



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

AUDIT REPORT

Security at the Nevada National Security Site

OAS-L-15-06

May 2015



Department of Energy
Washington, DC 20585

May 8, 2015

MEMORANDUM FOR THE MANAGER, NEVADA FIELD OFFICE

A handwritten signature in black ink, appearing to read "David Sedillo".

FROM: David Sedillo, Director
Western Audits Division
Office of Inspector General

SUBJECT: INFORMATION: Audit Report on "Security at the Nevada National Security Site"

BACKGROUND

The Nevada National Security Site (NNSS) supports national defense as well as research and development programs for the National Nuclear Security Administration (NNSA). As part of these missions, NNSS hosts an array of defense and national security experiments for the NNSA National Laboratories. It also supports nonproliferation testing and radiological detection activities and conducts treaty verification and first responder training.

Security-related activities at NNSS are primarily conducted by two contractors. National Security Technologies, LLC, (NSTec) is responsible for overall management and operation of NNSS, including oversight of physical and personnel security activities. Centerra Group, LLC, (Centerra Nevada), formerly known as Wackenhut Services, Inc.-Nevada, is the protective force contractor at NNSS. As such, it is responsible for physical protection of the national security interests at NNSS which include special nuclear material and national security operations.

Given the importance of NNSS security-related mission activities, we initiated this audit to determine whether security at NNSS was managed effectively.

RESULTS OF AUDIT

During the course of our audit, nothing came to our attention to indicate that security at NNSS was not generally managed effectively. In particular, we noted that security-related activities were reviewed by internal and external parties on a periodic basis and that issues identified during these assessments and the associated corrective actions were entered into formal tracking systems and monitored until closure. We also determined that there was a process in place to ensure that testing and maintenance of critical security-related assets were conducted according to Department of Energy (Department) policy. Further, we found that security training such as

force-on-force exercises, which test security responses to various scenarios, was conducted as required per the Centerra Nevada contract, and those areas identified for improvement were being addressed.

However, we identified an important security infrastructure project that experienced significant schedule delays and cost increases. The project, Argus, is the NNSA's recommended enterprise security system, which integrates access control, intrusion detection, and video assessment of alarms to protect and control high-consequence assets. NSTec planned to replace the aging NNSA Process Equipment and Control System with Argus. Project activities were to be performed by both NSTec and Centerra Nevada personnel. We determined that the Argus project experienced schedule delays and cost increases as a result of inadequate project management and funding issues. As a result, Centerra Nevada has continued to rely on an outdated security system with backup countermeasures to ensure security is maintained. In our opinion, this approach may not be the most efficient or cost effective method to meet NNSA security requirements. NNSA project management officials told us that action has been taken to address the project management issues and that funding for the Argus project has been requested in the fiscal year (FY) 2016 budget request.

Argus Project Status

The Argus project experienced significant schedule delays and cost increases. The project was initiated in November 2010 with an estimated cost of \$8.4 million and expected completion date of October 2011. However, NSTec did not perform its role as the project integrator, as specified in Argus project documentation. As a result of the lack of integrated project planning, the Argus project did not progress as anticipated. Due to the delays in the project's progress, NSTec was tasked to develop a revised cost estimate for the project in June 2012. The updated estimate totaled \$17.8 million with the cost increase attributed primarily to labor and contingency. Labor costs almost doubled from approximately \$5 million to \$10 million due to a change in the composition of the workforce. The Nevada Field Office planned to use commercial grade material for the project; however, because of the type of facility that Argus was to be installed in, NSTec determined that the materials and installation practices had to meet higher safety standards than originally planned. The resulting change in workforce composition substantially increased the labor costs. Also, based on an analysis performed in NSTec's Risk Analysis Report, contingency increased from about \$800,000 to \$3.5 million.

Due to the increase in estimated costs, in January 2013, the Nevada Field Office advised NSTec that the Argus project was required to be managed as a line item project, subject to additional Office of Management and Budget and Department requirements. Originally, the Argus project was managed as a general plant project, which is defined as a construction project of a general nature whose total estimated costs do not exceed \$10 million. As a result of the change in project category, the project was subject to more stringent project management requirements, including additional budget and risk management parameters. In addition, in July 2013, NSTec received direction to develop a new cost estimate that reflected the impact of Department Order 473.3 *Protection Program Operations* on the project. The Order contains requirements applicable to the installation of physical security systems. NSTec estimated an additional

\$4.9 million would be needed for the labor and materials needed to fulfill the Order requirements and that it would also add 6 months to the schedule. NSTec expected another \$2 million would be necessary to fulfill various other new requirements due to the conversion of the project from a general plant project to a line item project. Mainly as a result of the additional line item requirements mentioned above and an estimated \$1.7 million in cost escalation associated with the schedule delays, the Argus project total estimated costs have increased to approximately \$35.3 million—more than four times the original estimate.

The Argus project has been on hold since May 2014 due to a lack of funding and will not proceed until funding is authorized by Congress. According to the FY 2016 Construction Project Data Sheet, if funding is obtained, the Argus project is expected to restart in March 2016 and be completed by the end of FY 2019.

Argus Project Management

The Argus project delays and cost increases occurred, in part, as a result of inadequate project management. For example, we found that NSTec's project management role was not clearly understood. Specifically, we noted that several project documents, including the Argus project authorization and the project execution plan, stated that NSTec was responsible for providing integrated project and construction management. As the project integrator, NSTec was responsible for bringing together component subsystems into a whole and ensuring that those subsystems function together. However, NSTec officials believed they were only responsible for managing the installation activities performed by NSTec employees rather than also integrating the work performed under Centerra Nevada. We could not determine why NSTec did not assume its role as the project integrator due to the lack of personnel available with knowledge of the situation at that time. In fact, the Argus project has lacked consistent NSTec leadership throughout its existence. To illustrate, an NSTec official told us that the project manager had changed five times since the project was initiated in November 2010. In our opinion, the lack of consistent management also likely hindered the project's progress. Further, NNSA's Office of Acquisition and Project Management told us that NSTec's inexperience with projects of this complexity and their associated project management requirements led NSTec to significantly underestimate the challenges involved in the Argus project.

Additionally, basic project management principles related to incorporating risk management into the early stages of a project were not followed as required by applicable Department guidance. The Argus project authorization indicated that project management, design, and reporting requirements were to be tailored as set forth in Department Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*. Department Order 413.3B states that the principles apply to general plant projects as well as line item projects. One of the project management principles contained in Department Order 413.3B, which is intended to help ensure successful project execution, is early integration of safety into the design process. For example, according to Department Order 413.3B, a risk and opportunity assessment should be developed early in the design stage to identify the risks associated with incomplete knowledge or assumptions regarding safety issues and opportunities to reduce costs. We also noted that the Nevada Field Office had directed that all work associated with the Argus project be suspended in

February 2012 due, in part, to the Risk Analysis Report being considered insufficient and incomplete because it did not encompass an appropriate mitigation plan. The Risk Analysis Report was ultimately completed in July 2012, almost 2 years after the project was initiated.

Another example of the lack of incorporating appropriate risk management elements into the project concerned an increase in the quality of the material to be used in the Argus project. In April 2012, NSTec was directed to develop an analysis that described the safety and engineering design requirements associated with the Argus project. The analysis found that higher quality material (i.e., above commercial grade) needed to be used to ensure safety requirements were met because, although the security system itself does not provide a direct safety function, its interface with the facility it is installed in had additional safety considerations. As mentioned earlier, the change in material quality was important because the resulting labor workforce changes led to a significant cost increase.

Poor communication between the Nevada Field Office and NSTec personnel managing the Argus project was also a contributing factor to the situation. To illustrate, a Nevada Field Office official stated that communication between Federal and NSTec officials was strained, and at times, the Federal Project Director was excluded from Argus project meetings. The lack of communication was also corroborated by an NSTec Parent Oversight Organization Committee established to conduct a week-long forensic review of the project due to the significant schedule delays and increased costs. In particular, its June 2012 report highlighted the lack of communication between the Federal Project Director and the NSTec Project Manager as an issue.

NNSA and NSTec management officials told us that they have taken action to address the project management issues identified above. In particular, an Integrated Project Team was established in May 2012 and included the Federal Project Director and senior management of NSTec and Centerra Nevada. The Integrated Project Team developed a recovery approach for Argus which included a clear definition of the roles and responsibilities for all of the parties involved in the project. Additionally, the Integrated Project Team created a project recovery plan with revised cost, schedule, and risk baselines that should help facilitate successful completion of the Argus project once additional funding is obtained. Further, to improve communication, NSTec's project managers were reorganized, and project management was elevated to the division level. NSTec also hired a new Project Division Manager and conducted communication training for its project managers. Finally, NSTec obtained technical guidance from NNSA's Office of Acquisition and Project Management on how to incorporate the more stringent line item project management requirements into the Argus project.

Argus Project Funding

The Argus project also experienced project delays and cost increases because of various funding issues. As mentioned previously, in January 2013, during the design phase and after the majority of the equipment was procured, the Nevada Field Office determined that the project would exceed the \$10 million general plant project limit, and thus would require line item funding. Accordingly, the Nevada Field Office submitted a line item funding request for the Argus project for FY 2014, but, according to an Office of Defense Nuclear Security official, Argus did not

receive the requested funding because the Nevada Field Office had not provided a detailed explanation for the project's significant cost increases to the Senate Appropriations Committee. The official also told us that the House Appropriations Committee did not provide funding because funding for new work was deferred pending implementation of the NNSA reorganization and assurance that NNSA was addressing known deficiencies at other sites to ensure similar mistakes would not be made during the security system upgrade at the NNSS.

Also, the Nevada Field Office had submitted a funding request for the Argus project in FY 2014 as a 2-year, incrementally funded project and expected that Argus would be funded in FY 2015. By the time Nevada Field Office officials learned that the Argus project was not funded in the FY 2014 budget, the deadline to submit the FY 2015 budget request had passed. We noted that the Nevada Field Office requested funding be provided for Argus in FY 2016.

IMPACT ON OPERATIONS

Due to the issues described above, NNSS has continued to rely on an outdated security system with backup countermeasures to ensure security is maintained. In our opinion, this approach may not be the most efficient or cost effective method to meet NNSS security requirements. Further, completion of the Argus project is important because, according to the Department's FY 2016 budget request, Argus is necessary to support critical facilities within the nuclear security enterprise, some of which are designed for the staging of special nuclear material and nuclear explosive operations.

SUGGESTED ACTIONS

We believe that management's corrective actions, if fully implemented, should help address the issues we have identified. Should Congress authorize funding for the Argus project, we suggest that the Manager, Nevada Field Office, ensure that Argus project requirements, including all safety requirements, are identified and incorporated into the design and that effective communication is maintained among the implementing entities.

Attachments

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

OBJECTIVE, SCOPE, AND METHODOLOGY

OBJECTIVE

The objective of this audit was to determine whether security at the Nevada National Security Site was managed effectively.

SCOPE

We performed this audit between February 2014 and May 2015 at the Nevada Field Office in North Las Vegas, Nevada, and the Nevada National Security Site in Mercury, Nevada. The audit was conducted under Office of Inspector General Project Number A14LV024.

METHODOLOGY

To accomplish the objective, we:

- Reviewed and analyzed Department and contractor criteria including policies, procedures, functions, and responsibilities for performance of security-related activities;
- Interviewed key Federal and contractor personnel associated with the Safeguards and Security programs;
- Toured security facilities at the Nevada National Security Site;
- Reviewed prior assessments and reports related to Safeguards and Security activities;
- Evaluated NNSA policies, procedures, and staffing for oversight of Safeguards and Security activities; and
- Reviewed the databases/systems used for monitoring and tracking Safeguards and Security issues.

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. Additionally, we assessed the implementation of the *GPR Modernization Act of 2010* as necessary to accomplish the objective and determined that performance measures related to site security were established as required. 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-generated data to satisfy our objective and therefore did not conduct a data reliability assessment. An exit conference was held on April 21, 2015.

PRIOR REPORT

- Audit Report on [National Nuclear Security Administration's Construction of a Radiological/Nuclear Complex for Homeland Security](#) (DOE/IG-0775, September 2007). The audit found that the Nevada Field Office (previously referred to as the Nevada Site Office) had not effectively monitored and communicated project status to senior Department of Energy (Department) and Department of Homeland Security officials. Also, the report noted that, as a result of transition of the management and operating contract to a new contractor, the project lost its entire contractor project management team. The new contractor, National Security Technologies, LLC, assumed responsibility for the project and performed several project reviews, which identified project management weaknesses. The report further noted that Nevada Field Office officials made limited use of project progress reviews and did not enter critical performance and monthly status reports into the Department's Project Assessment and Reporting System, which was used to communicate with senior management.

FEEDBACK

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