinides program management approach that will collect, on an annual basis, prioritized projects from each site. A designated Headquarters program manager will integrate these priorities across sites, and those projects that merit immediate investment will be funded, and the work directed and tracked. I will provide you with additional details on this process as it is developed, but it is my intention to complete the first data call and review in FY 2003 and to fund specific tasks in FY 2004. Thereafter we will forecast an annual budget within the Future Years Nuclear Security Program and review priorities annually. This will be a comprehensive approach that will include characterization, packaging, storage and disposition in whatever combination best addresses the most critical safety requirements and programmatic needs.

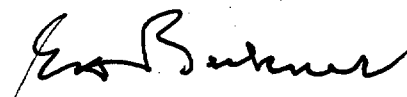
Finally, you have pointed out numerous deficiencies related to the protocols and procedures used throughout the inactive materials management process from identification to disposition. We agree with the concerns expressed in your May 20, 2002, letter and are committed to updating aspects of our system that are outdated and ineffective.

The attached "Report to the Defense Nuclear Facilities Safety Board on the Management of Inactive Actinide Materials at NNSA Sites," was prepared by the Inactive Actinides Working Group and presents three strategies: (1) Protocol for Acceptance and Retention of Nuclear Materials, (2) Material Characterization and Storage Adequacy, and (3) Disposition. This Report identifies planning and implementation of activities and milestones in FY 2003-04 on which we will keep you apprised, including addressing your December 31, 2002, comments: A briefing to the Board will be scheduled to present our path forward.



If you have any questions or require further information, you may contact me, or your staff may contact Diane Larsen of my staff (301) 903-7316.

Sincerely,

A handwritten signature in black ink, appearing to read "Everet H. Beckner". The signature is fluid and cursive, with a prominent initial "E".

Everet H. Beckner
Deputy Administrator
for Defense Programs

Enclosure

**REPORT TO THE DEFENSE NUCLEAR FACILITIES
SAFETY BOARD ON THE MANAGEMENT OF INACTIVE
ACTINIDE MATERIALS AT NNSA SITES**

Strategy for FY 2003-04 Activities

JANUARY 31, 2003

INTRODUCTION

This report defines an integrated, sustained National Nuclear Security Administration (NNSA) strategy to optimize management of the NNSA nuclear materials inventory with an emphasis on reducing risk and program impacts. This strategy is comprised of three parts focusing on improvements in the management protocol for inactive nuclear materials at NNSA sites, the effective characterization of these materials, and the disposition of surplus materials, considering all NNSA program drivers and constraints. Implementation of this strategy will enable NNSA to meet its goal of reducing site inventories to materials needed to satisfy mission requirements and thereby reduce risk. The strategy also addresses the Board's fundamental interest in an integrated approach to the management of inactive materials at NNSA sites. The integrated approach implemented by this strategy will enhance and sustain the effective management, storage, and disposition of inactive materials. As always, we will continue to address imminent public and worker safety concerns associated with actinide storage immediately as they are identified. Appropriate corrective actions will eliminate or mitigate the risk.

Strategy Part 1 - Protocol for Acceptance and Retention of Nuclear Materials:

Identifies activities to justify receipt and retention of materials, clarifies use categorization of materials, and recommends the establishment of specific site-level roles and responsibilities for materials management decisions.

Strategy Part 2 - Material Characterization and Storage Adequacy: Outlines a clear and consistent NNSA-wide process to develop and apply criteria to ensure material characterization requirements for safe storage, transportation, and disposition.

Strategy Part 3 - Disposition: Initiates disposition planning, including preparation and application of criteria and guidance for making disposition decisions and administrative steps for NNSA resolution of no-pathway issues for materials that cannot be dispositioned offsite without removal of barriers, and addresses the issue of sealed-source disposition. All these actions will lead to NNSA decisions on implementation of disposition actions beginning in FY 2004. For surplus plutonium and highly enriched uranium, planning and implementation for ultimate disposition is the responsibility of the Office of Fissile Materials Disposition (NA-26). Planning and interim actions involving these surplus fissile materials will be coordinated with NA-26.

This three-part strategy constitutes a NNSA-integrated multi-year approach to improve overall management of NNSA inactive nuclear materials. It includes provisions for alternative or contingency planning and provides mechanisms for identifying related concerns (e.g., availability of containers and transportation) and for raising issues to NNSA sponsors. Inactive materials management systems, including preparation of pertinent, specific materials lists, will continue to be developed in parallel with planning and implementation of storage and disposition projects. This multi-year approach provides a framework to clarify and resolve issues and to improve overall management of NNSA inactive nuclear materials.

Figure 1 presents the schedule for FY 2003-04 activities for implementing this strategy.

Figure 1. Summary Inactive Actinides Activities Schedule for CY 2003-04

| ID | Task Name | Start | Finish | 2003 | | | | 2004 | | | | Q1 | | |
|----|---|--------------|--------------|--------|----|----|----|------|----|----|----|----|--|--|
| | | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | | | |
| 1 | NNSA PROTOCOL FOR ACCEPTANCE AND RETENTION OF NUCLEAR MATERIALS | Mon 2/17/03 | Mon 11/1/03 | | | | | | | | | | | |
| 2 | Justification for Retention | Mon 2/17/03 | Fri 1/16/04 | | | | | | | | | | | |
| 3 | Develop NMM Guidance for Acceptance and Retention Protocol | Mon 12/15/03 | Fri 1/23/04 | | | | | | | | | | | |
| 4 | NNSA Sites Begin Operating Under New Protocol | Mon 1/26/04 | Fri 10/29/04 | | | | | | | | | | | |
| 5 | All NNSA Sites Operating Under New Criteria | Mon 11/1/03 | Mon 11/1/04 | ◆ 11/1 | | | | | | | | | | |
| 6 | MATERIALS CHARACTERIZATION AND STORAGE ADEQUACY | Fri 10/3/03 | Thu 9/30/04 | | | | | | | | | | | |
| 7 | Survey Current Site Characterization Methods | Fri 10/3/03 | Thu 4/29/04 | | | | | | | | | | | |
| 8 | Complete Site Level Implementation Plans | Fri 4/30/04 | Thu 9/30/04 | | | | | | | | | | | |
| 9 | DISPOSITION | Mon 2/17/03 | Thu 9/30/04 | | | | | | | | | | | |
| 10 | IAWG Complete First Report on Known Materials with "NO" Disposition Pathway | Mon 2/17/03 | Fri 6/13/03 | | | | | | | | | | | |
| 11 | Site Offices, with IAWG Input, Propose NNSA Disposition Related Priorities Including Prioritized Materials Lists | Mon 2/17/03 | Fri 5/30/03 | | | | | | | | | | | |
| 12 | NNSA HQ Approval of Disposition Priorities | Fri 6/6/03 | Fri 6/6/03 | ◆ 6/6 | | | | | | | | | | |
| 13 | Site Offices, with IAWG Input, Complete Integrated Task Proposal Recommendation for FY04 HQ Review | Mon 6/9/03 | Fri 8/15/03 | | | | | | | | | | | |
| 14 | HQ Determines FY04 Priorities and Funding Approach and Amount for Inactive Actinides Work | Fri 8/29/03 | Fri 8/29/03 | ◆ 8/29 | | | | | | | | | | |
| 15 | Site Offices Complete Resource Loaded Disposition Plans for FY04 | Fri 8/29/03 | Tue 9/30/03 | | | | | | | | | | | |
| 16 | IAWG Develop and Recommend NNSA Discard Criteria | Mon 2/17/03 | Fri 10/17/03 | | | | | | | | | | | |
| 17 | IAWG Develop Alternative Storage Contingency Report for Materials without Cost Effective Disposition Pathways | Thu 9/25/03 | Wed 3/10/04 | | | | | | | | | | | |
| 18 | Supplement Existing Packaging and Transportation Plans to Include Inactive Materials | Mon 3/15/04 | Fri 6/11/04 | | | | | | | | | | | |
| 19 | Site Offices, with IAWG Input, Develop Integrated Disposition Proposals for Future Years | Mon 2/16/04 | Fri 6/18/04 | | | | | | | | | | | |
| 20 | Site Offices, with IAWG input, identify priority inactive actinides work for the FY05 budget as part of the NNSA PPBE Process | Mon 3/3/04 | Fri 4/11/04 | | | | | | | | | | | |
| 21 | HQ Evaluation and Selection, with IAWG Input, of FY05 Disposition Projects | Thu 5/1/04 | Fri 10/31/04 | | | | | | | | | | | |
| 22 | Contractors Develop Resource Loaded Disposition Plans for FY05 | Mon 2/2/04 | Thu 9/30/04 | | | | | | | | | | | |

STRATEGY PART 1 – PROTOCOL FOR ACCEPTANCE AND RETENTION OF NUCLEAR MATERIALS

Purpose

The purpose of Strategy Part 1 is to establish an improved, comprehensive protocol to ensure that inactive nuclear materials are periodically evaluated for continuing need and to ensure the supporting bases for retention are documented. This part of the strategy also will add intersite and intra-site uniformity for acceptance of inactive materials and clear roles and responsibilities for materials management-related decisions at NNSA sites. This part also will recommend changes to the Nuclear Material Inventory Assessment (NMIA) process to improve clarity, data utility, maintenance, and reporting.

Scope

The scope of Strategy Part 1 includes site-specific and corporate requirements to develop an improved protocol for nuclear materials management. There are two categories of inactive nuclear materials. The first category is material held for Potential Programmatic Use (PPU). The second is material with no defined programmatic use but not characterized as waste. The improved protocol will be applicable to the evaluation of all nuclear materials, but will require more detailed justification for the storage of nuclear materials not currently in use or having potential for programmatic use.

Background

Material requirements at NNSA sites vary as a function of mission. The nuclear weapon laboratories currently do not have a storage mission, and should therefore limit storage to material needed for ongoing programs. In contrast, the Y-12 NSC and Pantex sites have specific storage missions. Differences in site missions will be considered when developing the improved protocol governing the retention of inactive nuclear materials.

Summary of Strategy Part 1

Material Retention Protocol

A potential exists for nuclear materials not being used for near-term mission accomplishment to be neglected or inadequately managed. Therefore, it is necessary to minimize nuclear material held in user programs or at non-storage sites when the material is not required in the near-term.

DOE requires each of the DOE Field Elements to assess the status of contractor-held inventories of nuclear materials periodically and report on the planned use of each material. The annual Nuclear Materials Inventory Assessment (NMIA) report identifies the categories of existing nuclear material inventories, identifies their need, and explains their use. This existing inventory assessment process is the first step in the documentation of the rationale used to justify the retention of nuclear material for programmatic mission accomplishment.

The establishment of a material retention protocol will supplement the NMIA process by clarifying the bases and establishing consistent reporting requirements for retaining

materials in an inactive status at NNSA sites, particularly when storage is not part of the site mission.

In order to establish this enhanced protocol, each site will identify a responsible point of contact with the authority to make site-specific nuclear material management decisions related to the retention of nuclear material. The point of contact will also have the authority and the responsibility to authorize or reject incoming shipments at their respective sites. Clear decision-making lines within the NNSA also will be established within the protocol.

Project Codes

Existing project codes used in the NMIA do not provide sufficient detail, nor are they applied uniformly at NNSA sites, to provide adequate information to identify materials that are not needed at a site. Therefore, a consistent set of project codes will be developed and strictly defined for use by NNSA sites in performing programmatically required inventories. The nuclear material inventory at a site will be categorized and segregated by the assignment of these new project codes to each item. Related to each project code will be a description of the project objectives and associated activities and use justifications. This information will be maintained and updated on an ongoing basis by site accountability systems and documented in a project overview provided in the annual NMIA report. This process will provide the mechanism to track and record the status of an item as it changes throughout its entire life cycle. Furthermore, this process enables the NNSA to have a high level of confidence that active defined use categories of inventories are justified and documented.

The new project codes will be designed so that programmatic ownership is easily determined and programmatic objectives are clearly outlined. The project codes will be based on the NNSA budget and reporting codes, will identify the Headquarters and Field Office elements having programmatic responsibility for each project, and will be maintained and issued annually (Nuclear Materials Management and Safeguards System Report T-141) to organizations engaged in NNSA production and research programs.

Material Receipt Protocol

Receipt of material into or within the NNSA sites should be based on requirements for mission accomplishments, which may include long-term storage in the case of Pantex or the Y-12 National Security Complex (NSC). Typically, material receipts are authorized based on justified program requirements. The ultimate disposition of the incoming material will be part of the authorization process. Occasionally a site is directed to receive nuclear material that has no defined programmatic use. When this occurs and the material will become part of the inactive excess material at a NNSA site, the rationale for this decision must be documented and endorsed in writing by NNSA. A material receipt protocol will be established to incorporate these requirements and ensure acceptance criteria at the receiving site are met or formal exception is directed by NNSA and appropriate measures are taken to ensure safe receipt and storage.

Shipping authorization is the final approval to move material between sites. Therefore, an element of the material receipt protocol will be a systematic evaluation prior to receipt

of material. The following are standard criteria questions that the protocol will require to be answered satisfactorily before shipping authorization is granted by one of the sites:

1. Does the proposed material meet the acceptance criteria for the receiver?
2. Can appropriate nondestructive assay (NDA) and inventory measurements be performed and can the site adequately safeguard the material?
3. Is there programmatic funding for work involving the material?
4. What is the specific task associated with the programmatic work involving the material?
5. What is the schedule for the programmatic work involving the material?
6. What is the disposition of byproduct material from programmatic use, including waste product to be shipped offsite, indefinite storage, etc?
7. Are there waste issues associated with the programmatic work involving the material?
8. Is there storage space for the material?

Incoming nuclear material items that are excess to programmatic requirements at a site (recognizing storage as a programmatic mission at Y-12 and Pantex) should not be considered permanent transfers from the shipping site and should not be assigned a receiving site project code. Examples of this type of material are samples shipped to a site for analysis. These items should retain the original project code and the programmatic Record Identification Symbol (RIS) of the site owning the material. Retaining the original project code also reminds the owner program and site that the ultimate disposition of this material remains their responsibility. Following completion of the program, the material may physically be returned to the owner site.

NMIA Improvements

The annual NMIA report is required by DOE Order 5660.1B and is the baseline for nuclear materials management planning. The report is the product of existing processes at NNSA sites used to continually document the use and status of all nuclear material items in their custody. The NMIA database is a tool used by sites to manage their nuclear materials inventory and to generate the annual NMIA report, and serves as the basis of the evaluation protocol. The NMIA database and protocol will be enhanced to include improved project codes and to clarify fields identifying ownership and use.

Figure 1 provides the FY2003-04 tasks to be accomplished for Strategy Part 1.

STRATEGY PART 2 – MATERIAL CHARACTERIZATION AND STORAGE ADEQUACY

Purpose

The purpose of Strategy Part 2 is to provide a clear and consistent process for characterizing materials in inventory at NNSA sites to ensure safe storage and support disposition decisions. Item-level characterization (collection of storage-related attributes), when linked to specific storage methods, is intended to serve as the primary means of ensuring adequate, extended storage. Storage methods currently employed at sites are analyzed via site and facility-specific authorization bases and can be effectively linked to specific material items once appropriate characterization is provided. NNSA sites currently collect storage-related characterization attributes, but improvements in methods, standard, consistent terminology, and data collection will be implemented.

Scope

The scope of Strategy Part 2 includes an assessment of NNSA sites to determine current characterization methods. Development and implementation of site-specific characterization plans will be based on a consistently applied characterization process for storage. The scope of the resultant characterization process will ultimately include entire site inventories of accountable nuclear materials, both active and inactive. The scope also includes development of clear guidance for implementation at the NNSA sites for standardization of item-level characterization of inactive materials in storage.

Background

Implementation of a standardized item-level characterization methodology for inactive materials in storage at the NNSA sites is needed. The extent of materials characterization at NNSA sites varies from site to site, including differences as a function of material type, material condition, and its potential future use or disposition.

During the DNFSB staff site visits to the Los Alamos National Laboratory (LANL) and the Lawrence Livermore National Laboratory (LLNL) in early 2002, the DNFSB staff was using information provided by NNSA-HQ in the 1999 NMIA database. This data varied somewhat from NMIA site-level data submitted to NNSA-HQ. During the site meetings, the nuclear materials managers at the two sites used information from the 1999 NMIA site-level submittal reports in their discussions with the DNFSB staff. This data disconnect caused misunderstandings that were reflected in the Staff Issue Report. Additionally, the NMIA is not intended to supply characterization data to allow for storage-level decisions. Although the principal findings in the DNFSB's Staff Issue Report and subsequent letter to NA-10 remain valid, the actual condition of nuclear material management at NNSA sites and data to support storage are better than initial appearances indicated. Any remaining characterization issues regarding onsite storage will be readily addressed by enhancements to existing processes, while the longer-term issues concerning transportation and receiver site acceptance will require greater attention and resources.

Where dependable disposition options exist or are being developed, sites characterize the materials to meet receiver site and transportation requirements. This often requires more information about the materials than is required to support extended storage at NNSA sites.

While characterization for disposition is generally negotiated between a site and a receiver and performed at the time of shipment, in order to support (when necessary) extended storage at NNSA sites, this strategy outlines a storage characterization process that includes the following attributes:

- Characterization information will be adequate to support extended storage and disposition decisions;
- Uniform application of characterization “coding” will be used across NNSA sites;
- Information will be obtained by site-specific best practices and kept in a manner that allows for efficient data collection, sorting, and evaluation using currently existing information where possible as a baseline;
- Characterization information will be item specific and include storage-related attributes as needed to support safe storage methods.

Summary of Strategy Part 2

For materials that remain at the sites, whether active or awaiting disposition, the characterization process will be designed, approved, and implemented to support storage adequacy and disposition decisions. The process could be an enhancement of current characterization methods or an entirely new process. The resulting characterization process must meet several important criteria:

- Be designed and implemented to collect and provide needed information to support decisions regarding extended storage, disposition planning, and transportation initiatives;
- Possess a technically defensible means of linking resultant characterization information to appropriate storage methods;
- Provide necessary item-level characterization data to support disposition decisions;
- Provide necessary characterization information to support transportation of materials to offsite disposition locations.

Figure 1 provides the FY 2003-04 tasks to be accomplished for Strategy Part 2.

STRATEGY PART 3 – DISPOSITION

Purpose

The purpose of Strategy Part 3 is to identify or develop disposition paths for NNSA unneeded inactive actinide materials. This will be accomplished by developing and implementing a process for identifying practical material disposition paths, including alternatives, for materials having no onsite programmatic use or long-term storage requirement. This includes identifying a methodology for disposition planning for each specific site and the application of the methodology and development of site plans to support an integrated NNSA-wide disposition approach. The integrated NNSA disposition approach will include packaging- and shipping-related requirements and a mechanism for providing NNSA management with information for making decisions on materials with no identified disposition paths. The process will also identify uncertainties and gaps in the disposition plans and describe associated actions needed to address these uncertainties and gaps.

Scope

The scope of Strategy Part 3 includes all actinide materials and surplus sealed sources at NNSA sites that have not been declared waste and that have no defined onsite programmatic use or continued storage requirement.

All NNSA sites have active programs and, therefore, active nuclear materials inventories. However, these sites also have some fraction of their inventory that is not active or required for near-term programmatic use. This material may be programmatic in nature and required for programmatic support but is inactive because it is not needed in the near term. Material supporting non-DP programs, such as Advanced Recovery & Integrated Extraction System (ARIES) material, may be inactive because of the long lead time (>5 years) associated with the disposition path. Likewise, material supporting future stockpile refurbishment programs may be retained in storage long term, until required for rebuild. Finally, there is material that has no defined use and no clearly defined disposition path, such as the sealed neutron sources. The scope of this strategy includes these latter two categories—material with disposition paths in the distant future and material with no clearly defined disposition path.

Two NNSA sites require further definition of scope because of the unique nature of their missions. Pantex has as part of its mission the storage of components from the nation's stockpile. Similarly, the Y-12 NSC functions as the NNSA repository for uranium materials and components. Therefore, long-term storage at these sites is an integral part of their programmatic mission, along with offsite disposition of excess materials.

Background

The draft "Guidance for Disposition Planning Procedures," developed by the Corporate Nuclear Materials Information Management Project (CNMIMP) Business Process Reengineering team (March 2002), is the preferred methodology to complete this task. Some sites may have existing methodologies that are equivalent to this process. The use

of site-specific methods is acceptable as long as all of the steps outlined in the CNMIMP method are included.

Each NNSA site has applied the CNMIMP methodology or a similar technique to portions of their inventory based on a graded approach. As disposition plans are completed for higher priority material streams, streams of lower priority will be evaluated. Within current planning scenarios, typical "disposition" paths include the Savannah River Site for non-DP materials, such as ARIES and DNFSB Recommendation 2000-1 product, or the Y-12 NSC for uranium. There are three other significant disposition paths, i.e., DP programmatic use, DOE or commercial reuse of materials, and waste.

The DP end use for inactive actinide materials could include fabrication of pits or secondaries going to the stockpile or other NNSA programmatic use. DOE or commercial reuse, while limited for some material categories such as plutonium, represents a significant disposition pathway for other materials, such as uranium and thorium. Finally, the waste path is either the Waste Isolation Pilot Plant for transuranic waste, or other options for uranium declared as waste, such as the Nevada Test Site or commercial waste disposal sites. The waste path may hold significant potential in light of the number of items and amount of plutonium that EM has discarded as part of de-inventory and shutdown of the Rocky Flats facilities. NNSA will develop and apply a consistent set of discard guidelines incorporating the requirements and precedence of the Rocky Flats experience, which could facilitate the disposition of significant numbers of items from NNSA sites.

There may be points in a disposition pathway at which this disposition process can either proceed no farther or result in a state of extended storage at NNSA sites that do not have storage as a component of their missions. These problem areas result from a nuclear materials inventory situation that cannot be resolved easily by the contractor site or from NNSA requirements. These situations require action on the part of NNSA or the contractor site. These actions may include expanding storage capacity if the decision is made to store onsite, developing alternate storage capabilities and consolidation of material at a single site until final disposition can be defined, or defining a disposition pathway that previously did not exist or was not available. This last action also necessitates developing characterization requirements, shipping schedules, and the associated container and transportation logistics.

The "practicality" of the disposition path needs to be addressed. Not considered "practical" are defined pathways that are not viable for many years and therefore hinder programmatic work, create requirements for extended storage at sites not having long-term storage as part of their defined mission, or introduce worker radiation exposure issues. Similar issues exist if there are severe limitations associated with disposition paths. These may include disposal of non-defense pedigreed waste, packaging constraints, undefined characterization requirements, and shipping container or transportation unavailability.

Disposition Activities in Progress

A number of disposition activities are already in progress at NNSA sites in FY 2003 that are consistent with and complementary to Strategy Part 3 for Disposition, including:

- For the Y-12 NSC:
 - 155 MT of surplus DU alloyed metal are being dispositioned as waste in FY 2003.
 - Work is in progress in FY 2003 to redefine the discard limit to allow disposal of low-equity HEU-bearing salvage materials as waste. These materials have historically been stored until they could be recovered by chemical processing operations.
- For the LANL site:
 - Work is also in progress in FY 2003 on increased discard limits for disposal of low-equity plutonium-bearing materials as waste. These materials have historically been placed in storage with limited disposition options.
- For the Sandia National Laboratory/New Mexico (SNL/NM) site:
 - Work is progressing on Authorization and Safety Basis Documentation for the SNL/NM disposition Hot Cell Facility. This facility will be dedicated to the characterization and repackaging of inactive materials for final disposition. Final approval of the Hot Cell Facility Documented Safety Analysis is expected in early 2004 and operations are planned to begin in spring of 2004.

Summary of Strategy Part 3

Prior to any planning, the material requiring disposition will be identified and prioritized. The next step is a process for developing disposition paths. This includes determining the practicality of the preferred path and the development of alternatives. The characterization related to disposition, packaging, and transportation required to relocate materials will be defined and schedules developed. Finally, the strategy will supplement the existing packaging and transportation plans to include inactive materials.

Storage at NNSA's LLNL, LANL, and SNL/NM sites is not a primary disposition option. The only NNSA sites that have long-term storage as a part of their core mission are Pantex and the Y-12 NSC. The movement of inactive, non-DP programmatic, and excess materials either to a disposition site or into a planned storage location must be the preferred option unless these movements create an adverse impact on DP programmatic activities. However, in order to accomplish such movement of large amounts of nuclear materials, a significant amount of planning, scheduling, and coordination is needed. If onsite storage is determined to be the most feasible alternative, sites such as LLNL, LANL, and SNL/NM may need NNSA direction for this modification to their mission.

An approach that has not been fully exploited by NNSA is the use of precedence for disposition. Within DOE, EM sites have dispositioned nuclear material without the same options being available to NNSA sites. This Strategy Part 3 will explore dispositioning materials with the same characteristics from other sites by the same mechanisms. An example is the implementation of an enhanced discard criterion, such as that used by Rocky Flats or the Y-12 NSC for materials that are excess to DP programmatic needs. Such an approach will require extensive cooperation and collaboration within NNSA and across the entire DOE.

In addition to onsite storage capacity issues, there are also materials streams that have no defined disposition path. In the past, sites individually attempted to deal with these nuclear materials. This Strategy Part 3 will also develop an integrated NNSA-wide method for determining disposition options for these items. Material streams present significant problems to NNSA sites because there is presently no clear mechanism available to elevate such problems for resolution across the DOE complex.

Approach for materials with no identifiable disposition pathway

Following the protocol outlined in this strategy:

1. Contractor will submit the issue and resolution alternatives to the Site Office with a copy to the Inactive Actinide Working Group (IAWG).
2. IAWG will compile an integrated, prioritized list of materials with no disposition pathway from Site Offices.
3. IAWG will forward the issues to NA-10.
4. NA-10 will assign responsibility for resolution.
5. Assignee will recommend resolution to NA-10.
6. NA-10 will act upon the resolution within 60 days.

Figure 1 provides the FY 2003-04 tasks to be accomplished for Strategy Part 3.

SUMMARY

This three-part strategy, focusing on (1) the management protocol for inactive nuclear materials at NNSA sites, (2) the effective characterization of inactive nuclear materials, and (3) the disposition of surplus materials, constitutes an integrated, multi-year NNSA approach to dealing with inactive actinides. This plan establishes the framework and approach for implementation of improvements to the overall management of NNSA inactive nuclear materials.

The following planning elements constitute the path forward for implementing this three-part strategy:

- Contractor sites will generate site-specific project proposals addressing each strategy for the upcoming funding year including scope, schedule, and cost.
- IAWG will develop a recommendation for the annual integrated and prioritized project list capitalizing on lessons learned and opportunities for technical and disposition integration.
- Headquarters, along with Site Offices, will consider the recommendation and provide support necessary to accomplish activities approved for the funding year through work authorizations.
- Upon project funding, Contractor, along with Site Offices, will develop specific resource loaded plans for completion of the project.
- Site offices will provide management oversight for the completion of the projects.

Initial strategic milestones for CY 2003 include (Figure 1 milestones in **bold**):

- Apr 11** Site Offices, with IAWG input, identify priority task list for inclusion in the FY-05 budget process
- May 15: Sites submit specific draft project proposals for FY04 to IAWG, including proposed scope, schedule, and cost.
- June 16: IAWG presents draft integrated project list for FY04 to Site Offices and NA-10 for initial consideration.
- Aug 15:** Site Offices, with IAWG input, submit an integrated task proposal recommendation for FY04 program activities.
- Aug 29:** Headquarters determines FY04 priorities and funding approach and amount for inactive actinides work.
- Sep 15: October 2003 financial plan released by Headquarters.
- Oct 1: Contractors begin FY04 work.

FY03 milestone commitments are based on existing funding constraints. Future-year milestones will be subject to specific funding set aside for this activity in FY04 and beyond.

The benefits of implementing this three-part strategy include:

- Reducing safety and programmatic risk at NNSA sites;
- Reducing management costs related to inactive nuclear materials;
- Reducing the amount of unneeded materials at sites, making room for programmatically required materials;
- Reducing the liability profile for the ongoing storage of inactive materials;
- Establishing a defensible linkage between material characterization and retention of materials in extended storage;
- Demonstrating strong sustained support by NNSA for addressing legacy nuclear materials issues.