

Counterfeit, Fraudulent, And Suspect Items (CFSI)

Where is it going?

NUPIC VIC - 2013

Daniel Pasquale, Office of New Reactors
Construction Assessment & Enforcement
Branch (CAEB)

Daniel.Pasquale@nrc.gov



Current Events in CFSI



2012	Jan	The Construction Industry Institute (CII) approves additional funding to continue researching counterfeit materials inn the construction industry (RT-307)
	Feb	Procurement Director of a Russian supplier to the nuclear power industry arrested for buying low quality raw materials and pocketing the difference.
	Nov	INPO Event Report IER-4-12-86, "Counterfeit Parts and Equipment Vulnerability" ➔ Issued w/action statement: "Plants are expected to consider corrective actions provided in this document and to develop applicable corrective actions."
	Dec	Pentas Controls – DOJ press release
2013	Jan	Multiple South Korean plants identify numerous CFSI issues
	Jan	IAEA adds CFSI to Convention on Nuclear Safety (CNS) Annual reports
	Jan	IN-2012-22, "Counterfeit, Fraudulent, Suspect Items Training Offerings" issued
	Feb	NRC reinstitutes public meetings specifically to address CFSI with industry
	Apr	India holds initial fuel load at Kudankulam plant due to suspect fraudulent parts
	Apr	"Grand Fraud" exposed at the Russian nuclear energy company for misrepresenting the development activities for equipment intended for nuclear reactors.
2014	<i>tbd</i>	ASME NQA-1 discussing adding CFSI language to the 2014 Addenda (Non-mandatory)
	<i>tbd</i>	SECY-11-0154 Effectiveness Review conclusions to NRC Commissioners



ML 112200150

POLICY ISSUE
(INFORMATION)

October 28, 2011

SECY-11-0154

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: AN AGENCYWIDE APPROACH TO COUNTERFEIT, FRAUDULENT,
AND SUSPECT ITEMS

PURPOSE:

This paper informs the Commission of the staff's plans to identify and implement proactive strategies to detect and prevent the intrusion of counterfeit, fraudulent, and suspect items (CFSI) into equipment, components, systems, and structures regulated by the U.S. Nuclear Regulatory Commission (NRC).

SUMMARY:

This paper provides the Commission with the staff's agencywide strategy and plan to monitor and evaluate CFSI potentially impacting NRC-regulated activities. The paper also documents the staff's assessment of the current regulations, guidance, and licensee procurement processes associated with preventing the intrusion of CFSI into NRC regulated activities.

The staff assembled an internal task force comprised of representatives from the various offices potentially affected by the CFSI issue. As part of this effort four working groups were formed to

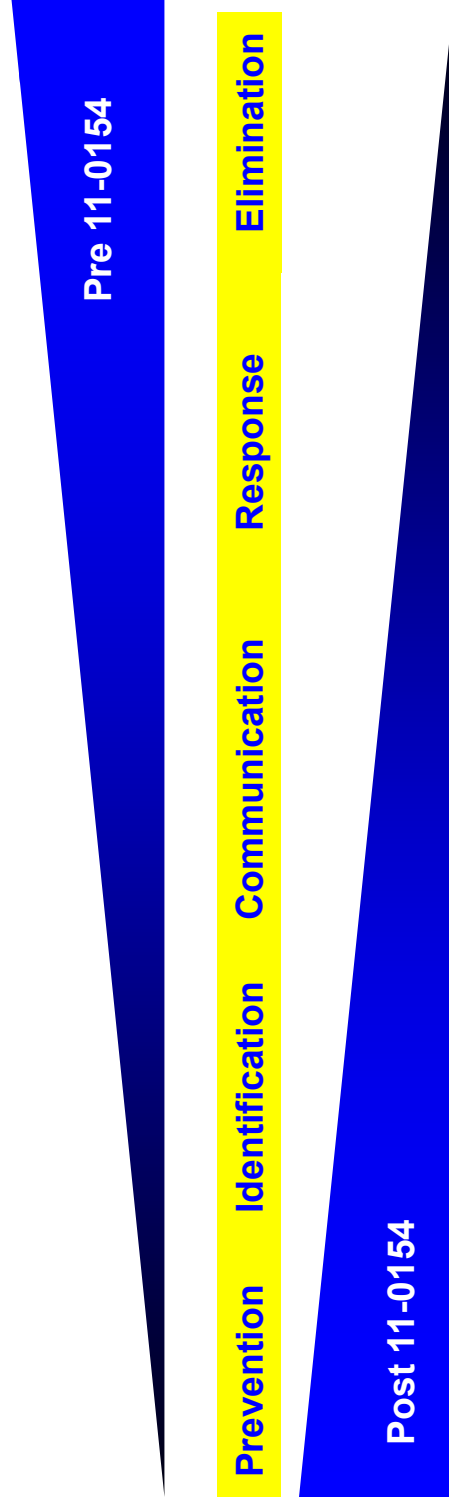


SECY 11-0154

CFSI Response Shift

Reactive → Proactive

RESOURCES



NUREG/BR-0500



“Safety Culture Policy Statement”

[Rev. 1]

Dec 2012 (ML12355A122)

*“This policy statement applies to
...holders of quality assurance program
approvals, vendors and suppliers of
safety-related components...”*

- **Problem Identification and Resolution**
Issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.
- **Questioning Attitude**
Individuals avoid complacency and continuously challenge existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action.

USNRC
U.S. Nuclear Regulatory Commission
Protecting People and the Environment

SAFETY CULTURE Policy Statement

NRC MISSION
The mission of the NRC is to license and regulate the Nation's civilian use of byproduct sources, and special nuclear materials in order to protect public health and safety, promote the common defense and security, and protect the environment.

DEFINITION OF NUCLEAR SAFETY CULTURE
Nuclear safety culture is the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment.

TRAITS OF A POSITIVE NUCLEAR SAFETY CULTURE
Experience has shown that certain personal and organizational traits are present in a positive safety culture. The following are traits of a positive safety culture:

- **Leadership Safety Values and Actions**—Leaders demonstrate a commitment to safety in their decisions and behaviors.
- **Problem Identification and Resolution**—Issues potentially impacting safety are promptly identified, promptly evaluated, and promptly addressed and corrected commensurate with their significance.
- **Personal Accountability**—All individuals take personal responsibility for safety.
- **Work Processes**—The process of planning and controlling work activities is implemented so that safety is maintained.
- **Continuous Learning**—Opportunities to learn about ways to ensure safety are sought out and implemented.
- **Environment for Raising Concerns**—A safety-conscious work environment is maintained where personnel feel free to raise safety concerns without fear of retribution, intimidation, harassment, or discrimination.
- **Effective Safety Communication**—Communications maintain a focus on safety.
- **Respected Work Environment**—Trust and respect permeate the organization.
- **Questioning Attitude**—Individuals avoid complacency and continuously challenge existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action.

There may be additional traits not included here that are also important in a positive safety culture. These traits were not developed for inspection purposes.

TO GET MORE INFORMATION
NUREG/BR-0500 Rev. 1
December 2012
www.nrc.gov
www.nrc.gov/docs/2012/12355a122.pdf



SECY 11-0154 SUMMARY

19 Planned Actions (opportunities to enhance CFSI processes)

Five implementation categories to consolidate similar issues:

- *Industry process enhancements/best practices*
 - ✓ (11 Industry voluntary initiatives)
- *Regulatory guidance*
- *Communication*
- *Training*
- *Industry oversight for detecting & preventing CFSI*

Industry's Voluntary Initiatives

Proposed Prioritization - Sort by NUMBER



#	<u>INITIATIVE</u>	<u>PRIORITY</u>	<u>LEVEL</u>
1.	Develop a <u>plan</u> for implementing “proactive” CFSI strategies	XI	LOW
2.	Develop a method for sharing CFSI Information, including issues identified during receipt inspection and during commercial grade dedication	VI	MEDIUM
3.	Develop an industry accepted practice for using the corrective action program and nonconformance programs for entering CFSI related to <u>safety related components</u>	I	HIGH
4.	Develop an industry accepted practice for using the corrective action program to enter <u>non-safety related CFSI</u> into the corrective action program	V	MEDIUM
5.	Establish an industry CFSI database	VII	MEDIUM
6.	Incorporate industry best practices for quarantining CFSI items and removing them from the supply chain without returning them to the supplier	III	HIGH
7.	Incorporate industry best practices for identifying and informing the industry of CFSI trends	X	LOW
8.	Incorporate industry best practices for enhancing commercial-grade dedication, and receipt inspection practices to account for CFSI	IV	HIGH
9.	Incorporate industry best practices for product authentication of complex items that will provide additional assurance for preventing CFSI	VIII	LOW
10.	Incorporate industry best practices for using batch sampling with authentication testing	IX	LOW
11.	Incorporate industry best practices for the use of standardized anti-CFSI language in procurement documents	II	HIGH



Agency Enhancements



- 1. Regulatory guidance**
 - Addition of CFSI to Part 21 guidance
- 2. Communication**
 - Expand OpE/ConE program for CFSI
 - Program move from CEVB to CAEB
 - CFSI Technical Review Group (TRG)
 - Federal Agency Outreach
 - DHS/ICE National IPR Center
 - Federal Acquisitions Regulations (FAR) CFSI update
 - International
 - NEA Nonconforming /CFSI Task Group (NRC Chair)
 - IAEA IRS & (CNS) Convention on Nuclear Safety



Agency Enhancements



3. Training

- CFSI awareness into Allegations training module
- Provided CFSI Overview to OI Inspectors
- Provided CFSI Awareness to NRC staff (Region I: In-Prog)
- Issued IN 2012-21, CFSI Training Offerings
- Formal Inspector training module in development

4. Industry oversight

- NRC inspections
 - Vendor inspections - CFSI added to VIPP
 - Licensee procurement, (pilots w/temp instructions)
- Licensee audits of suppliers
 - Manufacturers
 - Dedicating entities
 - Supplier-to-supplier audits
 - Suppliers of CDAs (per site cyber plan – 10 CFR 73.54)



Existing Industry Guidance on CFSI



EPRI 1019163	“Plant Support Engineering: Counterfeit, Substandard and Fraudulent Items, Mitigating the Increasing Risk”
EPRI TR-1021493	“Plant Support Engineering: Counterfeit and Fraudulent Items - A Self-Assessment Checklist”
EPRI NP-5652	“Guideline for the Utilization of Commercial Grade Items In Nuclear Safety Related Applications (NCIG-07)”
EPRI NP-6406	“Guidelines for the Technical Evaluation of Replacement Items in Nuclear Power Plants (NCIG-11)”
EPRI NP-6629	“Guidelines for the Procurement and Receipt of Items for Nuclear Power Plants (NCIG-15)”
EPRI TR-017218-R1	“Guideline for Sampling in the Commercial-Grade Item Acceptance Process”
EPRI TR-106439	“Guideline on Evaluation and Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Applications”
EPRI TR-107330	“Generic Requirements Specification for Qualifying a Commercially Available PLC for Safety-Related Applications in Nuclear Power Plants”
EPRI TR-107339	“Evaluating Commercial Digital Equipment for High Integrity Applications – A Supplement to ERPI Report TR-106439”



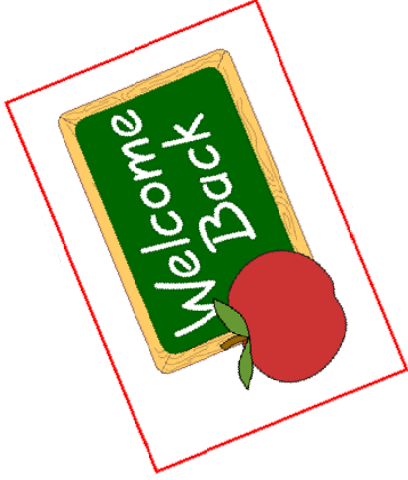
Additional

CFSI

Guidance



DOE G 414.1-3	“Suspect/Counterfeit Items Guide for Use with 10 CFR 830 Subpart A, Quality Assurance Requirements, and DOE O 414.1B, Quality Assurance”
IAEA-TECDOC-1169	“Managing suspect and counterfeit items in the nuclear industry”
SAE AS-5553	“Counterfeit Electronic Parts: Avoidance, Detection, Mitigation and Disposition”
SAE AS-6081	“Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation and Disposition - Distributors”
IDEA-STD-1010-A	“Inspection Standard for Detecting Counterfeit Components”
IDEA-STD-1010-B	“Acceptability of Electronic Components Distributed in the Open Market”
ASME NQA-1 (NQA-1-2014)	“Quality Assurance Requirements for Nuclear Facility Applications (QA)”



Updated Training Offerings



- EPRI : Counterfeit, Fraudulent, Substandard Item Training Workshop
- EPRI: Nuclear Procurement Training Course
- EPRI: ASME Procurement Training Course
- EPRI: CFSI Computer Based Training
- NRC: IN 2012-22, “Counterfeit, Fraudulent, Suspect Item (CFSI) Training Offerings”



Areas In Development

- *Reporting vs. sharing CFSI information*
 - ? *How to communicate with non-members*
 - ? *Establish “tear lines”*
- *How far up the supply chain is necessary?*
 - *Dedicating entity*
- *Appropriate quarantine protocols*
 - *Legal processes in play*
- *What should an anti-CFSI procurement clause communicate*
- *Key CFSI definitions*
- *Procuring electronics*
 - ? *Individual testing vs. final acceptance testing*
- *Cybersecurity Supply Chain Oversight*
 - ? *Responsibilities: Supplier QA auditing vs. security services*

Reporting Requirements vs. Proactive Initiative



<u>Regulatory Requirement</u>	<u>Voluntary</u>
• Prescribed process • Specific data requirements • Codified response times • Publicly available • Unrestricted usage • Broadcast publication • Full disclosure	• Process tailored to needs • Data tailored to needs • Arbitrary response times • Limited access • Ability to control usage • Targeted participation • Ability to establish “tear lines”

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The Need To Quarantine

- is essential to the agency's ability to adequately conduct an effective inspection and/or investigation of a suspected counterfeit item. Possession of the item is necessary for investigators to address potential wrongdoing issues.
- protects investigatory evidence. Each suspected item is treated as potential evidence of a violation of NRC regulations or other U.S. law, and must be quarantined.
- is essential since each investigation is unique, and is conducted based on the facts/circumstances associated with the specific case. Once OI determines that the item is no longer needed, the item, will (if still in OI's possession) be returned to the licensee. This usually occurs fairly quickly, but some cases may take longer than others.

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What Should an Anti-CFSI Contract Clause Communicate?

1. Provide advance notification that the customer (& the commercial nuclear industry) is CFSI intolerant, and will report any illegal activities it encounters to authorities
2. That both parties value the significance of supplying only the highest quality parts
3. That both parties employ a meaningful testing/inspection process to screen for substandard and misrepresented items
4. Require solid CFSI practices from sub-suppliers
5. The customer does not approve of, or accept unauthorized part substitutions
6. The supplier is expected to receive authorization from the customer prior to altering any item associated with the contract
7. That both parties are exhibiting a questioning attitude regarding their supply sources, and use only authorized suppliers
8. That both parties will disposition identified CFSI in a responsible manner that is considerate of the industry as a whole (including quarantine of appropriate items)
9. The customer expects that they will be promptly notified by the supplier, if and when the supplier becomes aware that he has supplied misrepresented product to the customer
10. That motivations to try to pass off misrepresented goods have been effectively minimized

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Key Terms Needing Definitions

	NRC	EPRI	DOE	IAEA	FAR
Counterfeit	✓	✓	✓	✓	✓
Fraudulent	✓	✓	0	0	✓
Suspect	0	✓	✓	✓	✓
Substandard	0	✓	✓	0	0
Authentication	✓	0	0	0	0



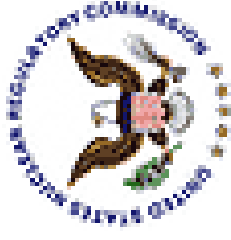
Plan for Going Forward

- Industry submit revised guidance:
 - Address the (11) voluntary initiatives
- Staff review of industry submission
- Convene CFSI steering committee:
 - Discuss comments with industry
 - Perform staff training
- Perform NRC Implementation effectiveness reviews
- Evaluate overall CFSI program effectiveness
- SECY to Commissioners
- Subsequent actions as directed
 - Possible Reg Guide endorsement
 - Possible rule making





THE FINISH LINE



- *Implementation of a “living” program that proactively addresses the “global” aspects of the issue*
- *Enhanced CFSI attention including:*
 - *detection, prevention, response, and up-to-date training*
- *Continuous improvement through acknowledgement in the corrective action programs*
- *Increased CFSI communications throughout regulated procurement activities including dialog with related industry sectors*
- *Interagency response protocols that leverage investigatory and law enforcement resources*



QUESTIONS ?

***Daniel Pasquale
U.S. NRC, Office Of New Reactors
Sr. Operations Engineer
Office of New Reactors
Construction Assessment &
Enforcement Branch Branch
(CAEB)***

(301) 415-2498

Daniel.Pasquale@nrc.gov

