

U.S. NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

RIN 3150 AH54

Fire Protection Program—Post-Fire Operator Manual Actions

AGENCY: Nuclear Regulatory Commission

ACTION: Withdrawal of proposed rule

SUMMARY: The Nuclear Regulatory Commission (NRC) is withdrawing its proposed amendment to the Commission's fire protection regulations for nuclear power facilities operating prior to January 1, 1979. The proposed amendment pertained to the use of manual actions by plant operators coincident with fire detectors and an installed automatic fire suppression system in the fire area as an alternative method to achieve hot shutdown conditions in the event of fires in certain plant areas. Based on stakeholder comments, the Commission believes that the proposed rule would not achieve intended objectives of effectiveness and efficiency.

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## I. Purpose

For the reasons discussed in this document, the Commission is withdrawing a proposed rulemaking that was recommended as the appropriate regulatory tool to resolve a compliance issue associated with the use of operator manual actions for post-fire safe shutdown of the nuclear power plant. The Commission is initiating an operator manual actions closure plan to ensure compliance with the fire protection regulations.

## II. Background

Section 50.48(b) of the *Code of Federal Regulations* (10 CFR 50.48(b)) backfits the requirements of paragraphs III.G, III.J, and III.O of Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to plants licensed to operate before January 1, 1979 (pre-1979). The NRC incorporated similar guidance and criteria into Branch Technical Position CMEB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants," and Section 9.5-1, "Fire Protection Program," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants" (also referred to as the Standard Review Plan (SRP) for plants licensed after January 1, 1979 (post-1979). Post-1979 licensees incorporated their fire protection program implementation requirements into their operating license as a license condition.

Paragraph III.G.2 of Appendix R to 10 CFR Part 50 requires that, where cables or equipment of redundant trains of systems necessary to achieve and maintain hot shutdown

conditions are located in the same fire area, one of the following means of ensuring that one of the redundant trains is free of fire damage shall be provided:

- a. separation of cables and equipment by a fire barrier having a 3-hour rating
- b. separation of cables and equipment by a horizontal distance of more than 20 feet with no intervening combustibles or fire hazards and with fire detectors and an automatic fire suppression system in the fire area
- c. enclosure of cables and equipment in a fire barrier having a 1-hour rating and with fire detectors and an automatic fire suppression system in the fire area

Paragraph III.G.2 of Appendix R to 10 CFR Part 50 cannot be reasonably interpreted to permit reliance upon operator manual actions with respect to redundant safe shutdown systems in the same fire area. Therefore, any pre-1979 licensee that is using operator manual actions instead of fire barriers or separation without an NRC-approved exemption is not in compliance with the regulations. Licensees who are required to comply with paragraph III.G and who implement operator manual actions without NRC review and approval are not in compliance with the rule.

In the past, the staff reviewed and approved a number of exemption requests for the use of operator manual actions when licensees could not meet the requirements for either separation distance, a fire barrier, or a fire suppression system as detailed under paragraphs III.G.2(a), (b), or (c) of Appendix R to 10 CFR Part 50. The staff's rationale for approving these exemptions was predicated on the type and amount of combustibles, the need for automatic fire suppression and detection capability, the effectiveness of the applicant's manual firefighting capability, and the time assumed available for plant operators to take such manual actions.

The staff had become aware that some licensees were using operator manual actions in lieu of fire barriers and initiated this rulemaking as a means to bring plants into compliance.

As originally issued, 10 CFR 50.48, "Fire Protection," allowed licensees to make a request for exemption from a requirement to comply with one or more of the provisions of Appendix R to 10 CFR Part 50, if the exemption was based on licensee's assertion that the required modifications would not enhance fire protection safety in the facility or that the modifications might be detrimental to overall facility safety. 10 CFR 50.12, "Specific Exemptions," provides the current basis for the NRC considering an exemption.

The regulations also allow a licensee to use a risk-informed, performance-based approach under 10 CFR 50.48(c) using National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition," instead of seeking an exemption or license amendment or meeting the requirements of Appendix R.

### III. Proposed Rulemaking

In SECY-03-0100, "Rulemaking Plan on Post-Fire Operator Manual Actions," dated June 17, 2003, the NRC staff recommended a revision to the reactor fire protection regulation contained in Appendix R to 10 CFR Part 50 and associated guidance to resolve a regulatory compliance issue. The proposed rule on post-fire operator manual actions was published in the *Federal Register* on March 7, 2005 (70 FR 10901), with a 75-day comment period that ended on May 23, 2005. The proposed rule would have revised paragraph III.G.2 of Appendix R to allow licensees to implement acceptable operator manual actions combined with fire detectors

and automatic fire suppression capability as an acceptable method for ensuring the capability of a licensee to bring a reactor to, and maintain it in, a hot shutdown condition. Fire detectors and automatic fire suppression requirements, with the criteria for feasible and reliable operator manual actions were included to maintain fire protection defense-in-depth. The anticipated outcome of this proposed rule was to reduce unnecessary regulatory burden and maintain NRC effectiveness and efficiency by reducing the need for licensees to prepare exemption requests, and the need for NRC to review and approve these requests.

The NRC received about 80 comments from 14 individuals and organizations on the proposed rule. Industry stakeholders and the Nuclear Energy Institute (NEI) commented that the proposed rule requirement for an automatic fire suppression system is not necessary and installation of such systems would be costly without a clear safety enhancement. Industry stakeholders and NEI stated that this requirement would likely not reduce or eliminate the number of exemption requests, and thus, would not meet one of the primary purposes of the rulemaking.

Industry stakeholders further objected to the proposed rule requirement for a time margin and stated that thermal hydraulic calculations and other analyses have inherent conservatism that accounts for time margin. Industry stakeholders also objected to the time margin factor of two, stating that it is arbitrary, unprecedented, and inconsistent with requirements for other plant programs, such as emergency operating procedures.

Some industry stakeholders claim that the proposed rule is a backfit and that NRC guidance has allowed the use of operator manual actions to protect redundant safe shutdown trains.

Comments received from public interest groups and individuals generally stressed the need for the NRC to maintain the current fire protection of safe shutdown regulation. The Union of Concerned Scientists and the Nuclear Information and Resource Service stated that they agree with the staff's recommendation to withdraw the proposed rule.

The NRC's response to the above comments and other comments is available to the public in "Response to Public Comments on the Proposed Operator Manual Actions Rule," (ADAMS Accession No. ML053350235).

The NRC has engaged stakeholders throughout the rulemaking process. On April 27, 2005, the NRC held a Category 3 public meeting at NRC Headquarters in Rockville, Maryland, to obtain stakeholder feedback on the proposed rule. Representatives from the industry, the Nuclear Energy Institute (NEI), industry consultants, and a public interest group attended the meeting. The feedback provided by the industry stakeholders during the public meeting was similar in nature and consistent with those provided in written comments at the close of the 75-day public comment period.

On September 30, 2005, the NRC held a Category 2 public meeting at NRC Headquarters to discuss planned withdrawal of the proposed operator manual actions rule and NRC's closure plan. During this meeting, the NRC received public comments on the closure plan from industry, the NEI, the Nuclear Information and Resource Service, and an industry consultant.

#### IV. Withdrawal of Rulemaking

Industry stakeholders and NEI stated that the proposed rule, if implemented, would require numerous exemption requests for conditions that do not satisfy the automatic fire suppression requirement, specific acceptance criterion for operator manual actions, or a combination thereof. This outcome does not meet the rulemaking primary purpose of effectiveness and efficiency to reduce or eliminate exemption requests. Issuing a new rule with the likelihood of numerous exemption requests is not a good regulatory practice. Based on the above, the NRC is withdrawing the proposed rulemaking.

#### V. Operator Manual Actions Closure Plan

##### A. Ensuring Compliance

The NRC will continue to enforce its regulations through scheduled inspections to ensure compliance. The NRC expects that noncompliance findings, identified by NRC inspectors or licensees, will be addressed by licensees through plant corrective actions to bring the plant back into compliance, consistent with the Commission's current fire protection regulations.

The withdrawal of the operator manual actions rulemaking would require some licensees to take corrective actions other than what a final rule would have allowed. As such, the NRC's closure plan to deal with the rule withdrawal includes issuing a new regulatory issue summary and developing internal staff regulatory review guidelines for post-fire operator manual actions.



B. Regulatory Issue Summary

The NRC intends to issue a regulatory issue summary (RIS) to reiterate its III.G.2 compliance expectations with respect to the use of operator manual actions, discuss the means to achieve compliance, advise licensees of the date the NRC will terminate the enforcement discretion guidance in Enforcement Guide Memorandum (EGM) 98-02, "Enforcement Guidance Memorandum—Disposition of Violations Of Appendix R, Sections III.G and III.L Regarding Circuit Failures," Revision 2 issued in February 2000 (incorporated into Enforcement Manual section 8.1.7.1), respond to industry's contention regarding backfit of operator manual actions, and discuss exemption requests, compensatory measures and corrective actions pertaining to operator manual actions.

C. Staff Regulatory Review Guidelines

The NRC developed acceptance criteria as part of the proposed rule for operator manual actions and DG-1136, "Demonstrating the Feasibility and Reliability of Operator Manual Actions in Response to Fire," dated February 2005, that provided an acceptable method for complying with the proposed rule. The acceptance criteria and DG-1136 were published in 70 FR 10901. The NRC plans to update Section 9.5-1, "Fire Protection Program," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants" [also referred to as the Standard Review Plan (SRP)] to address post-fire operator manual actions acceptance guidance. This update to SRP will include the knowledge gained during the proposed rule development and will enhance the NRC regulatory review process for future licensing actions, such as exemption requests.

D. Enforcement Action

In March 1998, the NRC staff issued EGM 98-02 (most recent revision was issued in

February 2000, ADAMS Accession No. ML003710123), which provides enforcement discretion guidance for issues related to fire-induced circuit failures. This EGM was in response to an apparent widespread misunderstanding of the fire-induced circuit failure requirements on the part of licensees and remains in effect. This EGM also encompasses the vast majority of manual actions since manual actions are used as compensatory measures to satisfy the regulatory requirements related to fire-induced circuit failures. The EGM provides guidance for disposition of noncompliances involving fire-induced circuit failures, which could prevent operation or cause maloperation of equipment needed to achieve and maintain post-fire safe shutdown. Among the enforcement conditions, discretion will be given for cases where licensees do not dispute that a violation of regulatory requirements has occurred with respect to a nonconformance and that licensees take prompt compensatory actions and corrective actions within a reasonable time. The expectations of this EGM have been incorporated into the current NRC Enforcement Manual.

The Office of Nuclear Reactor Regulation issued a revised Inspection Procedure (IP) 71111.05T, "Fire Protection (Triennial)," in March 2003 providing inspection criteria for operator manual actions. The inspection criteria are used as guidance by NRC inspectors to determine if unapproved operator manual actions can be used as a compensatory measure while corrective actions are taken by the plant.

The NRC plans to terminate the enforcement discretion guidance in EGM 98-02 six months after the publication date of this *Federal Register* notice. The continuation of the applications of EGM 98-02 and IP 71111.05T for six months are effective to ensure and maintain the overall plant safety by licensees through the use of adequate and appropriate compensatory measures in the form of operator manual actions implemented in accordance

with the licensee's fire protection program. Manual actions that fail to meet the criteria in the inspection procedure are not considered to be feasible or adequate compensatory measures.

The NRC issued RIS 2004-03, Revision 1, "Risk-informed Approach for Post-Fire Safe-Shutdown Circuit Inspections" on December 29, 2004, which, in part, clarified the NRC's expectation associated with fire induced circuit failure issues. Subsequent to RIS 2004-03, Revision 1, the NRC incorporated EGM 98-02 enforcement discretion guidance in its approach to address existing operator manual actions while the proposed rulemaking activity was taking place. Now that the rulemaking is withdrawn, the NRC has determined that it is reasonable to continue the application of EGM 98-02 for six months after the publication date of this *Federal Register* notice. The NRC's withdrawal of the proposed operator manual actions rule would require licensees to take corrective actions for existing operator manual actions that have not been previously approved by the NRC. The rationale for a six-month continuation is intended to provide a reasonable amount of time for those licensees that have implemented feasible and reliable operator manual actions as compensatory measures to initiate corrective actions. The corrective action could involve compliance with III.G.2 or III.G.3; adoption of NFPA 805 through 10 CFR 50.48(c); or submission of exemption requests or license amendments.

Some licensees could be significantly affected if the proposed rule is withdrawn because they rely on large numbers of unapproved operator manual actions, have not taken corrective actions, and expected the final rule to bring them into compliance. Some of these licensees may determine that adoption of NFPA 805 is a viable corrective action option. Other licensees may initiate actions to comply with III.G.2 or III.G.3, or submit exemption requests, but may not have those corrective actions completed in the six-month continuation of the enforcement discretion guidance in EGM 98-02. In any case, the staff expects that all licensees will need to

either initiate corrective actions or initiate adoption of NFPA 805 within the six-month continuation of enforcement discretion. The staff expects completion of the corrective actions in a timely manner consistent with RIS 2005-20, "Revision to Guidance Formerly Contained in NRC Generic Letter 91-18," dated September 26, 2005 (ADAMS Accession No. ML052020424), and completion of the transition to NFPA 805 consistent with the licensee's transition schedule.

The Commission believes that the proposed rule would not achieve its objective. Therefore, the Commission has decided to withdraw the proposed rule.

Dated at Rockville, Maryland this \_\_\_\_\_ day of \_\_\_\_\_ 2006.

For the Nuclear Regulatory Commission.

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Annette Vietti-Cook

Secretary of the Commission.