



U.S. Department of Energy  
Office of Inspector General  
Office of Audits and Inspections

# Inspection Report

Follow-up Inspection on Material  
Control and Accountability at  
Los Alamos National Laboratory

INS-O-13-04

July 2013



**Department of Energy**  
Washington, DC 20585

July 18, 2013

MEMORANDUM FOR THE ACTING MANAGER, LOS ALAMOS FIELD OFFICE,  
NATIONAL NUCLEAR SECURITY ADMINISTRATION

*Sandra D. Bruce*

FROM: Sandra D. Bruce  
Assistant Inspector General  
for Inspections  
Office of Inspector General

SUBJECT: INFORMATION: Inspection Report on "Follow-up Inspection on  
Material Control and Accountability at Los Alamos National Laboratory"

INTRODUCTION AND OBJECTIVE

The Department of Energy's (Department) Los Alamos National Laboratory (Los Alamos) is managed and operated under contract by Los Alamos National Security, LLC, for the National Nuclear Security Administration (NNSA). The Los Alamos Field Office is the Federal entity responsible for administering the contract. This contract requires Los Alamos to follow the contractually specified directives on Material Control and Accountability (MC&A) when maintaining certain nuclear materials in support of the Nation's nuclear weapons stockpile program. Examples of these materials include plutonium and enriched uranium, which are then subdivided into four categories of accountable nuclear material. Categories I and II materials are the most attractive for theft or diversion and include pits or other pure products containing significant quantities of nuclear material. Categories III and IV items are less attractive for theft or diversion because they contain smaller quantities of nuclear material. MC&A is part of the Department's safeguards program designed to establish and track nuclear material inventories, control access to nuclear materials and detect the loss or diversion of nuclear materials. Los Alamos tracks, manages and controls nuclear materials in 64 Material Balance Areas (MBAs).

Our September 2007 report on *Material Control and Accountability at Los Alamos National Laboratory*, (DOE/IG-0774) identified weaknesses regarding the control and accountability of nuclear materials. Management committed to implementing the report recommendations and to taking appropriate corrective actions. We initiated this inspection to determine if Los Alamos implemented the planned corrective actions intended to improve the policies and procedures for inventory, transfers, characteristics and locations of nuclear materials related to the MC&A Program.

RESULTS OF INSPECTION

While several corrective actions were completed on the recommendations included in our prior report, our inspection revealed that Los Alamos continued to experience problems with the accountability of certain nuclear materials controlled under its MC&A Program. Specifically, our

testing of 15 MBAs revealed instances in which nuclear materials were not maintained in the correct location, properly labeled or correctly identified in the Los Alamos MC&A database. For one Category IV<sup>1</sup> MBA selected for inventory as part of our follow-up inspection, the Los Alamos Inventory Team identified several weaknesses with the accountability of certain nuclear materials. As a result, consistent with the MC&A Program, the MBA account remained locked until corrective actions could be completed.

The issues we identified occurred, in part, because Los Alamos personnel did not always provide effective oversight to ensure the control and accountability of nuclear materials. Specifically, Los Alamos did not ensure that its accounting record system accurately reflected the identity and location of nuclear materials as required by Department Manual 470.4-6, *Nuclear Material Control and Accountability*. We also determined that it was standard practice for Los Alamos MC&A Group personnel to conduct inventories in the MBAs we reviewed only on a biennial basis. Based on the issues identified in this report, this periodic oversight was not sufficient to ensure MBA inventory control and accounting concerns were identified and addressed in a timely manner. As a consequence, Los Alamos continues to experience location, labeling and MC&A database issues in a limited number of MBAs.

The quantities of the nuclear materials in question were relatively small and the control and accounting issues did not involve materials in sufficient quantity, enrichment and/or configuration to pose a high level of risk. The issues were, however, worthy of correction and could enhance accounting of higher security category nuclear materials. Accordingly, we made recommendations designed to assist management with making additional improvements to the Los Alamos MC&A Program.

### MANAGEMENT REACTION

Management generally agreed with the report's findings and recommendations. As appropriate, we modified our report to address management's comments. The modifications are more fully discussed in the body of our report.

Management's formal comments are included in Appendix 3.

Attachment

cc: Deputy Secretary  
Acting Under Secretary of Energy  
Acting Administrator, National Nuclear Security Administration  
Chief of Staff

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<sup>1</sup> Category IV is the description of the significance of nuclear material based on type, form and amount. It is the least significant of the four categories.

# **REPORT ON FOLLOW-UP INSPECTION ON MATERIAL CONTROL AND ACCOUNTABILITY AT LOS ALAMOS NATIONAL LABORATORY**

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# **FOLLOW-UP INSPECTION ON MATERIAL CONTROL AND ACCOUNTABILITY AT LOS ALAMOS NATIONAL LABORATORY**

## **MATERIAL CONTROL AND ACCOUNTABILITY**

Under the Department of Energy's (Department) Material Control and Accountability (MC&A) Program, each site/facility is required to establish a sustainable, effective graded safeguards program for the control and accountability of nuclear materials to detect and deter theft and diversion, and to prevent the unauthorized control of a weapon, test device, or materials that can be used to make an improvised nuclear device. As part of the MC&A Program, Los Alamos National Laboratory (Los Alamos) maintains accountable nuclear materials in 64 Material Balance Areas (MBAs). MBAs are typically single geographical areas containing integral operations and may include processing or storage areas.<sup>2</sup>

Our report on *Material Control and Accountability at Los Alamos National Laboratory*, (DOE/IG-0774, September 2007) identified numerous weaknesses with the control and accountability of certain nuclear materials. While Los Alamos implemented several of the recommended actions in our report, our inspection revealed that opportunities for further improvements exist with regard to accounting for certain nuclear material items controlled under its MC&A Program.

Of the 15 MBAs reviewed, one Category IV MBA did not meet the 99 percent accuracy requirement for the identity and location of nuclear materials as required by Department Manual 470.4-6, *Nuclear Material Control and Accountability*. Specifically, a total of 1,564 items were inventoried during the Office of Inspector General physical inventory of all 15 MBAs, and 1,538 accurately reflected the correct item identity and location for a 98.34 percent accuracy rate. In one Category IV MBA selected for inventory as part of our follow-up inspection, the Los Alamos Inventory Team identified several weaknesses in the accountability of certain nuclear materials. As a result, consistent with the MC&A Program, the MBA account remained locked until corrective actions could be completed.<sup>3</sup>

### Accuracy of MBA Record System

We found that nuclear material in one MBA was not always maintained in the correct location and that certain nuclear materials were not properly labeled. Department Manual 470.4-6, requires that the accounting record system accurately reflect the item identity and location for at least 99 percent of the items selected. Additionally, the *Los Alamos Material Control and Accountability Plan* requires responsible MBA personnel to reconcile all physical inventories to ensure that all items are inventoried in their location of record. All accountability information must be recorded in the formal Los Alamos Local Area Network Material Accountability System (LANMAS).<sup>4</sup>

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<sup>2</sup> MBAs that are not single geographical areas have been approved by the Field Office in deviation HSS-LANL-10-022, *Single Geographical Area Requirement for an MBA*. For cases where MBAs are not single geographical areas, details describing the situation are documented in the area-specific supplements of the MC&A plan. In no case does an MBA boundary cross a Material Access Area boundary.

<sup>3</sup> In comments to a draft of this report, management identified one Category I MBA that also did not meet the record system performance metric.

<sup>4</sup> LANMAS is the Department standard for Nuclear Material Control and Accountability databases and the handling of related special nuclear material decay calculations.

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The Office of Inspector General selected this MBA for inventory as part of its follow-up inspection, and observed the Los Alamos Inventory Team conduct the inventory. During this 100 percent inventory, the Los Alamos Inventory Team identified several MC&A weaknesses. For example, 5 items were in the wrong location, 1 was labeled with the wrong item identification, 10 labels listed the wrong material type code<sup>5</sup>, and 3 items were not recorded as intrinsically sealed.<sup>6</sup> After completion of the physical inventory, Los Alamos personnel determined that because the MBA did not meet the 99 percent accuracy performance metric for accounting records systems, the MBA account remained secure and immediate corrective actions were initiated to locate the accountable items and correct the item identification problems. According to an official, the MBA account remained locked, consistent with the MC&A Program requirements, until all issues we identified were resolved. Officials said that additional oversight activities would be conducted for this MBA because it failed to meet defined performance requirements, to include conducting a special inventory and trending to identify systemic issues. The actions taken by Los Alamos management addressed the weaknesses identified during MBA inventory activities conducted on June 28, July 12 and September 28, 2012. The Los Alamos MC&A Group told us that it conducted an external evaluation on October 2, 2012, and reported that all identified MC&A weaknesses were corrected.

#### Combining Accountable Nuclear Materials

We found that in two cases, nuclear material items were "physically combined" with other items, but LANMAS was not updated to reflect the combined material configuration. This resulted in inaccurate accounting for the items in question. Although, the Los Alamos Inventory Team determined that two aluminum fuel slats were permanently wedged in a square assembly administrative changes had not been made to the nuclear material inventory in LANMAS and the slats remained listed as separate items. This situation was acknowledged by a Los Alamos official and corrective actions were initiated, resulting in Los Alamos re-measuring the assembly for the additional nuclear material. The nuclear material of the two items was added to the square assembly's material quantity for accountability and the two items were then dropped from the MBA's inventory list as separate items.

The Los Alamos Inventory Team also determined that a lot containing 10 fuel rods was integrated into an assembly already containing 191 rods, for a total of 201 rods. There were no administrative transactions noting the change of location and other than varying rod height and tip color, there were no visual means to determine which rods were associated with each lot. A Los Alamos official immediately initiated corrective actions to address the situation. In both cases, the MBA custodian failed to submit LANMAS transactions showing the change in location of the nuclear material.

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<sup>5</sup> Material Type Code is a two-digit number representing the nuclear material, the particular isotope, and the percent of enrichment.

<sup>6</sup> The *Los Alamos MC&A Plan* contains a list of the types of containers that are considered to be intrinsically tamper-indicating. Containers/items considered to be intrinsically tamper-indicating include welded containers.

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## Identifying Accountable Nuclear Materials

We determined that nuclear material items were not always uniquely identified. We found 10 documented cases, including 2 that occurred in 2012, in which the same identification numbers were used. Los Alamos officials indicated that this condition could have occurred because it had disabled the LANMAS capability that prevented the use of identical alphanumeric characters for item identification during the transfer of data from Materials Accounting and Safeguards System, the older database and accounting record system, to LANMAS. Once the data transfer had been completed, a capability to prevent the use of the same alphanumeric was not reinstated even though the control could help reduce the opportunity for item misidentification.

Further, we noted that the method used to label nuclear materials did not always ensure that the items could be readily identified during the inventory process. During our follow-up testing of control problems identified during our previous inspection, we observed that felt tip pens were still being used for labeling items, causing difficulty in reading the item identification number. While this practice may be acceptable when meeting short term needs, in this specific case, a felt tip pen was used in a glove box in which acetone use was prevalent. This could potentially result in dissolving part of a character in the required alphanumeric item identification, therefore affecting the identification of the item.

### **Contributing Factors and Impact**

The issues we identified occurred, in part, because Los Alamos personnel did not always provide effective oversight to ensure the control and accountability of nuclear materials. Specifically, Los Alamos did not ensure that its accounting record system accurately reflected the identity and location of nuclear materials, as required by Department Manual 470.4-6, which affected the tracking of material inventories. Notably, Los Alamos personnel did not always ensure that the movement of items within the MBAs was properly documented in LANMAS, or that the labels accurately reflected the type of nuclear materials. In addition, the failure to utilize the LANMAS capability that was intended to prevent the use of the same alphanumeric character and the continued use of felt tip pens during glove box operations also contributed to the weaknesses in the accountability of certain nuclear materials maintained by Los Alamos. We also determined that it was standard practice for Los Alamos MC&A Group personnel to conduct inventories in the majority of MBAs that we reviewed only on a biennial basis. Based on the issues identified in this report, this periodic oversight is not sufficient to ensure MBA inventory control and accounting concerns are identified and addressed in a timely manner.

As a consequence of the issues noted, Los Alamos continues to have location, labeling and MC&A database issues in a limited number of MBAs.

### **RECOMMENDATIONS**

To address the issues identified in this report regarding the control and accountability of nuclear materials, we recommend that the Manager, Los Alamos Field Office, direct the Los Alamos National Laboratory to ensure that:

1. The level of oversight for MBAs outside Technical Area-55 is conducted at a frequency sufficient to afford full implementation of the Department's MC&A policy regarding the

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identity and location of accountable nuclear materials, and the updating of the LANMAS nuclear material databases; and,

2. LANMAS database processes prevent the multiple use of the same alphanumeric character as an item identifier.

We recommend that the Chief, Office of Health, Safety and Security, determine whether:

3. MC&A policy should allow for the use of felt tip pens for the labeling of nuclear material items, and describe circumstances for use.

### **MANAGEMENT COMMENTS**

Management generally agreed with the report's findings and recommendations. However, management disagreed with our finding included in our draft report concerning the delayed implementation of Department Order 474.2, *Nuclear Material Control and Accountability*, causing a potential policy gap in this area. Management indicated that it had confirmed, through independent oversight inspections conducted at NNSA sites in 2012 and 2013, that the delay in implementing Department Order 474.2 had no adverse impact on NNSA's MC&A programs.

Management's formal comments are included in Appendix 3.

### **INSPECTOR COMMENTS**

Management's comments were generally responsive to our report findings and recommendations.



### **OBJECTIVE, SCOPE AND METHODOLOGY**

#### **OBJECTIVE**

We initiated this inspection to determine if Los Alamos National Laboratory (Los Alamos) implemented the recommendations of our 2007 inspection report on *Material Control and Accountability at Los Alamos National Laboratory* (DOE/IG-0774) concerning the policies and procedures for the Material Control and Accountability Program's inventory, transfers, characteristics and locations of accountable nuclear materials.

#### **SCOPE**

We conducted this inspection from May 2012 through July 2013 at the National Nuclear Security Administration (NNSA) Albuquerque Complex in Albuquerque, New Mexico; and, the Los Alamos Field Office and Los Alamos National Laboratory, in Los Alamos, New Mexico.

#### **METHODOLOGY**

To accomplish the inspection objective, we:

- Reviewed, analyzed and/or collected Department of Energy, NNSA and Los Alamos guidance and requirements documents;
- Received informational briefings from the NNSA Los Alamos Field Office and Los Alamos personnel;
- Interviewed personnel at the Los Alamos Field Office and Los Alamos; and
- Observed and/or reviewed 15 Material Balance Area judgmental samples or 100 percent inventories.

This inspection was conducted in accordance with the Council of the Inspectors General on Integrity and Efficiency, *Quality Standards for Inspection and Evaluation*, January 2012. Those standards require that we plan and perform the review to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our inspection objective. We believe the evidence obtained provides a reasonable basis for our findings and conclusion based on our inspection objective. The inspection included tests of controls and compliance with laws and regulations to the extent necessary to satisfy the inspection objective. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our inspection. Also, we assessed the Department's compliance with the *Government Performance and Results Modernization Act of 2010* and determined that the Department had established appropriate performance measures for Material Control and Accountability. We relied on computer-processed data to some extent to satisfy our objective. We confirmed the validity of such data, as appropriate, by conducting interviews and reviewing source documents.

The Exit Conference with management was held on April 17, 2013.

### **RELATED REPORTS**

The following reports are related to Material Control and Accountability:

#### **Office of Inspector General**

- Inspection Report on [\*Material Control and Accountability at Los Alamos National Laboratory\*](#) (IG-0774, September 2007). The Department of Energy's (Department) Los Alamos National Laboratory (Los Alamos) has a national security mission that includes responsibility for the science, engineering and technology related to certain radioactive materials supporting the Nation's nuclear weapons program. These include materials such as plutonium, enriched uranium and depleted uranium. Los Alamos maintains inventories of Categories I, II, III and IV accountable nuclear material. Categories I and II materials are those that would be most attractive to an adversary intent on theft or diversion. Categories III and IV materials are those that would be less attractive because they contain smaller quantities of plutonium, uranium or other materials.
- Inspection Report on [\*Material Control and Accountability at Lawrence Livermore National Laboratory\*](#) (IG-0745, November 2006). Lawrence Livermore National Laboratory (Livermore) supports the Department's core mission of maintaining a safe, secure, and reliable nuclear weapons stockpile and applying scientific expertise toward the prevention of the proliferation of weapons of mass destruction and terrorist attacks. Livermore personnel perform tests and study various characteristics of nuclear material, to include accountable nuclear material, which is a collective term that encompasses all materials so designated by the Secretary in quantities that require special control. Examples of these materials include plutonium, enriched uranium, americium, and depleted uranium.

#### **Government Accountability Office**

- Government Accountability Office Report on [\*Nuclear Security: Better Oversight Needed to Ensure that Security Improvements at Lawrence Livermore National Laboratory are Fully Implemented and Sustained\*](#) (GAO-09-321, March 2009). The Department's Office of Independent Oversight found numerous and wide-ranging security deficiencies with Livermore's safeguards and security program. The Department gave the Laboratory the lowest possible rating in two security areas: protective force performance and classified matter protection and control. The plan to remove most of Livermore's special nuclear material by the end of fiscal year 2012 faces challenges because the plan's schedule depends on a number of factors, some of which Livermore does not control, such as the willingness and ability of other National Nuclear Security Administration (NNSA) and Department sites to receive the material, the timeliness of the effort, adequate funding, and the availability of specialized transport trucks operated by NNSA's Office of Secure Transportation to transfer material to other Department sites.

**MANAGEMENT COMMENTS**



**Department of Energy**

Washington, DC 20585

April 18, 2013

MEMORANDUM FOR GREGORY H. FRIEDMAN  
INSPECTOR GENERAL

FROM: ~~GLENN S. POBONSKY~~  
CHIEF HEALTH, SAFETY AND SECURITY OFFICER  
OFFICE OF HEALTH, SAFETY AND SECURITY

SUBJECT: Management Comments on Draft Report "Follow-up Inspection  
on Material Control and Accountability at Los Alamos National  
Laboratory" (S12IS007)

The Office of Health, Safety and Security (HSS) appreciates the opportunity to review the subject draft Office of Inspector General (IG) report provided on April 3, 2013. We found that the draft report does not provide a clear cause and effect relationship between the National Nuclear Security Administration's (NNSA) decision not to implement DOE Order 474.2 and the material control and accountability (MC&A) issues at Los Alamos National Laboratory (LANL) identified in the report. The report indicates that "policy gaps" likely contributed to the issues at LANL, but does not recognize that LANL, and all other NNSA sites, are continuing to operate to the longstanding MC&A requirements in DOE Manual 470.4-6, which are significantly more prescriptive than those in DOE Order 474.2.

**Recommendation 3:** We recommend that the Chief Health, Safety and Security Officer, Office of Health, Safety and Security, determine whether: The setting-aside of Department Order 474.2 had an adverse effect on the MC&A Programs at NNSA sites.

**HSS Response:** Non-concur. HSS Independent Oversight inspections conducted at NNSA sites in 2012 and 2013 have confirmed that the delay in implementing DOE Order 474.2 has had no adverse impact on NNSA MC&A programs because contractors continue to abide by the requirements in DOE Manual 470.4-6 in accordance with their contracts. HSS will continue to evaluate site MC&A programs as part of its Independent Oversight safeguards and security inspections, and will bring any program performance or compliance issues to the attention of cognizant site management. Therefore, while HSS agrees that NNSA sites should continue efforts to implement DOE Order 474.2, we do not agree that additional analysis or study is needed to determine whether the setting aside of DOE Order 474.2 has had an adverse impact on NNSA MC&A programs. HSS suggests that recommendation three of the draft report be deleted.



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**MANAGEMENT COMMENTS**

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**Recommendation 4:** We recommend that the Chief Health, Safety and Security Officer, Office of Health, Safety and Security, determine whether: MC&A policy should allow for the use of felt tip pens for the labeling of nuclear material items, and under what circumstances.

**HSS Response:** Concur. In the next iteration of DOE Standard 1194 (DOE-STD-1194-2011), HSS will add a metric to ensure that each nuclear material item is labeled with a unique identifier that is permanent, legible, and non-duplicative of any other identifier throughout the life cycle of the item and recorded in the accounting system as labeled. The target date for submission of the change to the standard of this action is June 2013.

If you have any questions or require additional information, please contact me at (202) 287-6071, or you have a member of your staff contact Mr. John Boulden, Director, Office of Enforcement and Oversight, at (301) 903-2178.

cc: Neile Miller, NA-1  
Cynthia A. Lersten, NA-MB-1  
Dean Childs, NA-MB-1.1  
William Eckroade, HS-1  
John S. Boulden III, HS-40  
Pernell B. Watson, HS-44  
Larry Wilcher, HS-50

**MANAGEMENT COMMENTS**



**Department of Energy  
National Nuclear Security Administration  
Washington, DC 20585**



May 22, 2013

MEMORANDUM FOR SANDRA D. BRUCE  
ASSISTANT INSPECTOR GENERAL  
FOR INSPECTIONS

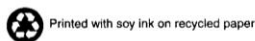
FROM: CYNTHIA A. LERSTEN  
ASSOCIATE ADMINISTRATOR  
FOR MANAGEMENT AND BUDGET

Subject: National Nuclear Security Administration Comments on the Draft  
Inspection Report titled "Follow-up Inspection on Material Control and  
Accountability at Los Alamos National Laboratory (LANL)";  
S12IS007/2012-01033

Thank you for the opportunity to review the subject draft Inspector General (IG) report. The report identifies two recommendations for National Nuclear Security Administration (NNSA) action to ensure issues identified during the inspection are effectively addressed. We agree with those recommendations and are taking steps to develop/implement processes that will result in sustained satisfactory performance to address the IG's concerns not only at Los Alamos National Laboratory (LANL) but across the Nuclear Security Enterprise. NNSA will use its assessment and strategic requirement elements to ensure the cited recommendations are satisfactorily resolved.

We appreciate the inspectors' time and effort in conducting the audit and coordinating the final results with NNSA. The attachment to this memorandum provides our specific response to each recommendation, as well as general and technical comments for the IG's consideration to improve the clarity and factual accuracy of the report. Should you have any questions regarding this response, please contact Dean Childs, Director, Audit Coordination and Internal Affairs at (301) 903-1341.

Attachment



**MANAGEMENT COMMENTS**

Attachment

**NNSA Response to Draft Inspection Report**

“Follow-up Inspection of Material Control and Accountability (MC&A)  
at Los Alamos National Laboratory (LANL)”

To address the issues identified in the report, the Inspector General (IG) recommended the National Nuclear Security Administration (NNSA) ensure:

**Recommendation 1:** The level of oversight for Material Balance Areas (MBAs) outside Technical Area-55 is of a frequency sufficient to afford full implementation of Department MC&A policy regarding the identity and location of accountable nuclear materials, and the updating of the Local Area Network Material Accountability System (LANMAS) nuclear material databases.

***Management Response: Concur***

NNSA agrees that conducting additional physical inventories with MC&A Group oversight is appropriate for cases in which the metrics are not met. To further enhance oversight, the LANL MC&A group will commence periodic meetings between members of the MC&A group, the MBA custodians, and management as an additional means of communicating and emphasizing topics of concern, as well as promoting a free flow of information and ideas. NNSA will also continue to employ risk-based criteria to determine the appropriate frequency for conducting specific oversight activities. NNSA has confidence that the existing risk-based processes, together with the noted MC&A Group meetings with MBA custodians, adequately address the IG’s concerns. NNSA therefore considers this recommendation closed.

Please note, during the IG inspection, a total of 15 MBAs were inventoried. Of these 15 MBAs, 11 are outside of TA-55. Two (2) of the 11 MBAs, both of which are safeguards category IV, failed to meet the accounting records system performance metrics stated in DOE Manual 470.4-6 Chg 1. LANL employees located and identified all of the nuclear material items, in a number of cases within minutes. Most of these items are source or other nuclear materials, and the rest were low enriched uranium.

LANL currently conducts physical inventories at a frequency that is twice what is required for category IV MBAs (annually versus every 24 months). Conducting additional inventories in response to performance metric failures has been an established part of the LANL physical inventory program for years and is expected to continue for the foreseeable future.

MC&A Group oversight for every inventory includes leading the effort with operations personnel and the MBA custodians to ensure that reconciliation of the book inventory versus the physical inventory is conducted and completed. Upon completion of the item reconciliation, the MC&A Group generates accounting ledgers to determine material balances and identifications for each MBA. MC&A Group personnel, with help from the MBA custodian and operations personnel, review this data to assess its accuracy and to correct any data entry errors that may have occurred during material transaction activity.

### MANAGEMENT COMMENTS

Attachment

**Recommendation 2:** LANMAS database processes prevent the multiple use of the same alphanumeric symbol as an item identifier.

***Management Response: Concur in Principle***

From a best business practice standpoint, NNSA will take additional action to address the situation noted in the report. The Laboratory's nuclear material accounting system has three options available that are related to alphanumeric identifiers assigned to nuclear material items. The first option (Option 1) is to allow duplicate identifiers. This is the current situation at the Laboratory. The second option (Option 2) is to provide the user with a warning that the chosen alphanumeric identifier already exists in the database, but not prevent a duplicate identifier from being created. The third option (Option 3) is to provide a notification to the user that the chosen identifier already exists in the database and prevent the creation of a duplicate identifier.

LANL is currently evaluating the ramifications of implementing Option 3, which would prevent the creation of duplicate alphanumeric identifiers. This evaluation includes determining programmatic impacts resulting from making this change to the nuclear material accounting system. The larger effort involves identifying and mitigating, where possible, any workarounds that may be attempted by users of the accounting system. Based on the results of this evaluation, a decision will be made whether or not to deploy Option 3. In the event that Option 3 is viable and deployed, those items with duplicate alphanumeric identifiers that exist in the database will be addressed at the time their accounting system record is modified for any reason.

In the event that Option 3 is not viable, a similar process will be used to evaluate the ramifications of implementing Option 2. In either case, training materials will then be developed and deployed to the user community prior to making any changes to the nuclear material accounting system. The estimated completion date for this action is September 30, 2013.

Please note, however, contrary to the report, federal policy does not specify that alphanumeric symbols used as an item identifier must be unique. DOE M 470.4-6, Section A, Chapter II, paragraph 3 simply states: "The site/facility operator must implement a physical inventory program for nuclear materials to demonstrate that materials are present in their stated quantities and to detect the unauthorized removal of nuclear materials." For several years, LANL has required the use of multiple pieces of information in order to uniquely identify nuclear material items, and at no time has it relied on only the alphanumeric item identifier as the means of item identification. Discrepancies were noted during the physical inventories that LANL performed during the IG inspection. However, LANL located all nuclear material items and at no time were LANL personnel unable to distinguish one nuclear material item from another. As such, NNSA does not believe the recommendation represents a non-compliance issue, nor does it increase risk that items cannot be effectively identified and tracked.

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3. What format, stylistic, or organizational changes might have made this report's overall message more clear to the reader?
4. What additional actions could the Office of Inspector General have taken on the issues discussed in this report that would have been helpful?
5. Please include your name and telephone number so that we may contact you should we have any questions about your comments.

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