



**UNITED STATES**  
**NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

**OFFICE OF THE  
INSPECTOR GENERAL**

January 26, 2012

**MEMORANDUM TO:** R. William Borchardt  
Executive Director for Operations

**FROM:** Stephen D. Dingbaum */RA/*  
Assistant Inspector General for Audits

**SUBJECT:** STATUS OF RECOMMENDATIONS: AUDIT OF NRC'S  
SAPHIRE 8 SYSTEM (OIG-11-A-18)

**REFERENCE:** DIRECTOR, OFFICE OF NUCLEAR REGULATORY  
RESEARCH, MEMORANDUM DATED JANUARY 13, 2012

Attached is the Office of the Inspector General's (OIG) analysis and status of recommendations 1, 2, and 3 as discussed in the agency's response dated January 13, 2012. Based on this response, recommendation 1 is closed and recommendations 2 and 3 are resolved. Please provide an update on all resolved recommendations by April 16, 2012.

If you have any questions or concerns, please call me at 415-5915 or Beth Serepca, Team Leader, at 415-5911.

Attachment: As stated

cc: N. Mamish, OEDO  
K. Brock, OEDO  
J. Arildsen, OEDO  
C. Jaegers, OEDO

## Audit Report

### AUDIT OF NRC'S SAPHIRE 8 SYSTEM

OIG-11-A-18

#### Status of Recommendations

Recommendation 1: Formalize a policy on granting access to SAPHIRE 8.

#### Agency Response

Dated January 13, 2012: The December 20, 2011, memorandum issued by the Office of Nuclear Regulatory Research, Division of Risk Analysis includes principles considered in defining appropriate guidance for granting access to the SAPHIRE software. The process to be used for granting access to SAPHIRE for NRC staff and contractors to support NRC work is described in the report titled, "Guidance on Granting Access to NRC's SAPHIRE Software." In addition, the report outlines the process for sharing SAPHIRE with domestic and international organizations and individuals outside of NRC. The guidance on granting access and distribution of the SAPHIRE software is consistent with the general guidance for all NRC-developed computer software as described in SECY-11-0010, "Process for Sharing Computer Safety Codes Developed by the U.S. Nuclear Regulatory Commission with Foreign Counterparts." The memorandum and report are archived in the internal NRC ADAMS package accession number ML113470249 and are not publicly available.

Target Completion Date: The staff considers the actions in response to this recommendation to be complete.

OIG Analysis: OIG reviewed the document on granting access to SAPHIRE 8 placed in ADAMS and determined that it is a policy document that describes the process for granting access to SAPHIRE 8. This recommendation is therefore considered closed.

**Status:** Closed.

## Audit Report

### AUDIT OF NRC'S SAPHIRE 8 SYSTEM

OIG-11-A-18

#### Status of Recommendations

- Recommendation 2: Develop and implement SAPHIRE Web site procedures to:
- Check and verify continued need for user access.
  - Deactivate unnecessary user accounts.

#### Agency Response

Dated January 13, 2012: This recommendation is being addressed through a contracting action with the Idaho National Laboratory (INL), the contractor that maintains the SAPHIRE Web site. The contractor has developed a SAPHIRE Web site security plan that includes improved access controls for the SAPHIRE Web site. The plan describes the existing access controls applied to the Web site and several changes that will be implemented to improve the access controls. The improved access controls will enhance ensuring that the users are valid and actively using the Web site. The plan is not publicly available, but it is available for internal NRC review at ADAMS accession number ML11355A119.

The plan also outlines the procedure to verify continued need for user access and to deactivate unnecessary user accounts. Individual membership will be examined on an annual basis to determine if user access is still required. To support this annual review, the INL will provide a report to the SAPHIRE project manager containing account usage details. The SAPHIRE project manager will use this information and, if necessary, will contact individual users to determine which users should have continued access to the SAPHIRE Web site. The outcome of the annual user access review will be summarized in a report and archived in an internal ADAMS package.

To complete the work related to this recommendation, the following actions are needed. The SAPHIRE project manager will review the account usage reports provided by INL and will establish appropriate criteria for determining continued need for user access. The staff will continue to work with INL to implement the changes described in the SAPHIRE Web site security plan, specifically in the sections

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### **AUDIT OF NRC'S SAPHIRE 8 SYSTEM**

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#### **Status of Recommendations**

“Enhancements to automatic account expirations” and “SAPHIRE Website Security Controls Enhancements.” Upon completion of these actions, INL will issue a report stating that the plan has been implemented and describing the changes that have been made to the Web site. The report will be archived in an internal ADAMS package.

Target Completion Date: March 31, 2012

**OIG Analysis:**

The proposed corrective action meets the intent of the recommendation. This recommendation will be closed when OIG receives the report that the additional procedures have been implemented.

**Status:**

Resolved.

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### AUDIT OF NRC'S SAPHIRE 8 SYSTEM

OIG-11-A-18

#### Status of Recommendations

Recommendation 3: Develop and implement an automated system to deactivate SAPHIRE Web site user accounts that have not been used in a defined time period (e.g., 6 months).

#### Agency Response

Dated January 13, 2012: The SAPHIRE Web site has a system to automatically deactivate user accounts after a defined time period. Currently, a lack of formal guidance on the administration of the system has prevented effective use of this capability. Each account is assigned an expiration date. When the expiration date is reached, users are automatically blocked from accessing the Web site. The Web site administrators routinely extend the expiration date for the NRC users to prevent blocking access for these users.

As discussed in the status update to Recommendation 2 above, INL has submitted a plan to improve access controls for the SAPHIRE Web site. The plan includes an administrative procedure for extending user expiration dates. The SAPHIRE project manager will perform an annual review of access for NRC users. The SAPHIRE project manager will identify inactive and invalid users and will direct the Web site administrators to deactivate the accounts for these users. Upon completion of this review, the SAPHIRE project manager will direct the Web site administrators to extend the expiration date for valid NRC users. The outcome of the annual user access review will be summarized in a report and archived in an internal ADAMS package.

Because the automated system to deactivate SAPHIRE Web site user accounts already exists, this work will be completed with the implementation of the annual user access review procedure documented in the "Enhancements to automatic account expirations" section of the SAPHIRE Web site security plan. Upon completion of the plan implementation, INL will issue a report stating that the plan has been implemented and describing the changes in the administrative procedures for the Web site. The report will be archived in an internal ADAMS package.

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**OIG-11-A-18**

**Status of Recommendations**

Target Completion Date: March 31, 2012

**OIG Analysis:**

The proposed corrective action meets the intent of the recommendation. This recommendation will be closed when OIG receives the report that the additional procedures have been implemented.

**Status:**

Resolved.