



OFFICE OF INSPECTOR GENERAL

U.S. Department of Energy

INSPECTION REPORT

DOE-OIG-24-11

January 2024

**ALLEGATIONS OF SECURITY AND
SAFETY CONCERNS AT SANDIA
NATIONAL LABORATORIES**



Department of Energy
Washington, DC 20585

January 30, 2024

MEMORANDUM FOR THE MANAGER, SANDIA FIELD OFFICE

SUBJECT: Inspection Report on Allegations of Security and Safety Concerns at Sandia National Laboratories

The attached report discusses our review of allegations regarding security and safety at Sandia National Laboratories. This report contains four recommendations that, if fully implemented, should help ensure that similar security events do not occur in the future. Management fully concurred with our recommendations.

We conducted this inspection from January 2023 through November 2023 in accordance with the Council of the Inspectors General on Integrity and Efficiency's *Quality Standards for Inspection and Evaluation* (December 2020). We appreciated the cooperation and assistance received during this inspection.

A handwritten signature in black ink, appearing to read "Anthony Cruz".

Anthony Cruz
Assistant Inspector General
for Inspections, Intelligence Oversight,
and Special Projects
Office of Inspector General

cc: Deputy Secretary
Chief of Staff



Department of Energy Office of Inspector General

Allegations Regarding Security and Safety Concerns at Sandia National Laboratories (DOE-OIG-24-11)

WHY THE OIG PERFORMED THIS INSPECTION

The IG Hotline received two complaints alleging inappropriate management response to security and safety events at Sandia National Laboratories (SNL) in Albuquerque, New Mexico.

The complainant alleged that SNL management allowed a vendor to introduce and use a Bluetooth-enabled device in a Limited Area (LA) where unapproved electronic devices are expressly prohibited. Further, the complainant alleged that SNL management did not track the Bluetooth-enabled device while it was in the LA; did not report it properly; and was attempting not to report it.

The complainant also alleged that, in February 2022, management neither documented the cause nor addressed concerns related to a water leak that flooded part of the Microsystems Engineering, Science and Applications Complex and posed serious risks to equipment and personnel.

We initiated this inspection to determine the facts and circumstances regarding the alleged security and safety concerns at SNL.

What Did the OIG Find?

We substantiated the allegation that SNL management allowed a vendor to introduce and use a prohibited Bluetooth-enabled device in a LA, and SNL management did not track its presence or report it properly. However, we did not substantiate that SNL management deceptively attempted not to report it. Specifically, we determined that SNL management had approved an exemption for the Bluetooth-enabled device to be brought into the LA on a temporary basis and did not track it. This occurred because SNL management: (1) did not properly identify the device as a Controlled Article; (2) should not have allowed the Bluetooth-enabled device to be brought into the LA without going through the established approval process; and (3) approved a policy exception that inadvertently deviated from the federally approved process. Although we did not find that SNL management deceptively attempted not to report the incident, we did find that because the Bluetooth-enabled device was not appropriately identified as a Controlled Article, management did not consider whether this event qualified as an Incident of Security Concern.

We did not substantiate the allegation that SNL management failed to respond to a water leak that subsequently flooded part of SNL's Microsystems Engineering, Science and Applications Complex.

What Is the Impact?

The introduction of prohibited electronic devices in designated security areas increases the risk of compromise of national security information. The use of such devices in security areas could introduce threats from unintentional disclosures, insiders, and adversaries.

What Is the Path Forward?

To address the issues identified in this report, we made four recommendations that, if fully implemented, should help ensure similar security events do not occur in the future.

BACKGROUND

Sandia National Laboratories (SNL), whose primary site is in Albuquerque, New Mexico, grew out of the U.S. World War II effort to develop the first atomic bombs. SNL continues to keep the U.S. nuclear stockpile safe and secure as a multidisciplinary national security and engineering laboratory. National Technology and Engineering Solutions of Sandia, LLC., operates and manages SNL for the National Nuclear Security Administration (NNSA), a semi-autonomous agency within the Department of Energy. NNSA's Sandia Field Office (SFO) is responsible for Federal oversight of SNL's operations.

The Microsystems Engineering, Science and Applications (MESA) complex at SNL houses advanced nuclear weapons research, design, and development functions, as well as integrated materials research and the production facilities for microsystem technologies. This suite of facilities encompasses approximately 400,000 square feet and includes cleanroom facilities, laboratories, and offices, some of which operate 24 hours a day, 5 days a week. NNSA invests heavily in personnel and materiel to advance national security objectives for safeguarding classified activities and information.

On September 2, 2022, the IG Hotline received two complaints alleging inappropriate management response to security and safety events at SNL. The complainant alleged that SNL management allowed a vendor to introduce and use a Bluetooth-enabled device in a Limited Area (LA) where unapproved electronic devices are expressly prohibited. Further, the complainant alleged that SNL management did not track the Bluetooth-enabled device while it was in the LA; did not report it properly; and was attempting not to report it.

The complainant also alleged that, in February 2022, management neither documented the cause nor addressed concerns related to a water leak that flooded part of the MESA complex and posed serious risks to equipment and personnel.

We initiated this inspection to determine the facts and circumstances regarding the alleged security and safety concerns at SNL.

BLUETOOTH-ENABLED DEVICE

We substantiated the allegation that SNL management allowed a vendor to introduce and use a prohibited Bluetooth-enabled device in a LA, and SNL management did not track its presence or report it properly. We did not substantiate that SNL management deceptively attempted not to report it; however, we did find that because the Bluetooth-enabled device was not appropriately identified as a Controlled Article, management did not consider whether this event qualified as an Incident of Security Concern. Specifically, we determined that SNL management had approved an exemption for the Bluetooth-enabled device to be brought into the LA on a temporary basis and did not track it during the exception's timeframe. This occurred because SNL management: (1) did not properly identify the device as a Controlled Article; (2) should not have allowed the Bluetooth-enabled device to be brought into the LA without going through the established approval process for Controlled Articles; and (3) approved a policy exception that inadvertently deviated from the federally approved process.

Bluetooth-Enabled Device Temporarily Allowed in Limited Area

When SNL purchased a large, multimillion-dollar tool to enhance production capabilities at SNL, the vendor required that a Bluetooth-enabled device be attached to it during transit and installation to validate the warranty. On April 12, 2022, the vendor notified SNL personnel that the tool, expected to arrive on April 28, 2022, would arrive with a battery-powered, Bluetooth-enabled device attached to it. The vendor's warranty required the Bluetooth-enabled device because it could track and verify proper handling and environmental conditions. Further, the warranty required that only vendor personnel remove the Bluetooth-enabled device from the tool.

FIGURE 1. PHOTOGRAPH OF BLUETOOTH DEVICE



PROVIDED BY SNL MANAGEMENT

According to SNL Policy IT004, *Manage Controlled Electronic Devices and Media Policy*, "If a device does not have the ability to turn off Bluetooth, it may not be brought into [a LA]." To allow the tool in the LA and maintain the vendor's warranty, SNL management granted an exception to Policy IT004 for 5 days, starting April 27, 2022. On April 28, 2022, the vendor began installation, as expected.

Bluetooth-Enabled Device Was Not Tracked

We substantiated that SNL management did not track either the Bluetooth-enabled device while it was in the LA or the expiration of its policy exception. Several weeks after the Bluetooth-enabled device was brought into the LA, SFO officials asked SNL management whether the Bluetooth-enabled device had been removed. In responding to the SFO officials' query, SNL management learned on May 23, 2022, that the vendor had not yet removed the Bluetooth-enabled device from the tool, and the device remained in the LA. SNL personnel then contacted the vendor who removed the Bluetooth-enabled device on May 24, 2022.

Bluetooth-Enabled Device Was Not Identified as Controlled Article

We found that SNL personnel failed to properly identify the Bluetooth-enabled device as a Controlled Article. SNL management considered whether the Bluetooth-enabled device could be a Controlled Article but stated in the approved policy exception that it was not. However, according to Department of Energy Order 473.1A (Department Order 473.1A), *Physical Protection Program*, Controlled Articles include portable electronic devices capable of recording information or transmitting data. The Bluetooth-enabled device was capable of recording data during transit and later transmitting that data via Bluetooth technology. We discussed this situation with two SFO officials, each of whom was an Officially Designated Federal Security Authority¹ (ODFSA) for SNL. The ODFSAs told us that while they were not involved in the approval process, they reviewed the Bluetooth-enabled device in May 2022 and concluded that it was a Controlled Article. Further, the ODFSAs referred the matter in May 2022 to a security

¹ Officially Designated Federal Security Authorities are Federal employees who possess the appropriate knowledge and responsibilities for each situation to which they are assigned, and they are responsible for physical, technical, personnel, and information security matters affecting the location identified in the delegation.

official from NNSA Headquarters who also concurred that the Bluetooth-enabled device was a Controlled Article.

Inappropriate Exceptions to Federally Approved Controlled Articles Process

SNL management should not have allowed the Bluetooth-enabled device to be brought into the LA without going through the established approval process for Controlled Articles. Department Order 473.1A addresses both Government-owned and personally owned Controlled Articles, and we determined that the Bluetooth-enabled device was personally owned because it was not owned by a Government entity. Therefore, according to Department Order 473.1A, the Bluetooth-enabled device is not allowed in LAs without going through a process approved by the ODFSA and documented in a security plan. SNL's security plan refers to SNL Policy SS007, *Controlled and Prohibited Articles Policy*, for restrictions on Controlled Articles. Policy SS007 states that SNL personnel must not introduce personally owned Controlled Articles into LAs unless specifically identified as allowable in Policy IT004. The Bluetooth-enabled device described in the allegation was not identified in Policy IT004. Nevertheless, when SNL management failed to identify the Bluetooth device as a Controlled Article, it believed it had authority to approve an exception and allowed the Bluetooth-enabled device to be brought into the LA.

SNL management approved a policy exception that inadvertently deviated from the federally approved process because SNL policies for managing Controlled Articles inappropriately allow it. We found that both Policy IT004 and Policy SS007 state that designated Executive Policy Owners—who we determined were SNL contractor executives—can approve requests for exceptions to those policies. However, neither policy limits that authority to only approving exceptions for devices other than Controlled Articles. Meanwhile, Department Order 473.1A states that the approval process for allowing Controlled Articles to enter LAs must be approved by the ODFSA. In addition, the Director of the Department's Office of Security Policy told us that the approval authority for the introduction of Controlled Articles is the ODFSA. Therefore, exceptions to SNL policies that also deviate from the ODFSA-approved process cannot be approved by anyone other than the ODFSA. When we discussed this with SNL management, some members of management asserted that Policy IT004 does not apply to Controlled Articles. However, two SNL policy documents,² that the ODFSA-approved SNL security plan listed as part of the federally approved process, clearly state that Policy IT004 is also part of that process.

Bluetooth-Enabled Device as Potential Incident of Security Concern

Finally, although we did not find that SNL management deceptively attempted not to report the incident, we did find that because the Bluetooth-enabled device was a Controlled Article that was not approved through established processes, SNL security personnel should have considered whether its presence in the LA qualified as a reportable Incident of Security Concern. On May 24, 2022, SNL personnel reported to the SNL Security Incident Management Program that a Bluetooth-enabled device, which had received a temporary policy exception, remained in the LA

² The SNL policy documents include Policy SS007, *Controlled and Prohibited Articles*, and ODFSA Approval Request Letter SO-SNL-SN-ODFSA-2018-0011, *Controlled Articles at SNL*, which requested approval from the ODFSA for the SNL Controlled Articles process and was subsequently approved.

past the expiration date. On May 26, 2022, the Security Incident Management Program categorized the expiration of the policy exception as a Non-Incident/Non-Compliance and took no further action. Department Order 470.4B, *Safeguards and Security Program*, describes the requirements for reporting potential security incidents according to the circumstances involved. It describes one of those circumstances as non-adherence to security procedures. According to SFO and NNSA officials, the presence of an unapproved Controlled Article in a LA could qualify as an Incident of Security Concern, which would require reporting the incident in a national information system, conducting an inquiry, documenting identified causes, and tracking corrective actions. SNL’s Security Incident Management Program personnel told us that they did not consider whether the introduction of the Bluetooth-enabled device into the LA was a potential Incident of Security Concern because the exception signed by SNL management states that the Bluetooth-enabled device is not a Controlled Article.

IMPACT

The introduction of prohibited electronic devices into designated security areas increases the risk of compromise of national security information. The use of such devices in security areas could introduce threats from unintentional disclosures, insiders, and adversaries. Also, without proper categorization and reporting of security events, required and beneficial follow-up activities may not take place. Such activities include conducting inquiries, identifying causes, tracking corrective actions, and documenting lessons learned.

RESPONSE TO FLOODING EVENT

We did not substantiate the allegation that management made no effort to document relevant concerns or the cause of a water leak that posed a serious risk to equipment and personnel when it flooded part of the MESA complex.

On February 4, 2022, an alarm alerted SNL personnel to a possible water leak on a tool that had received maintenance earlier in the day. After investigation, SNL personnel discovered that a water supply line had disconnected and leaked approximately 1,500–2,000 gallons of water. The leak flooded the facility’s basement where additional equipment and electrical connections were present. Emergency response teams and custodial services performed cleanup activities, and the area resumed regularly scheduled operations on Monday, February 7, 2022.

We found that management’s response to the flooding event was reasonable and appropriate for the severity of the event. We reviewed documentation of the actions taken in response to the event, and we compared it to requirements in relevant Department guidance and site policies. We determined that SNL personnel generally followed

FIGURE 2. PHOTOGRAPH OF FLOODED BASEMENT



PROVIDED BY SNL MANAGEMENT

established procedures and processes to evaluate potential impacts of the event and to report details, as required. Additionally, we found that SNL’s evaluation of potential impacts identified no significant impacts to the tool at the source of the leak or any other tools in the MESA complex.

SNL personnel appropriately documented the event by reporting it to Performance Assurance³, which is a unit within the SNL contractor’s organization that independently reviews, assesses, and tracks such events. Performance Assurance interviewed the personnel who reported it; responded to it; and were assigned to or responsible for the area in which it occurred. Performance Assurance also requested that technical specialists evaluate the situation. At the conclusion of its review, Performance Assurance categorized the event as a minor deficiency because it did not meet occurrence reporting criteria as defined by Department Order 232.2A, *Occurrence Reporting and Processing of Operations Information*, nor qualify as a non-occurrence trackable event per SNL Policy MN471022, *Environment, Safety, and Health Manual*.

Further, an SNL Environment, Safety, and Health Coordinator for the MESA complex evaluated the impacts of the event. The Coordinator identified no potential environment, safety, or health impacts to personnel and recorded the event in the database for tracking purposes.

SNL management determined that the cause of this event was an improperly installed pipe clamp on the water supply line that failed to keep the pipe connected. SNL management attributed this failure to human error on the part of the subcontractor who had performed maintenance work on the tool earlier on the day of the event. Due to the relatively minor impact of the event and the readily identifiable cause, SNL management decided that a formal causal analysis was not needed.

FIGURE 3. PHOTOGRAPH OF DISCONNECTED WATER SUPPLY LINE



PROVIDED BY SNL MANAGEMENT

RECOMMENDATIONS

We recommend that the Manager, SFO, ensure:

1. SNL management develops a process to accurately identify, assess, and approve Controlled Articles before these items are allowed into security areas;
2. SNL policies addressing Controlled Articles do not allow SNL management to grant exceptions to processes that require approval from the ODFSA;
3. SFO’s approved guidance regarding Controlled Articles at SNL is up to date, aligns with current Department policies, and meets the approval of the ODFSA; and

³ Performance Assurance is a separate department within the SNL contractor’s organization whose personnel are responsible for categorizing events. They also participate in a collaborative causal analysis process with other stakeholders, which results in the identification of facts, issues, and causes.

4. SNL determines if an Incident of Security Concern occurred and takes appropriate action.

MANAGEMENT RESPONSE

Management fully concurred with our recommendations. Management stated that the SFO had been working with National Technology and Engineering Solutions of Sandia, LLC, the management and operating contractor for SNL, to improve and refine the Controlled Articles Program at SNL since May 2022. Specifically, the SFO stated it would: (1) develop a project plan to improve its prohibited and Controlled Articles Program; (2) ensure ODFSA approval is obtained when required; (3) ensure that SNL process and policy updates, including the Site Security Plan, align with Department and NNSA orders, directives, and policies; and (4) work with SNL to review and determine whether an Incident of Security Concern had occurred and take appropriate action.

Management's comments are included in Appendix 3.

INSPECTOR COMMENTS

Management's response and proposed corrective actions are fully responsive to our recommendations.

OBJECTIVE

We initiated this inspection to determine the facts and circumstances regarding the alleged security and safety concerns at Sandia National Laboratories.

SCOPE

The inspection was performed from January 2023 through November 2023 at Sandia National Laboratories and the Sandia Field Office in Albuquerque, New Mexico. The scope of the inspection was limited to the facts and circumstances regarding the events described in the two allegations. The inspection was conducted under Office of Inspector General project number S23LL009.

METHODOLOGY

To accomplish our inspection objective, we:

- Interviewed the complainant;
- Reviewed applicable laws, regulations, orders, guidance, policies, and procedures;
- Conducted site visits at Sandia National Laboratories in Albuquerque, New Mexico;
- Interviewed key Federal and contractor personnel;
- Obtained and reviewed documents and emails concerning various aspects of the allegations; and
- Reviewed related Government Accountability Office reports.

We conducted this inspection in accordance with the *Quality Standards for Inspection and Evaluation* (December 2020) as put forth by the Council of the Inspectors General on Integrity and Efficiency. We believe that the work performed provides a reasonable basis for our conclusions.

Management officials waived an exit conference on January 17, 2024.

Appendix 2: Related Reports

- Preliminary Notice of Violation on [*National Technology and Engineering Solutions of Sandia, LLC*](#) (December 2022). This notice addresses an Incident of Security Concern regarding the introduction of unauthorized electronic equipment into security areas at Sandia National Laboratories (SNL). In February 2020, SNL discovered unauthorized electronic equipment (i.e., video cameras) had been introduced into the Limited Area outside of the SNL Technical Library, which is a vault-type room, and into the Technical Library itself. Self-assessments did not evaluate the effectiveness of activities related to preventing the presence of unauthorized recording devices that could compromise classified information in security areas and found 66 unapproved Controlled Articles in 23 separate vault-type rooms.
- Report on [*Los Alamos National Laboratory: Contractor Improving in Safety and Other Areas but Still Faces Challenges*](#) (GAO-22-105412, June 2022). This report mentions a flood event at Los Alamos National Laboratory and states that the National Nuclear Security Administration (NNSA) would like to see an improved culture of safety there. The Department of Energy defines safety culture as the values and behaviors that serve to make safe performance of work the overriding priority in its National Laboratories. NNSA conducted a fiscal year 2021 performance evaluation and cited non-adherence to safety procedures as leading to the water overflow. NNSA's fiscal year 2021 report noted additional safety basis problems, such as inconsistencies and incomplete information in the evaluation of the spill event, that revealed potential gaps in the facility's safety basis.

Appendix 3: Management Comments

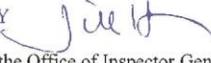


Department of Energy
Under Secretary for Nuclear Security
Administrator, National Nuclear Security Administration
Washington, DC 20585



January 3, 2024

MEMORANDUM FOR TERI L. DONALDSON
INSPECTOR GENERAL
OFFICE OF THE INSPECTOR GENERAL

FROM: JILL HRUBY 
SUBJECT: Response to the Office of Inspector General (OIG) Draft Report,
*Allegations of Security and Safety Concerns at Sandia National
Laboratories (S23LL009)*

Thank you for the opportunity to review and comment on the subject draft report. The National Nuclear Security Administration (NNSA) appreciates the OIG's independent review and validation of concerns regarding controlled articles processes at Sandia National Laboratories (SNL).

Consistent with the report's recommendations, SFO has been working with SNL's management and operating contractor, National Technology & Engineering Solutions of Sandia, LLC to improve and refine the controlled articles program at the laboratory since May 2022. The attached management decision outlines actions taken and planned.

If you have any questions regarding this response, please contact Mr. Dean Childs, Director, Audits and Internal Affairs, at (202) 836-3327.

Attachment

NATIONAL NUCLEAR SECURITY ADMINISTRATION
Management Decision

Allegations of Security and Safety Concerns at Sandia National Laboratories (S23LL009)

The Office of Inspector General (OIG) recommended that the Department of Energy's National Nuclear Security Administration (DOE/NNSA):

Recommendation 1: Ensure Sandia National Laboratories (SNL) management develops a process to accurately identify, assess, and approve Controlled Articles before these items are allowed into security areas.

Management Response: Concur. At the request of the Sandia Field Office (SFO), NNSA's Security Management Improvement Program conducted a review of SNL's policies and procedures for the management of prohibited and controlled articles. Based on the results of this review, SFO directed National Technology & Engineering Solutions of Sandia, LLC to develop a project plan to improve their prohibited and controlled articles program. This project plan identifies process modifications and associated policy updates to be completed that will help ensure that controlled articles are accurately identified, assessed, and approved prior to being allowed into security areas. This includes incorporating Technical Surveillance Countermeasures subject matter expert reviews into the controlled articles approval process. These actions are expected to be completed by June 30, 2024.

Recommendation 2: Ensure SNL policies addressing Controlled Articles do not allow SNL management to grant exceptions to processes that require approval from the Officially Designated Federal Security Authority (ODFSA).

Management Response: Concur. The policy updates referenced in response to Recommendation 1 will address the exception process to ensure that ODFSA approval is obtained when required. These actions are expected to be completed by June 30, 2024.

Recommendation 3: Ensure SFO's approved guidance regarding Controlled Articles at SNL is up to date, aligns with current Department policies, and meets the approval of the ODFSA.

Management Response: Concur with clarification. Discussion with the inspection team clarified the "guidance" referenced in this recommendation is the SNL Site Security Plan and not specific SFO guidance. As part of implementing Recommendations 1 and 2, SFO will ensure that SNL process and policy updates, including the Site Security Plan, are in alignment with DOE/NNSA orders, directives, and policies; and approved by the ODFSA where appropriate. These actions are expected to be completed by June 30, 2024, consistent with the closure of recommendations 1 and 2.

Appendix 3: Management Comments

Attachment

Recommendation 4: Ensure SNL determines if an Incident of Security Concern occurred and takes appropriate action.

Management Response: Concur. SFO will work with SNL to review and determine whether the situation discussed in this report should have resulted in an Incident of Security Concern and take action as appropriate based on the results of that review. These actions are expected to be completed by June 30, 2024.

FEEDBACK

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Department of Energy
Washington, DC 20585

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