

May 14, 2009

MEMORANDUM TO: Samuel J. Collins, Regional Administrator, Region I  
Luis Reyes, Regional Administrator, Region II  
Mark A. Satorius, Regional Administrator, Region III  
Elmo E. Collins, Regional Administrator, Region IV  
Eric J. Leeds, Director, Office of Nuclear Reactor Regulation  
Michael R. Johnson, Director, Office of New Reactors  
Charles L. Miller, Director, Office of Federal and State Materials and  
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Michael F. Weber, Director, Office of Nuclear Material Safety  
and Safeguards  
Roy P. Zimmerman, Director, Office of Nuclear Security and  
Incident Response

FROM: Cynthia A. Carpenter, Director  
Office of Enforcement /RA/

SUBJECT: ENFORCEMENT GUIDANCE MEMORANDUM 09-002  
ENFORCEMENT DISCRETION FOR FIRE INDUCED CIRCUIT  
FAULTS

**Purpose:**

The purposes of this Enforcement Guidance Memorandum (EGM) are to describe the conditions limiting enforcement discretion during the resolution of fire protection concerns involving multiple spurious operations. Enforcement discretion is limited to three years from the date of issuance of Regulatory Guide (RG) 1.189, Revision 2: (1) six months following the issuance of RG 1.189, Revision 2, for licensees to identify noncompliances related to multiple fire induced circuit faults, place the noncompliances into their corrective action program and implement compensatory measures for the noncompliances<sup>1</sup> and (2) three years following the issuance of RG 1.189, Revision 2, for licensees to complete the corrective actions associated with noncompliant multiple fire induced circuit faults. This EGM supersedes EGM 98-002 Revision 2 (Agencywide Documents Access and Management System (ADAMS) accession number ML003710123).

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<sup>1</sup> Regulatory Guide 1.189, Rev. 2 is expected to be published before October 1, 2009.

**Background:**

In the 1990's, the Office of Nuclear Reactor Regulation (NRR) staff and regional inspectors found plant specific issues related to fire induced circuit analysis. The NRC staff began interacting with stakeholders to understand the problem and develop a solution to the circuit analysis issues. A few years later, the NRC staff issued enforcement discretion guidance in EGM 98-002 Rev 2, which provided enforcement discretion for *all* fire induced circuit failures where licensees had implemented compensatory measures.

On September 11, 2006, in SECY-06-0196, the staff proposed to the Commission to issue a generic letter to clarify the fire induced circuit failure issues, (see SECY-06-0196, "Issuance of Generic Letter 2006-XX, 'Post-Fire Safe-Shutdown Circuits Analysis Spurious Actuations"). In response to SECY-06-0196, the Commission published Staff Requirements Memorandum (SRM) SECY-06-0196, of the same title dated December 15, 2006.

In SRM-SECY-06-0196, the Commission: (1) disapproved issuance of the proposed generic letter, (2) directed the staff to develop a clearly defined method of compliance to resolve fire induced circuit failures for licensees who choose not to utilize the risk-informed approach contained in Title 10 of the *Code of Federal Regulations* Part 50, Section 48(c) (10 CFR 50.48(c)) – National Fire Protection Association Standard (NFPA) 805, and (3) directed the staff to engage industry stakeholders to discuss the clarification of regulatory expectations to ensure a common understanding of the path to closure for this issue.

In parallel to the disposition of issues related to circuit analysis, the staff has been addressing the issues pertaining to unapproved operator manual actions. The two issues overlapped in that many unapproved operator manual actions had been established to address circuit issues. In 2007, the NRC issued EGM-07-004, "Enforcement Discretion for Post-Fire Manual Actions Used as Compensatory Measures for Fire Induced Circuit Failures," to provide enforcement guidance consistent with the direction provided to the staff in SRM-SECY-06-0010, "Withdraw Proposed Rulemaking – Fire Protection Program Post-Fire Operator Manual Actions," dated February 8, 2006. EGM-07-004 provided licensees enforcement discretion for unapproved manual actions performed for *single* circuit failures. By September 6, 2007, the licensee must have entered these manual actions into the licensee's corrective action system and instituted compensatory measures. Once these compensatory measures were implemented, enforcement discretion continued until March 6, 2009, by which time licensees must have corrective actions in place or have submitted requests for exemptions or license amendments to the NRC for approval. However, as stated in EGM-07-004, other circuit failure issues, specifically *multiple* spurious actuations, continued to receive enforcement discretion under EGM-98-002 Rev 2.

On June 30, 2008, the staff published SECY-08-0093, "Resolution of Issues Related to Fire Induced Circuit Failures." This SECY proposed the technical path forward for the resolution of multiple fire induced circuit faults, including changes to enforcement guidance. On September 3, 2008, the Commission published SRM-SECY-08-0093, which approved the staff's changes to the enforcement discretion for fire induced circuit faults. This EGM will supersede EGM 98-002, Rev 2, and will set a date for licensees to initiate corrective actions and implement compensatory measures for noncompliant multiple fire induced circuit faults.

**Discussion:***Single Spurious Actuations Contrasted with Multiple Spurious Actuations*

When considering spurious operations it is necessary to separate the fire damage which causes the spurious operation to occur from the operation itself. For the purposes of this enforcement discretion, the NRC staff is providing the following distinction between single and multiple in the context of spurious actuations. Single spurious actuations involve a single fire induced circuit fault that causes undesired operation of one or more systems or components. Examples of single fire induced circuit faults include a single hot short, a short to ground or an open circuit. Multiple spurious actuations are multiple fire induced circuit faults causing an undesired operation of one or more systems or components.

This EGM provides enforcement discretion for analysis of the effects of multiple fire induced circuit faults. For example, two circuit failures may need to occur to cause the single actuation of the Emergency Core Cooling System (ECCS). Although the actuation of the ECCS is a single actuation, it requires multiple fire induced circuit faults and therefore is covered by this EGM.

*Revised Regulatory Guide 1.189*

The NRC staff met with industry stakeholders on the following dates: October 16, 2008 (ML083110683), November 19, 2008, (ML083380505), and December 18, 2008 (ML090230219) to discuss fire induced circuit issues. The staff views are documented in NRC Draft Regulatory Guide DG-1214 (ML090070453), which was released for public comment in April 2009. DG-1214, when finalized will be Regulatory Guide 1.189 Rev 2, "Fire Protection for Nuclear Power Plants."

The revised RG 1.189 will include a method of compliance for licensees to resolve multiple fire induced circuit faults for licensees that chose not to adopt 10 CFR 50.48(c) – NFPA 805. Specifically, Regulatory Position 5.3 of RG 1.189 will provide the necessary definition for licensees to understand the regulatory requirements and implement these requirements at their stations. Regulatory Position 5.3 is consistent with the staff views based on the discussions with the industry stakeholders on this issue.

**Action:**

This EGM is not applicable to licensees' who are transitioning to 10 CFR 50.48(c) – NFPA 805. Nor will enforcement discretion be granted to identified noncompliances that are found to be willful or a finding that the Reactor Oversight Process Significant Determination Process would evaluate as red or categorized at Severity Level I.

This EGM establishes a period of enforcement discretion for six months following the issuance of RG 1.189 Rev 2, as the date by which licensees must,

- identify noncompliances related to multiple fire induced circuit faults,
- implement compensatory measures for the noncompliances, and
- place the noncompliances in the licensees' corrective action program.

Noncompliances identified after this 6 month period will be dispositioned in accordance with the Enforcement Policy.

The 6 months will be followed by a 30 month period of additional enforcement discretion for the licensees to resolve identified multiple fire induced circuit fault related noncompliances in the licensees' corrective action program. Adequate compensatory measures for the noncompliances must be established and/or maintained for the entire period or until resolved, whichever is sooner, in order to receive enforcement discretion. At the end of the 36 months, the enforcement discretion will end for all unresolved noncompliances, regardless of any compensatory measures that are still in place.

While violations associated with this enforcement discretion do not require discussion at an Enforcement Panel, they do require assignment of an Enforcement Action (EA) tracking number and shall be documented in an inspection report. The following or similar language should be included in the cover letter to the inspection report which discusses the violation:

“A violation of [insert either 10 CFR Part 50, Appendix R, Sections III.G.2 or III.G.3 or the licensees' approved fire protection program] was identified. Because the violation was associated with multiple fire induced circuit faults and identified during the discretion period as described in Enforcement Guidance Memorandum (EGM) 09-002, the NRC is exercising enforcement discretion in accordance with EGM-09-002.”

This EGM emphasizes that three years following the issuance of RG 1.189 Rev 2 is the date the licensee must complete corrective actions associated with noncompliances involving multiple fire induced circuit faults in order to receive enforcement discretion. These dates are consistent with Commission direction provided in SRM-SECY-08-0093.

Corrective actions for these noncompliances could involve actions to:

- comply with 10 CFR Part 50, Appendix R, Sections III.G.2 or III.G.3, or licensees' approved licensing basis; or
- submit appropriate exemption requests or license amendments; or
- adopt National Fire Protection Association Standard 805 (NFPA-805), through 10 CFR 50.48(c).<sup>2</sup>

The guidance of NRR Office Instruction LIC-109 “Acceptance Review Procedures” (ML081200811) will be utilized to process an exemption/amendment request. Licensees that submit an acceptable high quality and complete exemption/amendment request before the end of the 36 months will continue to receive enforcement discretion until the staff disposes the exemption/amendment request. If the exemption/amendment is unacceptable with opportunity to supplement, the enforcement discretion will continue while under review by the staff. If after receipt of the supplemental information and the exemption/amendment is determined to be acceptable for review, enforcement discretion will continue until the exemption/amendment is dispositioned by the NRC. If after the three years following the issuance of RG 1.189 Rev 2 and

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<sup>2</sup> Licensees who submit their letter of intent to transition to NFPA 805 will have enforcement discretion as stated in the NRC Enforcement Policy, “Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues” (73 FRN 52705).

during the LIC-109 process, a licensee's submittal is not acceptably supplemented or a submittal is initially characterized as unacceptable with no opportunity to supplement, the licensee will no longer receive enforcement discretion. The noncompliances related to these multiple fire induced circuit faults will be dispositioned in accordance with the Enforcement Policy.

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