

Counterfeit, Fraudulent, and Suspect Items: NRC Staff Response to Office of Inspector General Reports

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Objective

- Present an overview of the findings and recommendations identified in the Office of Inspector General's (OIG's) Audit Report and Special Inquiry on NRC's oversight of Counterfeit, Fraudulent, and Suspect Items (CFSI) at nuclear power plants.
- Communicate the results and planned actions from the NRC staff's review of the information presented in these reports.

Background

- Concerns related to CFSI affecting NRC regulated entities prompted several NRC initiatives to support addressing CFSI concerns.
- Recent CFSI events both domestically and overseas resulted in:
 - Issuance of guidance to heighten awareness of the existing NRC regulations and how they apply to CFSI
 - Issuance of information notices on certain CFSI events
 - Creation of CFSI Technical Review Group (TRG) to evaluate events to determine whether they involve CFSI and their applicability to NRC regulated facilities
- In 2010, the OIG conducted an audit of the NRC's vendor inspection program and found that the NRC's approach to CFSI could be strengthened.

Staff Response to 2010 OIG Audit

- In response to CFSI-related findings in the 2010 OIG audit report, the staff documented in SECY-11-0154¹ the NRC's agencywide strategy and plan to monitor and evaluate CFSI relevant to NRC-regulated activities.
- In SECY-15-0003², the NRC staff discussed how 14 of these action items were completed and committed to completing the remaining five by December 2018.
- In 2021, the staff re-assessed these action items and determined that all actions were completed.

1. SECY-11-0154, "An Agencywide Approach to Counterfeit, Fraudulent and Suspect Items"

2. SECY-15-0003, "Staff Activities Related to Counterfeit, Fraudulent, and Suspect Items"

OIG Audit of NRC's Oversight of CFSI

- In February of 2022, the OIG issued a report (OIG-22-A-06) documenting its audit findings and recommendations on NRC's oversight of CFSI at nuclear power plants.
- The OIG's audit results found that NRC should improve its oversight of CFSI by (1) clarifying and communicating how the NRC collects, assesses, and disseminates information regarding CFSI, and (2) improving staff awareness of CFSI.
- The audit report identified eight recommendations to address the OIG's audit findings.
- The NRC staff issued a response to the OIG's audit report findings and recommendations, in which the staff agreed with these recommendations and identified planned actions.

OIG Audit Recommendations

- Develop processes and guidance to collect, process, and disseminate CFSI information
- Communicate those processes
- Develop an agencywide approach for CFSI and identify agency's primary objective regarding mitigation of CFSI
- Define CFSI
- Include a CFSI category in the Allegation Management System
- Develop inspection guidance in inspection procedures
- Develop CFSI training
- Develop a knowledge management and succession plan

Planned Actions to Address OIG Audit Recommendations

- Develop agency charter that documents objectives, approach and strategy for CFSI-related oversight of NRC regulated facilities and activities.
- Incorporate definition of CFSI in formal NRC guidance documents.
- Enhance current TRG processes and documentation for collecting, evaluating, and disseminating CFSI events and communicating this process with applicable internal stakeholders.
- Develop additional inspection guidance for CFSI-related oversight activities.
- Engage internal stakeholders to raise awareness of CFSI risks and incorporate CFSI in applicable inspector qualification activities.
- Include a category for CFSI in the Agency's Allegation Management System.

OIG Special Inquiry Case No. 20-022

- In February of 2022, the OIG issued its findings from a special inquiry on CFSI at operating nuclear power plants.
- The special inquiry identified five findings related to CFSI at operating nuclear power plants:
 - Presence of CFSI at two of the plants sampled
 - Extent of CFSI at plants unknown because tracking of CFSI is not a requirement under 10 CFR Part 21
 - No substantiation that NRC has lower CFSI standards
 - Third-parties reported fewer than 10 potential CFSI cases since 2016
 - NRC did not investigate or pursue any substantive actions regarding an allegor's concerns about the presence of CFSI

NRC Review of Information in Special Inquiry

- NRC staff conducted a review of the information presented in the special inquiry using the NRC's risk-informed decision-making process and determined that there is no immediate safety concerns to reactor facilities or facilities regulated under NMSS programs.
- The review found that there was (1) no evidence of CFSI that challenged reactor facility safety; (2) adequate defense-in-depth to mitigate potential failures CFSI; and (3) overall small increase in risk and minimal impact to safety margins from potential failures of SSCs due to CFSI.
- For facilities regulated under NMSS programs, the staff's review determined that CFSI issues are adequately minimized or mitigated through adherence to requirements and implementation of defense-in-depth measures.

Assessment of Risk Posed by CFSI

- NRC staff performed an assessment of the risk posed by CFSI using a safety case approach and concluded that the NRC's regulatory framework provides reasonable assurance that NRC regulated facilities have adequately prevented or mitigated risks posed by CFSI.
 - Incorporation of risk-informed approaches and defense-in-depth principles into the NRC's regulatory framework ensures CFSI risks are prevented or mitigated.
 - Implementation of a comprehensive oversight program provides confidence that NRC regulated facilities established measures to adequately prevent or mitigate CFSI risks.
- NRC staff recognized areas where the OIG's reports provided opportunities for the agency to make incremental improvements to implementation of existing programs and processes.

Staff Recommendations to Incrementally Improve NRC's Oversight Processes

- Strengthening awareness of the reporting requirements under 10 CFR Part 21, 10 CFR 50.72, 50.73, 71.95, 72.75, and 72.242 for NRC regional staff and inspectors.
- Performing outreach during regular industry meetings with vendors of spent fuel storage systems and radioactive material transportation packages to enhance supplier awareness of risks posed by CFSI and available guidance to address these risks.
- Engaging with other Federal agencies that perform regulatory oversight of safety critical industries and international regulatory counterparts to assess their approaches to mitigate CFSI risks and determine applicability of any insights gained from the assessment to NRC's approach for oversight related to CFSI.

Key Takeaways

- NRC staff has taken a proactive approach to its oversight of CFSI through issuance of CFSI-related guidance, development of processes to evaluate potential CFSI events, and performance of outreach activities with internal and external stakeholders.
- OIG recently conducted an audit and a special inquiry of NRC's oversight of CFSI at nuclear power plants and recommended the NRC improve its oversight of CFSI.
- NRC staff conducted a review of the information presented in these reports and concluded that no evidence was found to substantiate that NRC regulated facilities have been adversely impacted by CFSI.
- NRC staff performed an assessment of NRC's oversight of risks posed by CFSI to its regulated facilities and determined that the current regulatory framework adequately mitigates the risk posed by CFSI.
- NRC staff recognized that the OIG's reports presented opportunities for the NRC to make incremental improvements to our current processes for oversight of risks related to CFSI and identified actions to implement these improvements.

Questions

Acronyms

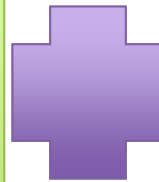
- CFR: Code of Federal Regulations
- CFSI: counterfeit, fraudulent, and suspect item
- OIG: Office of the Inspector General
- TRG: Technical Review Group

Backup Slides

CFSI is encompassed in NRC regulations for quality assurance and defect reporting

Appendix B to 10 CFR Part 50 areas:

- 1) Design control
- 2) Procurement document control
- 3) Control of purchased materials, equipment, and services
- 4) Identification and control of material, parts, and components
- 5) Disposition of nonconforming materials, parts, or components
- 6) Corrective action and program effectiveness reviews



10 CFR Part 21 and 10 CFR 50.55(e)

- 1) Evaluation of deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazard
- 2) Notification to NRC when there is information indicating a failure to comply or a defect

Key Guidance Documents for CFSI and Recent Information Notices on CFSI events

(ADAMS Accession No. ML15008A191) **Regulatory Issue Summary (RIS)-15-08**, “Oversight of Counterfeit, Fraudulent, and Suspect Items in Nuclear Industry” heightens awareness of the existing NRC regulations and how they apply to CFSI within the scope of NRC’s regulatory jurisdiction.

Generic Letter 89-02, “Actions to Improve the Detection of Counterfeit and Fraudulently Marketed Products” shares information regarding elements of programs that appear to be effective in providing the capability to detect counterfeit or fraudulently marked products.
<https://www.nrc.gov/reading-rm/doc-collections/gen-comm/gen-letters/1989/gl89002.html>

Information Notice (IN) 2018-11 Supplement 1: Kobe Steel Quality Assurance Record of Falsification

IN 2013-15 Willful Misconduct/Record Falsification and Nuclear Safety Culture

IN 2013-02 Issues Potentially Affecting Nuclear Facility Fire Safety

IN 2008-04 Counterfeit Parts Supplied to Nuclear Power Plants

NRC Bulletin 1988-010 Nonconforming Molded-Case Circuit Breakers

Other Sources of Guidance

Nuclear Industry Guidance

- EPRI Technical Report 3002002276 Plant Support Engineering: Counterfeit and Fraudulent Items – Mitigating the Increasing Risk
- NEI 14-09, Revision 1, Guidelines for Implementation of 10 CFR Part 21 Reporting of Defects and Noncompliance, as endorsed in NRC RG 1.234

International Guidance

- IAEA Publication on Managing Counterfeit and Fraudulent Items in the Nuclear Industry
- NEA MDEP CP-VICWG-04 Common Position on Counterfeit, Fraudulent, and Suspect Items Procedure

Resources from other Federal Agencies

- Department of Homeland Security National Intellectual Property Rights Coordination Center <https://www.iprcenter.gov/>
- Department of Energy (DOE) Operating Experience Committee <https://www.energy.gov/ehss/doe-corporate-operating-experience-program>

Resources

<https://www.nrc.gov/about-nrc/cfsi.html>

[https://nuclepedia.usalearning.gov/index.php?title=Counterfeit, Fraudulent, and Suspect Items](https://nuclepedia.usalearning.gov/index.php?title=Counterfeit,_Fraudulent,_and_Suspect_Items)

<https://www.iprcenter.gov/>

<https://www.epri.com/research/products/3002002276>

<https://www.iaea.org/publications/11182/managing-counterfeit-and-fraudulent-items-in-the-nuclear-industry>

<https://www.energy.gov/ehss/doe-corporate-operating-experience-program>