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Office of Inspector General
Office of Audits and Inspections

Audit Report

The Resumption of Criticality
Experiments Facility Operations at the
Nevada National Security Site

OAS-M-13-09

September 2013



Department of Energy
Washington, DC 20585

September 30, 2013

MEMORANDUM FOR THE PRINCIPAL DEPUTY ADMINISTRATOR, NATIONAL
NUCLEAR SECURITY ADMINISTRATION

George W. Collard

FROM: George W. Collard
Assistant Inspector General
for Audits
Office of Inspector General

SUBJECT: INFORMATION: Audit Report on "The Resumption of Criticality
Experiments Facility Operations at the Nevada National Security Site"

BACKGROUND

The mission of the Criticality Experiments Facility, located at the Los Alamos National Laboratory (Los Alamos) was to conduct nuclear criticality experiments and hands-on training in nuclear safeguards, criticality safety and emergency response in support of the National Criticality Safety Program. Citing safety and security concerns, in 2004 the National Nuclear Security Administration (NNSA) halted criticality experiments at Los Alamos and authorized a capital project to transfer this capability to the Device Assembly Facility at the Nevada National Security Site (Nevada). The Nevada Field Office provided oversight of the project, which was managed through a joint contractor project team composed of Los Alamos, Lawrence Livermore National Laboratory (Livermore), National Security Technology, LLC (NSTec) and Wackenhut Services International. NSTec was responsible for maintaining the infrastructure and safety basis documentation needed to operate the facility. Safety basis documentation describes the facility and the controls needed to ensure safe operations. The project remodeled a portion of the Device Assembly Facility to form the National Criticality Experiments Research Center (NCERC). Four criticality machines, named Godiva, Planet, Comet and Flat-Top, were transferred from Los Alamos to NCERC as part of this project. The Project Execution Plan listed a target date of May 2010, for approval of start-up of the new facility.

Because of the importance of maintaining the criticality safety program, we initiated this audit to determine whether NNSA had safely restored the criticality experiment capabilities transferred from Los Alamos to NCERC as planned.

RESULTS OF AUDIT

We found that NNSA restored many of the former capabilities of the Criticality Experiments Facility at the NCERC in Nevada. We noted, however, that several problems with start-up activities resulted in delays in restoring the full array of experimental capabilities included in the project. Specifically:

- NNSA was unable to authorize the start-up of NCERC operations until May 2011, approximately 1 year after the planned date. The program experienced further delays in the start-up activities of each criticality machine, with completion of all planned start-up activities for one machine delayed about 2 years.
- NCERC has been unable to restore its full capability to perform plutonium-based criticality experiments.

The delays in restoring capabilities occurred because NNSA had not ensured that: (a) contractors had developed adequate procedures for correcting concerns identified during the process to authorize the start-up of NCERC; (b) the safety basis documentation matched facility conditions; and (c) procured safety equipment met cited standards. Additionally, NNSA had not ensured effective management of the multiple contractors involved in developing and amending the safety basis documentation, which ensures that nuclear operations can be conducted without undue risk to workers and the public. Finally, NNSA has struggled to successfully integrate and resolve issues between the multiple contractors involved in NCERC facility operations.

The Office of Inspector General has previously raised concerns about NNSA's ability to restart criticality operations at the NCERC. Specifically, in 2007, the Office of Inspector General issued *Management Controls over the National Nuclear Security Administration's Ability to Maintain Capability of the TA-18 Mission* (OAS-M-07-02, February 2007). That report noted that full resumption of criticality operations by Fiscal Year 2010, was at risk because NNSA had not adequately planned to replace, train and certify the staff needed to conduct criticality experiments once the project to move the Criticality Experiments Facility was completed. As of August 2012, it appeared that previously reported staffing issues had been resolved and that there was a sufficient number of trained and qualified staff available for NCERC to begin operations.

According to NNSA officials, additional work scope was transferred from Technical Area-18 to the Device Assembly Facility beginning in 2005, such as support for the Emergency Response Program and for packaging and shipping of nuclear materials. We did not review these activities, which were not part of the capital project or within the scope of our review.

Delays in Facility Operations

NNSA was unable to authorize the start-up of NCERC operations until a year after the planned date. The authorization, which was scheduled in May 2010, was delayed until May 2011 so that NSTec and Los Alamos could correct contractor concerns identified during the readiness process. The readiness process for NCERC, which consisted of several reviews, began as scheduled in October 2009, with a review by NSTec and Los Alamos, followed by two subsequent contractor operational readiness reviews in December 2009 and June 2010. An NNSA official stated that the number of concerns identified in the readiness reviews were commensurate with the complexity of the facility and operations, and that corrective actions to address the issues identified in such reviews are typically completed in a matter of weeks. However, corrective actions to resolve issues from the two contractor operational readiness reviews took 8 months, delaying the Federal readiness review until July 2010. The corrective actions in response to the Federal review that were required for start-up took an additional

10 months to complete. In addition, about two-thirds of the concerns in the Federal readiness review were similar to concerns from the previous reviews in the areas of conduct of operations, safety basis and facility safety.

Machine Operations

After NNSA granted authorization for start-up of the facility as a whole in May 2011, the facility operators were required to complete start-up activities for each machine. These activities included assembly of each machine and verification that the operators, equipment and procedures could safely perform the required operations with special nuclear materials. However, start-up activities were further delayed because the safety basis documentation required correction to include the full range of activities for one criticality machine. Specifically, in the September 2009 Start-up Plan, Godiva was scheduled for start-up to be completed in June 2011. However, delays in the authorization for facility start-up delayed Godiva start-up by about a year. While Godiva's operators were able to perform the initial activities in the Godiva start-up plan and declare the assembly operational by April 2012, completion of the full array of activities in the start-up plan was ultimately delayed until June 2013, about 2 years after originally scheduled.

In addition, NCERC has been unable to restore its full capability to perform plutonium-based criticality experiments within the authorized safety basis. The Defense Nuclear Facilities Safety Board (DNFSB) questioned whether some equipment was in compliance with the facility safety basis. In response, NSTec declared a potential inadequacy in the safety basis, leading the Device Assembly Facility manager to prohibit plutonium operations on Godiva and Flat-Top. In addition, persistent issues with flow requirements for the fire suppression system also led the facility manager to restrict plutonium capability on the other two machines, Comet and Planet. As a result of the restrictions, the plutonium portion of one critical experiment that was underway on Comet in September 2012, was delayed until December 2012, after an NSTec representative questioned whether the safety basis permitted the activity. At the time of our review, some plutonium operations could be performed with restrictions on two of the four machines.

Oversight and Management of NCERC

Weaknesses in Federal oversight contributed to delays in facility operations. Specifically, delays in the restart of criticality operations occurred because NNSA had not ensured that contractors adequately resolved concerns related to start of operations at NCERC or that safety basis documentation was consistent with facility conditions. In addition, delays occurred after authorization of facility start-up because NNSA did not ensure that safety equipment met standards cited in the safety basis or that the work of multiple contractors was fully integrated.

Resolution of Corrective Actions

Delays in completing the readiness reviews and the attendant delays in the start of operations occurred, in part, because the Nevada Field Office had not ensured that contractors had an effective corrective action resolution process. Although the readiness process identified

concerns and the contractors generated corrective actions in response, the corrective action resolution process was ineffective in correcting recurring systemic concerns. The readiness reviews identified similar concerns, such as procedures that could not be executed as written, controls that were not adequately implemented, and changes needed in the safety basis of the facility before operations could be authorized. Twenty-three of the 36 Federal review concerns were in the conduct of operations, safety basis and facility safety focus areas. Those concerns were similar to 18 concerns identified in previous contractor reviews. For example, the Federal readiness review identified the need for revisions in a fire system procedure that had previously been identified and reported as corrected by the contractor.

In addition, the contractors' analyses of the causes of concerns from their own reviews failed to identify systemic issues and the root causes. For example, in response to one concern, NSTec focused on correcting identified deficiencies in specific procedures rather than identifying the root cause of the deficiency in the procedure development process. Accordingly, the corrective actions did not address the deficiencies with the process for developing procedures. In particular, the first contractor readiness review noted that the procedure development process did not include requirements for verification and validation of technical procedures, which ensures that the procedures could be used as written. While NSTec addressed the shortcomings in the specific procedure identified in the concern, the contractor did not identify a cause for the systemic weaknesses in the procedure development process. The failure to correct weaknesses in the procedure development process and identify their causes contributed to the recurring identification of procedure problems in the four readiness reviews.

Additionally, the Nevada Field Office confirmed that the contractors on the joint contractor project team closed concerns before all corrective actions were completed. In particular, contractors did not adequately implement validation requirements for corrective actions before closing them. The four readiness reviews identified a total of 88 major concerns and 19 observations for correction by the contractors. Although a lower priority than findings, we included observations in our review of concerns to indicate opportunities for improvement. Many of the corrective actions required NSTec to revise procedures or other documentation to ensure that activities would be conducted safely after start-up of the NCERC. Because of the seriousness of the concerns, we selected a judgmental sample of 39 corrective actions to address 29 concerns from the 4 readiness reviews. However, we found that 15 of the 39 corrective actions (38 percent) reviewed were prematurely closed by the contractor before completing all of the required work. For example, NSTec closed a corrective action to add information about system surveillance requirements to several design documents without adding all required information to those documents. Although the results of our sample could not be extrapolated to all of the corrective actions taken in response to the four readiness reviews, the large percentage of errors in our sample demonstrated that substantial systemic weaknesses were present in the corrective action resolution process. To their credit, the Nevada Field Office and NSTec made changes to improve the site's readiness process and were able to restart another nuclear facility within cost and schedule milestones. However, the Nevada Field Office and NSTec have not yet addressed all issues present in the corrective action resolution process.

Our findings regarding the ineffectiveness of the corrective action program were consistent with NNSA readiness review conclusions. Although it ultimately authorized the start of operations at the NCERC, NNSA concluded in the final Federal readiness review that corrective actions for

previous review concerns had been inadequate. In response to that concern, NSTec prepared a corrective action plan in October 2010, to make changes to its root cause analysis and extent of condition review processes. The Nevada Field Office stated in an April 2012 validation that it was unable to validate whether these actions in response to this concern were adequate. Further, a January 2013 Nevada Field Office assessment found that NSTec's system did not always ensure that identified non-compliant conditions were fully corrected prior to issue closure. As of April 2013, the Nevada Field Office was working with NSTec to resolve the October 2010 corrective action plan.

Federal Oversight

Ineffective oversight of the closure of corrective actions by the Nevada Field Office also contributed to the premature closure of corrective actions. In particular, the final Federal readiness review questioned the effectiveness of the Nevada Field Office's oversight of NSTec's closure of corrective actions, citing a lack of clear expectations for the level of rigor required for the Nevada Field Office to validate corrective actions. In its response to this concern, the Nevada Field Office concurred and acknowledged that when the Nevada Field Office applied higher rigor during validation, it was less likely that a similar concern occurred in the Federal readiness review. However, while the Nevada Field Office made changes to its corrective action validation procedures, we noted that the current procedures do not provide specific direction to ensure corrective actions are effective and that the contractor identified and corrected related systemic problems. Instead, the Nevada Field Office determined the level of rigor to be applied to validation on a case-by-case basis. Given the weaknesses identified in the contractor issues management system, this level of oversight may not ensure effective identification of systemic issues or effective corrective actions to address identified issues.

Safety Basis Documentation

Neither the Nevada Field Office nor the contractors involved in the joint contractor project team adequately verified that the safety basis documentation matched facility conditions and contained all equipment assembly activities prior to declaring readiness, leading to delays in facility start-up. When the project team first declared the facility was ready to operate in September 2009, the safety basis documentation and supporting procedures lacked some of the activities necessary for facility start-up. During the readiness process, the four readiness reviews identified facility-wide deficiencies in safety basis procedures for maintenance, surveillance and start-up operations. Correcting the numerous safety basis deficiencies in start-up procedures contributed to the delay in the authorization of facility start-up from May 2010 to May 2011. Many of these safety basis procedures needed to be revised or corrected before NNSA could grant NSTec authorization to begin facility start-up operations.

In addition, the lack of complete safety basis documentation for the criticality machines delayed assembly of the machines. Specifically, the project team chose not to include the activities to assemble Godiva and test the machine in three different types of critical operations in the facility safety documentation, and the procedures for these activities had not been completed or approved as required prior to the project team's declaration that the facility was ready to operate in September 2009. Godiva start-up had already been delayed by about a year from the June 2011 date given in the September 2009 Start-up Plan because of overall facility delays. The

Federal readiness review identified concerns related to Godiva in the facility start-up plan and safety basis. The project team rewrote the facility start-up plan in January 2011, reprioritizing other activities and deferring work on the safety basis change required for the full range of planned Godiva activities. As a result, the necessary safety basis change was ultimately approved by the Nevada Field Office in March 2012, delaying completion of the initial activities needed to declare Godiva operational until April 2012, and further delaying completion of the full array of activities in the Godiva start-up plan until June 2013.

Plutonium Operations

Additionally, the NCERC has been unable to perform plutonium operations as planned, in part, because neither NNSA nor NSTec ensured that procured safety equipment met cited standards. Specifically, the NSTec Device Assembly Facility manager imposed restrictions on the extent of plutonium operations that can be performed at the facility due to concerns about equipment compliance with a standard cited in the safety basis. In particular, the equipment used in the NCERC that measured excess reactivity did not meet the safety classification requirements in the 2006 revision of Department Standard 3009, *Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Documented Safety Analyses*. However, the equipment complied with the approved design for the facility, which cited a 2002 revision of the standard that was in place at the time the facility was designed in 2005. During the transfer of the Criticality Experiments Facility capability to Nevada, management responsibility for the Device Assembly Facility was transferred from Livermore, under the joint contractor project team, to NSTec. NSTec was given responsibility for the safety basis documentation, which had been prepared by Livermore. Prior to the transfer, Livermore had updated the safety basis to reference the 2006 revision of the Department standard.

In a lessons learned analysis, NSTec reported that the project team did not task it with reviewing the safety basis when it took ownership of the document from Livermore because earlier versions of the document had already been reviewed. As a result, neither Nevada Field Office officials nor NSTec officials were aware of impacts from the updated Department standard for safety equipment at the time. However, NSTec identified this as a potential inadequacy of the safety analysis in 2010. The Nevada Field Office originally approved updating the safety basis documentation to remove the requirement to measure excess reactivity from the safety basis. However, in January 2013, the Nevada Field Office issued new direction to NSTec to correct the documented safety analysis to reflect that the facility was designed and built to the 2002 revision of Standard 3009. As of August 2013, the modification was being reviewed by the Nevada Field Office but the safety analysis change had not yet been approved.

Integration of Multiple Contractors

NNSA has faced challenges in integrating the multiple contractors involved in the NCERC. While the Deputy Administrator for Defense Programs recognized the achievements of the joint contractor project team, communication and integration between the contractors has nevertheless been cited frequently as an obstacle to operational efficiency to operations at NCERC. For example, the DNFSB identified contractor integration at NCERC as a concern as early as February 2006. As recently as 2010, the DNFSB found that NSTec lacked the experience to adequately monitor Los Alamos' operations at NCERC. To its credit, the Nevada

Field Office took steps in response to the DNFSB to better define the roles and responsibilities of the two contractors. In addition, the Nevada Field Office has taken several steps to improve contractor integration at the site, such as instituting a joint contractor criticality safety program to improve contractor integration during safety basis preparation. While this joint contractor program only addresses the disputes over certain specific types of safety basis work, the Nevada Field Office has since undertaken a broader initiative to improve the site processes for tracking and modifying safety basis documentation, and began using these updated processes to amend the safety basis to allow plutonium operations. Nevertheless, workers at NCERC from both Los Alamos and NSTec have identified communication and integration issues as a cause for delays to prior safety basis submissions. In addition, the persistent difficulties in expanding the safety basis documentation have led both NNSA and Los Alamos officials to express dissatisfaction with the limitations in the types of work that can be performed within the safety basis currently in place at the facility.

Impact

Because of the importance of avoiding criticality accidents, the Department committed to maintain a National Criticality Safety Program, including a community of trained individuals competent in practicing criticality controls. The National Criticality Safety Program uses NCERC to provide the hands-on training and criticality experiments necessary to ensure that the Department can safely and efficiently perform all of its work involving significant quantities of fissile material. However, work supporting future experiments has been delayed for periods of 6 months to 2 years. Finally, without being able to perform plutonium operations, the National Criticality Safety Program will be less likely to attract a volume of work from other programs and agencies to NCERC comparable to what it performed at Technical Area-18, work which could help offset some of NNSA's operating costs.

RECOMMENDATIONS

To improve operational efficiency at the NCERC, we recommend that the Principal Deputy Administrator, NNSA direct the Manager, Nevada Field Office to:

1. Establish more rigorous requirements for the contractor to evaluate corrective actions and validate the effectiveness of corrective actions in correcting systemic issues;
2. Reassess the formality and effectiveness of Field Office requirements for validating contractor corrective actions for high-consequence issues;
3. Ensure that safety basis documentation and supporting procedures accurately describe the work being performed and the current condition of the facility, equipment and infrastructure;
4. Ensure that safety basis documentation and safety basis changes are thoroughly reviewed for compliance to relevant standards prior to approval; and
5. Work with other field offices to improve communication, efficiency and collaboration between NSTec and other contractors performing work on site.

MANAGEMENT REACTION AND AUDITOR COMMENTS

Management concurred with the report's recommendations and indicated that corrective actions would be initiated. Management's proposed corrective actions are responsive to our recommendations. Management comments are included in Attachment 3.

Attachment

cc: Deputy Secretary
Acting Administrator, National Nuclear Security Administration
Chief of Staff
Manager, Nevada Field Office

OBJECTIVE, SCOPE AND METHODOLOGY

OBJECTIVE

The objective for this audit was to determine whether the National Nuclear Security Administration (NNSA) had safely restored the capabilities transferred from Los Alamos National Laboratory to the National Criticality Experiments Research Center (NCERC) as planned.

SCOPE

We conducted the audit from May 2012 to September 2013, at NNSA Headquarters in Washington, DC, the Nevada Field Office and National Security Technologies, LLC in Las Vegas, Nevada, and Los Alamos National Laboratory in Los Alamos, New Mexico.

METHODOLOGY

To accomplish the audit objective, we:

- Reviewed Department of Energy (Department) guidance, policies and procedures.
- Reviewed pertinent prior Office of Inspector General audits, as well as related reports from NNSA, the Defense Nuclear Facilities Safety Board, the field offices, and contractors.
- Interviewed key Federal and contractor personnel.
- Judgmentally selected a sample of 29 concerns and their associated 39 corrective actions from the 88 concerns and 19 observations in the 4 readiness reviews conducted on NCERC. We selected concerns from core requirements in which there were a large number of concerns in multiple readiness reviews or that were repeat concerns. Because a judgmental sample of issues was used, results are limited to the issues and associated corrective actions selected.

We conducted this performance audit in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. The audit included tests of controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. In particular, we assessed the Department's implementation of the *GPRA Modernization Act of 2010* and found that NNSA had established performance measures related to developing contractor assurance systems. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. We did not rely on computer-processed data to accomplish our audit objective. Management waived an exit conference.

PRIOR REPORTS

- Audit Report on [*Management Controls over the National Nuclear Security Administration's Ability to Maintain Capability of the TA-18 Mission*](#) (OAS-M-07-02, February 2007). The National Nuclear Security Administration (NNSA) had not maintained the capability to conduct the unique criticality operations performed at Technical Area 18, and was at risk of delays in re-establishing this capability. Full resumption of criticality operations in Fiscal Year 2010, was at risk because had not adequately planned to replace, train and certify the staff needed to conduct criticality experiments. Until these operations were resumed, NNSA was unable to support the mission of the Nuclear Criticality Safety Program.
- Audit Report on [*Nuclear Safety: Safety Basis and Quality Assurance at the Los Alamos National Laboratory*](#) (DOE/IG-0837, August 2010). Los Alamos National Laboratory continued to experience problems fully implementing numerous critical nuclear safety management measures because its management had not focused sufficient attention on implementing the Nuclear Safety Quality Assurance Program throughout the Laboratory. Also, the Los Alamos Site Office had not always taken the actions necessary to ensure nuclear safety at the Laboratory was improved by not establishing performance measures requiring updates of Documented Safety Analyses. Further, the Los Alamos Site Office had not established metrics requiring the Laboratory to correct identified system quality assurance weaknesses.

MANAGEMENT COMMENTS



Department of Energy
National Nuclear Security Administration
Washington, DC 20585
August 23, 2013



MEMORANDUM FOR RICKEY R. HASS

DEPUTY INSPECTOR GENERAL
FOR AUDITS AND INSPECTIONS
OFFICE OF INSPECTOR GENERAL

FROM:

CYNTHIA A. LERSTEN *Phot of myself for*
ASSOCIATE ADMINISTRATOR
FOR MANAGEMENT AND BUDGET

SUBJECT:

Comments on the Office of Inspector General Draft Report Titled "*The Resumption of Criticality Experiments Facility Operations at the Nevada National Security Site*" (A12AL033/2012-01194)

Thank you for the opportunity to review and comment on the subject draft report. The report provides five recommendations to further enhance operational efficiency at the National Criticality Experiment Research Center (NCERC). The National Nuclear Security Administration (NNSA) generally agrees with the Inspector General's (IG) recommendations.

The attachment to this memorandum provides NNSA's specific actions and timelines to address each recommendation. We have also provided general and technical comments for IG consideration to enhance the clarity and factual accuracy of the report. If you have any questions regarding this response, please contact Dean Childs, Director, Audit Coordination and Internal Affairs at (301) 903-1341.

Attachment



Printed with soy ink on recycled paper

Attachment

**National Nuclear Security Administration (NNSA)
Response to Inspector General Draft Report Titled Resumption of
Criticality Experiments Facility Operations at the Nevada National Security Site**

The Inspector General (IG) recommended NNSA:

Recommendation 1: Establish more rigorous requirements for the contractor to evaluate corrective actions and validate the effectiveness of corrective actions in correcting systemic issues.

Management Response: Concur in Principle

NNSA agrees that the contractor must establish and effectively implement an issues management/corrective action process that will identify and correct systemic issues. However, we believe existing federal requirements establish the appropriate level of rigor required to achieve the desired end result, when implemented appropriately. To ensure an effective implementation of those requirements, NNSA will direct the contractor to evaluate issues management/corrective action processes across the complex and industry, and utilize the results to establish and implement a more rigorous and effective process to identify and correct systemic issues. NNSA will review the contractor's revised processes to ensure they adequately address the IG's recommendation. The initial estimated completion date for these actions is September 30, 2014, pending development of the fiscal year (FY) 2014 Contractor Performance Evaluation Plan.

Recommendation 2: Reassess the formality and effectiveness of field office requirements for validating contractor corrective actions for high consequence issues.

Management Response: Concur

NNSA will evaluate and revise, as appropriate, field office processes to clearly define the requirements for validating contractor corrective actions for high consequence issues. The initial estimated completion date for these actions is July 31, 2014, pending development of the FY 2014 Master Assessment Schedule.

Recommendation 3: Ensure that safety basis documentation and supporting procedures accurately describe the work being performed and the current condition of the facility, equipment and infrastructure.

Management Response: Concur

NNSA agrees safety basis documentation and supporting procedures must be accurate and in agreement. Nevada Field Office (NFO) has robust processes to ensure the safety basis documentation is developed according to the established procedures. NFO will evaluate internal processes regarding the performance of Independent Verification Reviews (IVR) and will also direct the contractors to evaluate and revise as necessary their own IVR processes. The initial estimated completion date for these actions is July 31, 2014, pending development of the FY 2014 Master Assessment Schedule.

Attachment

Recommendation 4: Ensure that safety basis documentation and safety basis changes are thoroughly reviewed for compliance to relevant standards prior to approval.

Management Response: Concur

NFO will evaluate and revise, as appropriate, field office processes to ensure that safety basis documents are thoroughly reviewed prior to approval. The initial estimated completion date for these actions is July 31, 2014, pending development of the FY 2014 Master Assessment Schedule.

Recommendation 5: Work with other field offices to improve communication, efficiency and collaboration between National Security technologies, LLC (NSTec), and other contractors performing work on site.

Management Response: Concur

NFO will continue to improve communication and collaboration between NSTec and other contractors working at the NNSA National Security Site. As part of this effort, Memoranda of Understanding (MOUs) with Livermore Field Office and Sandia Field Office were established in 2009 and 2011 respectively. NFO is currently pursuing a final MOU with Los Alamos Field Office, which is currently in draft. The estimated completion date for actions to address this recommendation is March 31, 2014, upon finalization of the MOU with Los Alamos.

It should also be noted that, as a result of the Criticality Experiment Facility Operational Readiness Review, actions already completed include: a) the NSTec Device Assembly Facility Operations Review Committee (FORC) and the Los Alamos National Laboratory Criticality Experiments Safety Committee (CESC) have each incorporated a member from the other committee to further expand collaboration and communication; and b) in May of 2013, the Office of Infrastructure and Operations, Office of Environment, Safety and Health, committed to providing Sandia fast reactor expertise to the NCERC experiment review committees and developing language in the Nuclear Criticality Safety Five Year Program Plan for this support.

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