



U.S. Department of Energy
Office of Inspector General
Office of Inspections and Special Inquiries

Inspection Report

Internal Controls Over Classified Computers
and Classified Removable Media at the
Lawrence Livermore National Laboratory



Department of Energy

Washington, DC 20585

December 5, 2003

MEMORANDUM FOR THE SECRETARY

FROM:

Greg Friedman
Gregory H. Friedman
Inspector General

SUBJECT:

INFORMATION: Inspection Report on "Internal Controls Over Classified Computers and Classified Removable Media at the Lawrence Livermore National Laboratory"

BACKGROUND

Computers are used extensively in the full range of operations at the Department of Energy's (DOE) Lawrence Livermore National Laboratory (Livermore), including processing classified national security information. Livermore maintains a significant inventory of classified laptop and desktop computers, as well as classified removable media, such as hard drives and computer disks. DOE policy requires strict inventory controls over classified computers and classified removable media. The purpose of this inspection was to determine the adequacy of internal controls over classified computers and classified removable media at Livermore.

RESULTS OF INSPECTION

During the inspection, we were able to physically locate each of the classified laptop computers listed in Livermore's inventory, as well as each of the classified desktop computers and classified removable hard drives we selected for sampling. At the same time, we did identify certain internal control weaknesses in Livermore's administration of its classified computer and classified removable media inventories, increasing the vulnerability of these items to loss, abuse, and theft. Specifically, we found that:

- Classified Nuclear Emergency Search Team computer equipment and removable media were not subjected to required inventories;
- Six classified desktop computers that had been shipped permanently to other DOE sites remained in Livermore's property inventory; and
- A classified removable hard drive was not entered into Livermore's classified removable media tracking and accounting system, as required.



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The findings in this report complement several recent Inspector General reports concerning the adequacy of internal controls over sensitive property such as classified computers and firearms at Departmental facilities. Given current national security concerns, the Department and its contractors must make a maximum effort to safeguard classified computers and classified media to reduce the possibility of loss, abuse, and theft. Consequently, this report includes several recommendations to help to achieve this objective. Because of the security implications, during our inspection we alerted Livermore officials to our findings, so appropriate corrective actions could be initiated immediately.

MANAGEMENT REACTION

Management agreed with our findings and recommendations and identified the corrective actions already taken or planned to address our concerns.

Attachment

cc: Deputy Secretary
Administrator, National Nuclear Security Administration
Under Secretary for Energy, Science and Environment
Manager, Livermore Site Office
Director, Policy and Internal Controls Management

INTERNAL CONTROLS OVER CLASSIFIED COMPUTERS AND CLASSIFIED REMOVABLE MEDIA AT THE LAWRENCE LIVERMORE NATIONAL LABORATORY

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Overview

INTRODUCTION AND OBJECTIVE

Computers are used extensively in the full range of operations at Lawrence Livermore National Laboratory (Livermore), including processing classified national security information. Livermore reported an inventory of 86 classified laptop computers and 1,141 classified desktop computers as of March 2003. In addition, Livermore reported approximately 15,000 pieces of classified removable media. Department of Energy (DOE) policy requires strict inventory controls over classified computers and classified removable media.

The objective of this inspection was to determine the adequacy of internal controls over the accountability of classified computers and classified computer removable media at Livermore. This inspection complements similar work performed at Los Alamos National Laboratory, *“Interim Inspection Report on Inspection of Internal Controls Over Personal Computers at Los Alamos National Laboratory”* (DOE/IG-0597, April 2003); the Savannah River Site, *“Inspection of Internal Controls Over Laptop and Desktop Computers at the Savannah River Site”* (INS-L-03-09, July 29, 2003); and other laboratories, *“Management of Sensitive Equipment at Selected Locations”* (DOE/IG-0606, June 2003). It also complements our recent inspection of Livermore’s internal controls over firearms, *“Firearms Internal Controls at the Lawrence Livermore National Laboratory* (DOE/IG-0621, September 2003).

**OBSERVATIONS
AND CONCLUSIONS**

We were able to account for each of the 86 classified laptop computers listed in Livermore's property inventory, as well as the 272 classified desktop computers and 200 classified removable hard drives we selected for sampling. Despite this, we determined that there were significant inadequacies in the internal controls over classified computers and classified removable media at Livermore.

Specifically, we found that:

- Classified National Nuclear Security Administration (NNSA) Nuclear Emergency Search Team (NEST) computer equipment and removable media were not subjected to required inventories;
- Six classified desktop computers that were shipped permanently to other DOE sites and organizations remained in Livermore's property inventory; and
- A classified removable hard drive was not entered into Livermore's tracking and accounting system for classified removable media, as required.

Because of the security implications, during our inspection we alerted Livermore officials to our findings, so appropriate corrective actions could be initiated immediately.

Details of Findings

NEST EQUIPMENT

We found that classified NEST computer equipment and removable media were not subjected to required inventories. DOE policy presented in the “Classified Matter Protection and Control Manual” requires that NEST classified computer equipment and related media undergo a complete inventory at least once a month by two individuals. Based on historical events and the clear vulnerability of classified computer equipment and media, such exceptional inventory requirements are an essential component of the Department’s effort to ensure national security. However, we identified three pieces of NEST classified computer equipment and five classified removable media that were not being inventoried on a monthly basis by two individuals; rather, inventories were conducted intermittently at longer intervals by one person. Additionally, we identified two NEST classified removable media that were being inventoried on an annual basis, but not on a monthly basis as required. Reportedly, these media did not contain sensitive information. A Livermore official responsible for the NEST equipment advised that he was unaware of the DOE inventory requirements.

TRANSFERRED CLASSIFIED COMPUTERS

We found that six classified desktop computers that were shipped permanently to other DOE sites and organizations remained in Livermore’s property inventory. The six classified desktop computers were sent to other DOE sites and organizations one or more years ago under the DOE Secure Communications and Teleconferencing¹ (SCAT) project. Details on the computers’ locations and dates of shipment are as follows:

Type	DOE Location	Date Shipped
Desktop Computer	Bechtel, Andrews AFB, MD	7/29/99
Desktop Computer	Pantex Plant, Amarillo, TX	8/23/99
Desktop Computer	ORISE, Kirtland AFB, NM	10/25/00
Desktop Computer	DOE, Wash., DC	12/12/00
Desktop Computer	Savannah River Site Office, GA	1/24/01
Desktop Computer	Yarrow, Assoc., Fairfax, VA	10/25/01

¹ The SCAT system is used for crisis and routine communication by DOE, the Department of Homeland Security, and other emergency response organizations. Livermore is responsible for the acquisition and transfer of all SCAT computers to DOE sites and organizations in the SCAT program.

We were advised that the transfer of ownership for the six computers was not completed in a timely manner because the property representative responsible for the transfer had overlooked the requirement. A Livermore official said that action was being taken to transfer ownership of the six classified computers to the appropriate DOE sites and organization.

**CLASSIFIED
REMOVABLE
MEDIA**

We found that a classified removable hard drive was not entered into Livermore's tracking and accounting system for classified removable media. We accounted for each of the 200 classified removable hard drives in our judgmental sample of the 2,309 classified removable hard drives listed in Livermore's tracking and accounting system. However, during our sampling of the classified removable hard drives, we identified a classified removable hard drive that was not entered into Livermore's tracking and accounting system. We were advised that the reason for this was an oversight by a Livermore employee. The exclusion of any classified media from the Laboratory's tracking system, regardless of the underlying cause, has serious implications for the security and accountability of highly sensitive materials.

Livermore officials informed us that they took immediate action to correct this condition. Livermore officials advised that they entered the classified hard drive into Livermore's tracking and accounting system. Livermore officials also advised that they conducted a physical inventory of all classified removable hard drives and that all other media was being tracked and accounted for. Further, Livermore officials advised that Livermore published a "Lessons Learned" bulletin reminding all employees that all "classified removable electronic media" are accountable and must be tracked in Livermore's tracking and accounting system for classified removable media.

RECOMMENDATIONS

Livermore's failure to adequately enforce inventory and accountability requirements for classified items increases the vulnerability of classified computers and media, including critical NEST equipment, to loss, abuse, and theft. Therefore, we recommend that the Manager, Livermore Site Office, ensure that:

1. All NEST classified computer equipment and removable media are subjected to inventory reviews in accordance with DOE policy;
2. Livermore transfers the ownership of all SCAT classified desktop computers to the appropriate DOE sites and organizations; and
3. Steps are taken to ensure that classified media is immediately controlled upon being designated as classified.

**MANAGEMENT
COMMENTS**

On November 18, 2003, the Associate Administrator for Management and Administration, National Nuclear Security Administration, provided written comments on our draft inspection report. The Associate Administrator's verbatim response is included as Appendix B to this report. Management agreed with the report findings and recommendations and identified corrective actions taken or planned relating to the recommendations.

**INSPECTOR
COMMENTS**

We consider management's comments and actions regarding the findings and recommendations contained in our report to be responsive.

Appendix A

SCOPE AND METHODOLOGY

We conducted the fieldwork portion of our review during January 2003 to June 2003. Our review included interviews with officials from the Livermore Site Office and Lawrence Livermore National Laboratory. In addition, we conducted inventory verification of a judgmental sampling of classified desktop computers. We also reviewed applicable policies and procedures and other records regarding property management and computers, including:

- Livermore Management and Operating Contracts.
- DOE Property Management Regulations, Title 41 Code of Federal Regulations, Chapter 109.
- Livermore Property Management Policies and Procedures.
- DOE M 471.2-1C, Classified Matter Protection and Control Manual, Approved 4-17-01.
- DOE M 471.2-2, Classified Information Systems Security Manual, dated 8-3-99.
- Livermore's Classified Document User's Manual, dated October 2002.
- Livermore's Accountable Documents and Media Procedures, dated September 2000, Revised March 11, 2002.
- Livermore's General Plan 4001 v1.3, General Computer Security Plan for PL-1 Multiple User Classified Systems, dated July 30, 2002.
- Livermore's Policy 4303 v4.3, Classified – Single User Stand Alone (SUSA) Security Plan, dated July 24, 2002.

This inspection was conducted in accordance with the "Quality Standards for Inspections" issued by the President's Council on Integrity and Efficiency.

Appendix B

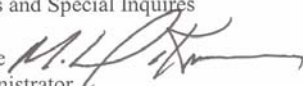


Department of Energy
National Nuclear Security Administration
Washington, DC 20585



NOV 18 2003

MEMORANDUM FOR Alfred K. Walters
Acting Assistant Inspector General
for Inspections and Special Inquiries

FROM: Michael C. Kane 
Associate Administrator
for Management and Administration

SUBJECT: Comments to Draft Report; LLNL's Control Over Classified
Computers

The Office of Inspector General (IG) issued their draft report, "Inspection of Internal Controls Over Classified Computers and Classified Removable Media at the Lawrence Livermore National Laboratory" on October 16, 2003. We appreciate having had the opportunity to have reviewed the draft report. NNSA understands that the objective of this inspection was to determine the adequacy of internal controls over the accountability of classified computers and classified computer removable media at the Lawrence Livermore National Laboratory (LLNL).

While the IG Inspectors were able to account for all equipment selected for sampling (86 laptops; 272 PCs; and 200 removable hard drives--all classified), the IG still concluded that there were significant inadequacies in the internal controls over classified computers and classified removable media at the Laboratory. The IG believed that LLNL's failure to adequately enforce inventory and accountability requirements for classified items increases the vulnerability of classified computers and media, including critical NEST equipment, to loss, abuse, and theft.

NNSA agrees with the report's findings and recommendations. LLNL has implemented or is in the process of implementing corrective actions relating to the recommendations. Attached is NNSA's management decision on the recommendations.

If you have any questions, please contact Richard Speidel, Director, Policy and Internal Controls Management, at 202-586-5006.

Attachment

cc: Camille Yuan Soo Hoo, Manager, Livermore Site Office
Robert Braden, Senior Procurement Executive, NA-63
William Desmond, Director, Office of Nuclear Safeguards and
Security Programs, NA-55
David Marks, Field Chief Financial Officer, SvcCen/NV



**National Nuclear Security Administration
Management Decision
to the Inspector General's Draft Report
"Inspection of Internal Controls Over Classified Computers
and Classified Removable Media at the
Lawrence Livermore National Laboratory"**

We recommend that the Manager, Livermore Site office, ensure that:

Recommendation 1

All NEST classified computer equipment and removable media are subjected to inventory reviews in accordance with DOE policy

Management Decision

Concur

While the LLNL NEST Team has been very diligent in checking and inventorying their equipment, the inventories have not been performed using the two-person rule as required by DOE security policy. LLNL NEST personnel have been conducting weekly inventories in conjunction with their requirement to test the computer equipment. There are 177 inventory sheets covering the time period of January 2002 through October 2003. However, the form of the inventories was not one that led to an easy inspection because of changes in the format of the inventory checklist and multiple inventory locations. Some of the items had also been deployed to Kirtland Air Force Base, but the accompanying receipts were not stapled to the inventory sheet.

In addition, the draft report mentions that two NEST classified removable media were not being inventoried at all. In fact, the media was being inventoried annually and did not contain any sensitive data. This media will now be included in the future monthly inventories.

Currently, LLNL is inventorying NEST computers and removable classified media using the two person rule. After the OIG exit conference, the LLNL Classified Matter Protection and Control Manager reviewed all of the inventory files and designed a new checklist that enables someone to easily verify the items being inventoried. It will be used for the next monthly inventory. LLNL NEST computer security will now validate that monthly inventories have been completed. NNSA LSO will validate that these corrective actions are in place by December 7, 2003.

Recommendation 2

Livermore transfers the ownership of all SCAT classified desktop computers to the appropriate DOE sites and organizations.

Management Decision

Concur

This discrepancy was apparently due to an oversight on the part of the LLNL property representative. LLNL has since transferred ownership of these computers to the appropriate DOE sites and organizations. The LLNL Property Manager met with the property representative involved in the transfer to coach the employee on property transfer procedures. We consider the actions taken responsive and complete.

Recommendation 3

Steps are taken to ensure that classified media is immediately controlled upon being designated as classified.

Management Decision

Concur

This issue led to NNSA LSO issuing the following finding to LLNL in May 2003: LLNL Classified Matter Protection and Control practices do not ensure that all classified removable media are subjected to accountability controls as required. LLNL accountability processes do not address all material that should be accounted for and inventoried (03-LLNL-IS.2-001). Corrective Actions included:

- A wall to wall assessment was completed on March 28, 2003 to identify if additional items were not in accountability. LLNL will conduct another wall to wall assessment in June 2004.
- A working group was formed by the LLNL Director's Office to identify and address root causes. A final report was delivered to LSO on June 10, 2003.

- Local operating plans were developed covering issues related to training requirements and notification to employees of local processes developed to ensure classified removable media were placed into accountability. Full implementation of these plans is expected by November 21, 2003.

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