

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
WASHINGTON, D.C. 20555-0001

April 19, 2005

**NRC REGULATORY ISSUE SUMMARY 2005-07  
COMPENSATORY MEASURES TO SATISFY  
THE FIRE PROTECTION PROGRAM REQUIREMENTS**

**ADDRESSEES**

All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

**INTENT**

The U.S. Nuclear Regulatory Commission (NRC) is issuing this regulatory issue summary (RIS) to inform addressees that alternate compensatory measures as otherwise required by the approved fire protection program may be used for a degraded or inoperable fire protection feature under certain circumstances, in accordance with the discussion in this RIS. This RIS describes the proper method for changing the approved fire protection program (FPP) to use an alternate compensatory measure. No action or written response is required.

**BACKGROUND INFORMATION**

The purpose of this RIS is to discuss how a licensee, with the standard license condition for fire protection, may change the approved FPP to use alternate compensatory measures. This RIS is in response to industry feedback from the October 13-15, 2004, public workshop in Atlanta, GA (ADAMS Accession No. ML043430240) on implementing changes to compensatory measures in the approved FPP. Generic Letter 86-10, "Implementation of Fire Protection Requirements," dated April 24, 1986, specified a process for revising the operating license condition to allow licensees to remove fire protection technical specifications and put them in the approved FPP. The standard license condition for fire protection is given in Generic Letter 86-10:

Fire Protection

(Name of Licensee) shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility (or as described in submittals dated \_\_\_\_\_) and as approved in the SER dated \_\_\_\_\_ (and Supplements dated \_\_\_\_\_) subject to the following provision: The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

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Currently most licensees have adopted this license condition and moved the fire protection compensatory measures from technical specifications to the approved FPP in accordance with the guidance in Generic Letter 88-12, "Removal of Fire Protection Requirements From Technical Specifications," dated August 2, 1988.<sup>1</sup>

## **SUMMARY OF THE ISSUE**

In certain situations a licensee may prefer to implement an alternate compensatory measure to the one required by the FPP. For example, the compensatory measure required by a licensee's approved FPP for a degraded fire barrier is typically an hourly fire watch or, in the case of an inoperable fire suppression system, a continuous fire watch with backup fire suppression equipment. Fire watches may not be the most effective compensatory measure for degraded or inoperable fire protection features or post-fire safe-shutdown capability (see Information Notice 97-48). A licensee may choose to implement a different compensatory measure or combination of measures (e.g., additional administrative controls, operator briefings, temporary procedures, interim shutdown strategies, operator manual actions, temporary fire barriers, temporary detection or suppression systems). Such a change may be made to the approved FPP. However, the licensee must perform a documented evaluation of the impact of the proposed alternate compensatory measure to the FPP and its adequacy compared to the compensatory measure required by the FPP. The evaluation must demonstrate that the alternate compensatory measure would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire. Any change to the FPP must maintain compliance with the General Design Criteria and 10 CFR 50.48(a), and must be retained as a record pursuant to 10 CFR 50.48(a). The licensee's change to the FPP is subject to inspection by the NRC through the Reactor Oversight Process (ROP).

The evaluation of the alternate compensatory measure should incorporate risk insights regarding the location, quantity, and type of combustible material in the fire area; the presence of ignition sources and their likelihood of occurrence; the automatic fire suppression and fire detection capability in the fire area; the manual fire suppression capability in the fire area; and the human error probability where applicable.

As a reminder to licensees, additional information on compensatory measures can be found in Information Notice 97-48, "Inadequate or Inappropriate Interim Fire Protection Compensatory Measures," dated July 9, 1997. Information Notice 97-48 provides background on the use of compensatory measures, discusses situations in which fire watches were used inappropriately, and gives examples of alternate compensatory measures that may be preferred for degraded or inoperable conditions associated with post-fire safe-shutdown capability or degraded fire protection features. Another source of information is Generic Letter 91-18, Revision 1, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," dated October 8, 1997, which discusses, among

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<sup>1</sup> Licensees without the standard license condition for fire protection may have to submit changes to their FPP for NRC review and approval. Licensees may not change a compensatory measure required by the licensee's technical specifications without NRC review and approval by license amendment.

other topics, compensatory measures and timely corrective actions.<sup>2</sup> Licensees may want to review and consider guidance provided to NRC inspectors and discussed in the most up-to-date generic communication on timeliness of corrective actions. The reliance on compensatory measures is one of the factors in the inspector guidance when evaluating timeliness of the corrective action. The expectation in the guidance is to promptly complete the corrective action at the first available opportunity and eliminate the reliance on the compensatory measure.

### **BACKFIT DISCUSSION**

This RIS requires no action or written response and is, therefore, not a backfit under 10 CFR 50.109. Consequently, the NRC staff did not perform a backfit analysis.

### **FEDERAL REGISTER NOTIFICATION**

A notice of opportunity for public comment was not published in the *Federal Register* because this RIS is informational.

### **SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT OF 1996**

The NRC has determined that this action is not a rule and thus is not subject to the Small Business Regulatory Enforcement Fairness Act of 1996.

### **PAPERWORK REDUCTION ACT STATEMENT**

This RIS does not contain information collections and, therefore, is not subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.).

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<sup>2</sup> As of the date of this RIS, the most current guidance is Generic Letter 91-18, Revision 1, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," dated October 8, 1997, ADAMS Accession No. ML031200701 and Attachment 1 to Generic Letter 91-18, dated October 8, 1997, ADAMS Accession No. ML031200704.

## CONTACT

Please direct any questions about this matter to the technical contacts listed below or to the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

***/RA/***  
Patrick L. Hiland, Chief  
Reactor Operations Branch  
Division of Inspection Program Management  
Office of Nuclear Reactor Regulation

Technical Contacts: Alex Klein, NRR  
301-415-3477  
E-mail: [ark1@nrc.gov](mailto:ark1@nrc.gov)

Phil Qualls, NRR  
301-415-1849  
E-mail: [pmq@nrc.gov](mailto:pmq@nrc.gov)

Note: NRC generic communications may be found on the NRC public Web site, <http://www.nrc.gov>, under Electronic Reading Room/Document Collections.