



OFFICE OF INSPECTOR GENERAL  
U.S. Department of Energy

# AUDIT REPORT

DOE-OIG-18-23

March 2018

**ISSUES MANAGEMENT WITHIN THE  
OFFICE OF SCIENCE**



**Department of Energy**  
Washington, DC 20585

March 9, 2018

MEMORANDUM FOR THE MANAGER, ARGONNE SITE OFFICE  
ACTING SITE MANAGER, SLAC SITE OFFICE

A handwritten signature in black ink, appearing to read "Debra K. Solmonson".

FROM: Debra K. Solmonson  
Deputy Assistant Inspector General  
for Audits and Inspections  
Office of Inspector General

SUBJECT: INFORMATION: Audit Report on "Issues Management Within the  
Office of Science"

BACKGROUND

The Department of Energy's Office of Science is the steward of 10 national laboratories that are federally funded research and development centers operated by private sector organizations under management and operating contracts. The Office of Science's management and operating contractors are required to maintain comprehensive contractor assurance systems to provide reasonable assurance that objectives are being accomplished and that systems and controls will be effective and efficient. One of the key attributes of contractor assurance is the identification and correction of negative performance/compliance trends before they become significant issues. The Office of Science's management and operating contractors maintain issues management programs as integral parts of their contractor assurance systems to ensure that issues are properly analyzed and corrective actions are taken to address deficiencies.

We initiated our audit to determine if select Office of Science laboratories had effective issues management programs. For our audit, we selected SLAC National Accelerator Laboratory (SLAC), which is operated by Stanford University; and Argonne National Laboratory (Argonne), which is operated by UChicago Argonne, LLC.

RESULTS OF AUDIT

In general, nothing came to our attention to indicate that SLAC and Argonne did not have effective issues management programs. We found that both laboratories had systems in place to track issues for corrective action purposes. In addition, we found that both laboratories used a graded approach to evaluate and correct issues based on risk and priority. However, during our audit, we did identify opportunities for improvement related to trending of issues and evaluating the effectiveness of corrective actions. We found that both laboratories had already made similar observations prior to our audit and had started making enhancements to their issues management programs to address these areas.

During our site visit to SLAC, we were informed that the laboratory was in the process of revising its issues management policy and preparing to upgrade its issues management system. SLAC completed the first phase of the system upgrade and started using the new system to track issues and corrective actions in September 2017. SLAC is planning to release a second phase of the system upgrade to implement new trending features in June 2018. Similarly, during our site visit to Argonne, we were informed that the laboratory had completed a comprehensive self-evaluation of its issues management program to identify process improvements. Argonne is currently in the process of revising its issues management procedures and enhancing its issues management system to address the opportunities for improvement identified during its self-evaluation.

We believe the actions being taken by SLAC and Argonne should address the opportunities for improvement we identified related to trending of issues and evaluating the effectiveness of corrective actions. Therefore, we are not making any formal recommendations.

### **Trending of Issues**

One of the requirements of contractor assurance systems is the identification and correction of negative performance/compliance trends. We noted that both SLAC and Argonne had issues management policies and procedures that included requirements for analyzing issues data to identify and report trends. However, we found that both laboratories could improve trending practices to help identify emerging, recurring, and/or systemic issues. During our audit, both laboratories informed us that they were making enhancements to their issues management programs to improve trending capabilities.

### **SLAC**

We found that SLAC did not perform trending of issues tracked in its issues management system. SLAC's issues management policy indicated that SLAC would perform trending of issues to look for institutional level risks and opportunities for performance improvement. Although we found that SLAC did not perform trending of issues, we noted that SLAC's issues program staff appeared to have ample awareness of institutional level trends as a result of their regular oversight activities. To its credit, we also found that SLAC was in the process of upgrading its issues management system in order to improve reporting and search features to assist with monitoring issues and trending analyses. We were informed that the system upgrade will implement new trending features, including the ability to assign trending codes to issues and corrective actions.

We also noted that SLAC had not tracked all of the occurrences it reported to the Department's Occurrence Reporting and Processing System in its issues management system. Although we found that SLAC had investigated and tracked most of these occurrences in a separate system, we identified instances where the corrective actions related to these occurrences had not been tracked in either system. Because completeness of the issues and corrective action populations are needed for effective trending, SLAC may want to consider tracking occurrences in its new issues management system.

## Argonne

We noted that Argonne identified trending as an opportunity for improvement during its self-evaluation to identify process improvements in its issues management program. Argonne had established internal trending codes in its issues management system to enable the preparation of issues trending reports. Specifically, Argonne had set up over 200 different trending codes in its issues management system. However, during its subsequent self-evaluation, Argonne observed that its issues management procedures did not establish criteria for applying the internal trending codes. During our review of records in Argonne's issues management system, we found that Argonne had not always assigned issues to trending codes that adequately reflected the underlying nature or cause of the issues in a way that would provide meaningful trending results. For example, we noted that Argonne had assigned 10 separate lockout/tagout incidents to 7 different trending codes, none of which were sufficient to identify the issues as involving lockout/tagout deficiencies. We were informed that Argonne is currently in the process of revising its issues management procedures to address these observations, as well as making enhancements to its issues management system to improve trending and analysis capabilities.

### **Effectiveness Reviews**

We noted that Argonne had identified effectiveness review procedures as an opportunity for improvement during its self-evaluation of the issues management program. An effectiveness review is performed after corrective actions have been completed in order to verify that the actions were effectively implemented to prevent issues from recurring. Based on our review of records in Argonne's issues management system, we did not see documentation to support that issue owners had evaluated the need for effectiveness reviews for high significance issues. We noted that Argonne had performed some effectiveness reviews for certain high significance issues. However, some of these reviews were not completed until 1 year or longer after the issues had been closed in the system. We were informed that Argonne is establishing new effectiveness review requirements in its issues management procedures to address this observation.

### **IMPACT AND PATH FORWARD**

As noted in this report, we found that SLAC and Argonne had initiated improvement initiatives to enhance their issues management programs. We believe the actions being taken by SLAC and Argonne should address the opportunities for improvement we identified related to trending of issues and evaluating the effectiveness of corrective actions. Therefore, we are not making any formal recommendations. We suggest the site office managers at SLAC and Argonne ensure the laboratories' improvement efforts are completed in a timely manner.

### Attachments

cc: Deputy Secretary  
Chief of Staff  
Under Secretary for Science

## **OBJECTIVE, SCOPE AND METHODOLOGY**

### OBJECTIVE

The objective of the audit was to determine if select Office of Science laboratories had effective issues management programs.

### SCOPE

The audit was performed from June 2016 through March 2018. We conducted the audit at SLAC National Accelerator Laboratory located in Menlo Park, California; and Argonne National Laboratory located in Argonne, Illinois. The scope of the audit included the issues management programs at SLAC National Accelerator Laboratory and Argonne National Laboratory. The audit focused on issues pertaining to environment, safety, health, and security that were identified during fiscal years 2013 through 2015. The audit was conducted under Office of Inspector General project number A16OR043.

### METHODOLOGY

To accomplish the audit objective, we:

- Reviewed applicable regulations, contract requirements, policies, and procedures pertaining to contractor assurance systems and issues management.
- Held discussions with key personnel from the site offices and laboratories.
- Reviewed a judgmentally selected sample of issues recorded in the laboratories' issues management systems during fiscal years 2013 through 2015. The sample included 100% of the issues that were rated high significance and a judgmental selection of issues rated medium and low significance that pertained to environment, safety, health, and security. Because the selection was based on a judgmental sample, results and overall conclusions are limited to the items tested and cannot be projected to the entire population.
- Reviewed issues trending reports prepared by the laboratories.

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 conclusions based on our audit objective. Accordingly, the audit included tests of controls and compliance with laws and regulations necessary to satisfy the audit objective. We also assessed compliance with the *GPR Modernization Act of 2010* and identified performance measures related to issues management. 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. Finally, we relied on

computer-processed data to achieve our audit objective. Specifically, we examined data and supporting documentation recorded in the laboratories' issues management systems. We determined the data to be sufficiently reliable for the purposes of this report.

Management waived an exit conference on February 23, 2018.

**PRIOR REPORTS**

- Audit Report on [\*Issues Management at the Los Alamos National Laboratory\*](#) (DOE-OIG-16-07, February 2016). The audit disclosed significant weaknesses in the Los Alamos National Laboratory's issues management program. Specifically, Los Alamos National Laboratory's corrective action program did not always adequately address issues, did not effectively prevent their recurrence, and did not consistently identify systemic problems.
- Audit Report on [\*Issues Management at the Los Alamos Field Office\*](#) (OAI-M-16-02, December 2015). The audit found that the Los Alamos Field Office had not implemented an effective issues management program. Specifically, the Los Alamos Field Office frequently did not enter issues identified in assessments into its corrective action system. Furthermore, a significant percentage of the issues that were entered into the system had incomplete, inaccurate, or invalid closure data.

## **FEEDBACK**

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