

RULEMAKING ISSUE AFFIRMATION

March 29, 2004

SECY-04-0050

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: FINAL RULE: REVISION OF 10 CFR 50.48 TO ALLOW PERFORMANCE-BASED APPROACHES USING NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARD 805 (NFPA 805), "PERFORMANCE-BASED STANDARD FOR FIRE PROTECTION FOR LIGHT WATER REACTOR ELECTRIC GENERATING PLANTS," 2001 EDITION

PURPOSE:

To obtain Commission approval to publish the final rule and a notice of interim enforcement discretion for licensees that choose to adopt the rule.

SUMMARY:

This rule adds a new paragraph (c) to the Fire Protection Rule in Title 10, Section 50.48, of the *Code of Federal Regulations* (10 CFR 50.48). This new paragraph allows reactor licensees to voluntarily comply with the risk-informed, performance-based fire protection requirements in NFPA 805, with certain exceptions stated in the rule language, as an alternative to complying with paragraph (b) or the requirements in their fire protection license conditions. In addition, this rule amends paragraph (f) to indicate that a fire protection program that complies with NFPA 805 is deemed to be acceptable for complying with the requirements for a fire protection program of that paragraph for decommissioning plants. Licensees will need to submit a request for a license amendment to comply with NFPA 805 in order to change their licensing basis.

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BACKGROUND:

In SECY-98-058, "Development of a Risk-Informed, Performance-Based Regulation for Fire Protection at Nuclear Power Plants," dated March 26, 1998, the staff proposed to the Commission that the staff work with the NFPA and industry to develop a risk-informed, performance-based consensus standard for fire protection for nuclear power plants that could be endorsed in a future rulemaking as an alternative set of fire protection requirements. In the Staff Requirements Memorandum (SRM) of June 30, 1998, the Commission approved the staff's proposal.

On January 13, 2001, the NFPA Standards Council approved NFPA Standard 805 (NFPA 805), "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition, as an American National Standard for light water nuclear power plants. The staff submitted its rulemaking plan to revise 10 CFR 50.48 to allow licensees to use NFPA 805 in SECY-00-0009, "Rulemaking Plan, Reactor Fire Protection Risk-Informed, Performance-Based Rulemaking," dated January 13, 2000, and the Commission approved the rulemaking plan in the SRM dated February 24, 2000.

The staff submitted the proposed rule to the Commission in SECY-02-0132, "Proposed Rule: Revision of 10 CFR 50.48 to Permit Light Water Reactors to Voluntarily Adopt National Fire Protection Association (NFPA) Standard 805, 'Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants,' 2001 Edition (NFPA 805), as an Alternative Set of Risk-Informed, Performance-Based Fire Protection Requirements," dated July 15, 2002, and received the Commission's approval on October 3, 2002, to publish the proposed rule. The NRC published the proposed rule in the *Federal Register* on November 1, 2002 (67 FR 66578). The public comment period expired on January 15, 2003. The staff has evaluated the comments and prepared the final rule.

DISCUSSION:

Published in February 2001, NFPA 805 describes a methodology for existing light-water nuclear power plants to apply performance-based requirements and fundamental fire protection design elements to the determination and establishment of fire protection systems and features for all phases (modes) of operation, as well as a methodology for establishing fire protection systems and features for decommissioning and permanent shutdown. The staff evaluated NFPA 805 and determined that, in general, it is consistent with the principles for performance-based regulation contained in the SRM dated March 1, 1999, entitled, "SECY-98-144: White Paper on Risk-Informed, Performance-Based Regulation." The staff also determined that NFPA 805 contains acceptable requirements or methodologies to identify and implement fire protection systems and features as alternatives to the fire protection requirements in 10 CFR 50.48(b) or the fire protection requirements in plant license conditions.

Public Comments on the Proposed Rule

The NRC received eight letters of comment on the proposed rule. The comments were submitted by an individual, an individual representing a public interest group, a utility with a nuclear reactor, two nuclear utility groups each representing six plants with nuclear reactors, a law firm, a law firm representing several utilities, and the Nuclear Energy Institute. Most comments supported the proposed rule and provided recommendations to enhance or modify

elements of the rule. One comment opposed adoption of the proposed rule because the rule allowed performance-based approaches in lieu of deterministic requirements. The staff considered all comments and in response, made the following changes to the rule.

The NRC received several comments on the proposed requirement that licensees must submit a request for a license amendment to use methods such as fire modeling or fire probabilistic safety assessments (PSA) to comply with NFPA 805. The commenters stated that the requirement would be an unnecessary burden. In the SRM to SECY-02-0132, the Commission directed the staff to carefully review the comments regarding the need for license amendments to use methods not in NFPA 805 and to evaluate methods that could be used to approve such methods. The staff reviewed the comments and determined that prior NRC review and approval of these methods were not needed and, therefore, deleted the proposed requirement. However, the use of those methods by licensees would be subject to NRC inspection.

The NRC received comments stating that, notwithstanding the prohibition in Chapter 3 of the standard against the use of performance-based approaches for the Chapter 3 fire protection program elements and minimum design requirements, performance-based approaches should be allowed for those program elements and minimum design requirements. The staff evaluated these comments and determined that the program elements and minimum design requirements in Chapter 3 may be subject to performance-based approaches. However, the staff also determined that those program elements and minimum design requirements are of such importance to fire protection that licensees should obtain NRC approval of the proposed approach via a license amendment request.

In response to a comment on the status of the appendices of NFPA 805, the staff clarified in the statement of considerations that Appendices B, C, and D are not part of the standard and are not endorsed in the rule. These appendices discuss nuclear safety analysis, application of fire modeling, and the use of fire PSA methods, respectively. The commenter noted that, although these appendices provide useful explanatory material for users of the standard, they did not receive the same level of review and scrutiny by the NFPA Technical Committee on Fire Protection for Nuclear Facilities, the NFPA membership, or the general public during the development process. NRC endorsement of these appendices is not needed in order for licensees to comply with NFPA 805 requirements.

ACRS and CRGR Reviews

The draft final rule was reviewed by the Advisory Committee on Reactor Safeguards (ACRS) in December 2003. In March 2004, the Committee to Review Generic Requirements (CRGR) agreed to waive a briefing on the final rule. Neither committee objects to issuing the final rule.

Implementing Guidance

The staff is working with the Nuclear Energy Institute (NEI) to develop implementing guidance for NFPA 805. The staff reviewed and commented on early versions of the guidance and participated in pilots to evaluate the guidance at the Joseph M. Farley Nuclear Power Plant and the McGuire Nuclear Station in April and July 2003, respectively. On May 15, 2003, NEI submitted NEI 04-01, Revision D, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c)," for staff review and comment. The staff provided comments on NEI 04-01 to NEI and is working with NEI to resolve them. The staff expects to develop a draft regulatory guide endorsing a version of NEI 04-01 in mid-2004.

Implementation

The staff plans to review two initial license amendment submittals for completeness and to establish a template for subsequent submittals. However, the staff does not intend to review in depth the remaining submittals. The staff plans to monitor licensee implementation of NFPA 805, as excepted, as part of the NRC Reactor Oversight Process (ROP) regularly scheduled fire protection inspections. Inspection criteria and guidance on NFPA 805 implementation, including the use of methodologies such as fire PSAs, circuit analysis, and fire modeling will be developed and inspector training will be provided.

Enforcement Considerations

As part of the transition to the NFPA 805 regulatory structure, licensees will establish the fundamental fire protection program identified in NFPA 805. Licensees will perform a plant-wide assessment to identify fire areas and fire hazards and evaluate compliance with their existing fire protection licensing basis. This fire protection assessment is in addition to the normal licensee review of their fire protection program.

During the assessment process, licensees may identify noncompliances with their existing fire protection licensing basis which must be evaluated to restore compliance with the existing plant requirements or to establish compliance with a performance-based approach under NFPA 805. These noncompliances would be identified by the licensee as part of the fire protection assessment, entered into the licensee's corrective action program, and dispositioned for corrective action including any compensatory measures. NRC enforcement action for these noncompliances could place a burden on staff and licensee resources with little corresponding safety benefit as the licensee is already performing an enhanced review of the fire protection program. Therefore, the staff proposes that the Commission approve enforcement discretion for those fire protection noncompliances identified as part of the transition to NFPA 805.

The proposed enforcement discretion would begin upon receipt of a letter of intent from the licensee stating their intention to adopt NFPA 805 and providing a schedule for completion of the plant-wide assessment. The enforcement discretion period would be in effect for up to two years under the letter of intent and, if the licensee submits a license amendment request, would continue until the NRC approval of the license amendment request is completed. This proposal is consistent with previous enforcement discretion granted when licensees voluntarily undertake a comprehensive review and assessment.

Additionally, for licensees that submit a letter of intent within six months of the effective date of this rule, the staff is proposing enforcement discretion for the implementation of corrective action for certain existing identified fire protection noncompliances to be deferred until the licensee has transitioned to 10 CFR 50.48(c). This enforcement discretion would be provided for those noncompliances that reasonably could be corrected under 10 CFR 50.48(c) provided the noncompliances have been placed in the licensee's corrective action program, appropriate compensatory measures have been put in place, are not associated with findings that the ROP Significance Determination Process (SDP) would evaluate as Red, or would not be categorized at Severity Level I.

The proposed interim enforcement discretion policy is provided as Attachment 4.

If the Commission approves the enforcement discretion proposed above, the staff will also provide appropriate inspection guidance that noncompliances within the scope of the enforcement discretion should not be evaluated under the ROP SDP and should not be entered into the action matrix of the ROP. This action is needed to accomplish the full intent of the proposed enforcement discretion and is a new consideration resulting from the implementation of the ROP. Entering noncompliances into the action matrix of the ROP that are within the scope of the enforcement discretion could generate unwarranted increases in inspection. Precedence for this approach exists in the treatment of "Old Design Issues" under Section 06.06.a in Manual Chapter 0305, "Operating Reactor Assessment Program." In general, identification of old issues is not associated with current performance. Therefore, the staff intends to implement this approach.

Consideration of Other Rulemakings

For this rule, the staff considered the potential impact of other fire protection rulemakings on those licensees who adopt NFPA 805. Although not currently in the scope of that rulemaking, the staff notes that the rulemaking on post-fire operator manual actions may impact licensees who adopt NFPA 805 if that rule is made applicable to plants that have adopted NFPA 805.

Contents of the Final Rulemaking Package

This rulemaking package includes the final rule to be published in the *Federal Register* (Attachment 1), the final regulatory analysis (Attachment 2), the environmental assessment and finding of no significant impact (Attachment 3), and the *Federal Register* notice with the interim enforcement discretion policy (Attachment 4).

RESOURCES:

The resources to complete the implementation of NFPA 805 (for NRR: \$100K and 1.0 FTE in FY 2004 and \$35K and 0.5 FTE in FY 2005; for RES: \$250K and 1.0 FTE in FY 2004 and \$135K and 0.8 FTE in FY 2005) are included in the budget for FY 2004 and FY 2005. These resources are for the draft and final regulatory guide to endorse the implementation guidance, guidance for review of licensee amendment submittals, guidance for fire PSAs and fire models, inspection criteria, and inspector training.

COORDINATION:

The Office of the General Counsel has no legal objection to this paper. The Office of the Chief Financial Officer has reviewed this Commission paper for resource implications and has no objections. The ACRS and CRGR have no objection to issuing this final rule.

RECOMMENDATIONS:

That the Commission:

1. Approve the notice of final rulemaking for publication in the *Federal Register* (Attachment 1).
2. Approve the notice of interim enforcement discretion for publication in the *Federal Register* (Attachment 4).
3. Certify that this rule, if promulgated, will not have a negative economic impact on a substantial number of small entities. The certification is needed to satisfy requirements of the Regulatory Flexibility Act, 5 U.S.C. 605(b).
4. Note:
 - a. That the following documents will be published in the *Federal Register*:
 - ! the *Federal Register* notice of final rulemaking (Attachment 1), and
 - ! the *Federal Register* notice with the interim enforcement discretion policy (Attachment 4).
 - b. The Enforcement Web Page on the NRC's public site will be updated to reflect the new enforcement policy and the Enforcement Manual will be revised to include appropriate guidance.
 - c. The Inspection Manual will be revised to reflect that findings within the scope of the interim enforcement discretion policy will not be evaluated under the ROP SDP and will not be placed in the ROP action matrix.
 - d. That a final Regulatory Analysis has been prepared for this rulemaking.
 - e. That an Environmental Assessment has been prepared for this rulemaking.
 - f. The Chief Counsel for Advocacy of the Small Business Administration will be informed of the certification regarding economic impact on small entities and the basis for it, as required by the Regulatory Flexibility Act.
 - g. The NRC has determined that this action is not a major rule under the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) and has confirmed this determination with the Office of Management and Budget (OMB).
 - h. Copies of the *Federal Register* notice of final rulemaking and the interim enforcement discretion policy will be distributed to all affected Commission licensees. The notices will be sent to other interested parties upon request.

- i. That a press release will be issued by the Office of Public Affairs when the rulemaking is filed with the Office of the Federal Register.
- j. The appropriate Congressional Committees will be informed.

/RA/

William D. Travers
Executive Director
for Operations

Attachments: 1. Final Rule *Federal Register* Notice
2. Regulatory Analysis
3. Environmental Assessment
4. Interim Enforcement Discretion Policy *Federal Register* Notice

ATTACHMENT 1
FEDERAL REGISTER NOTICE

NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

RIN 3150-AG48

Voluntary Fire Protection Requirements for Light Water Reactors;
Adoption of NFPA 805 as a Risk-Informed, Performance-Based Alternative

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its fire protection requirements for nuclear power reactor licensees to permit existing reactor licensees to voluntarily adopt fire protection requirements contained in the National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805). These fire protection requirements are an alternative to the existing deterministic, prescriptive fire protection requirements.

EFFECTIVE DATE: [Insert date 30 days after publication]. The incorporation by reference of the publication listed in the regulation is approved by the Director of the Federal Register as of **[Insert date 30 days after publication]**.

ADDRESSES: The final rule and related documents may be examined and copied for a fee at the NRC Public Document Room (PDR), One White Flint North, Room O1-F15, 11555 Rockville Pike, Rockville, Maryland (NFPA standards are copyrighted). Copies of NFPA 805 may be purchased from the NFPA Customer Service Department, 1 Batterymarch Park, P.O. Box 9101,

Quincy, MA 02269-9101 and in PDF format through the NFPA Online Catalog (www.nfpa.org) or by calling 1-800-344-3555 or 617-770-3000.

FOR FURTHER INFORMATION CONTACT: Joseph L. Birmingham, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone 301-415-2829; email jlb4@nrc.gov.

SUPPLEMENTARY INFORMATION:

- I. Background
- II. Discussion
- III. Comment Resolution on Proposed Rule
- IV. Section-by-Section Analysis
- V. Availability of Documents
- VI. Voluntary Consensus Standards
- VII. Finding of No Significant Environmental Impact: Availability
- VIII. Paperwork Reduction Act Statement
- IX. Regulatory Analysis
- X. Regulatory Flexibility Certification
- XI. Backfit Analysis
- XII. Small Business Regulatory Enforcement Fairness Act

I. Background

In 1971, the Atomic Energy Commission promulgated General Design Criterion (GDC) 3, "Fire protection," in Appendix A to 10 CFR Part 50. Subsequently, the NRC developed specific guidance for implementing GDC 3 in Branch Technical Position (BTP) Auxiliary and Power Conversion Systems Branch (APCSB) 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants," dated May 1, 1976, and Appendix A to BTP

APCSB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants Docketed Prior to July 1, 1976," dated August 23, 1976. In the late 1970s, the NRC worked with licensees to establish configurations to meet this guidance, reaching closure on most issues. However, to resolve the remaining contested issues, the NRC published the final fire protection rule (10 CFR 50.48, "Fire protection") and Appendix R to 10 CFR Part 50 dated November 19, 1980 (45 FR 76602).

Section 50.48(a)(1) requires each operating nuclear power plant to have a fire protection plan that satisfies Criterion 3 (GDC 3) of Appendix A to 10 CFR 50 and states that the fire protection plan must describe the overall fire protection program; identify the positions responsible for the program and the authority delegated to those positions; outline the plans for fire protection, fire detection and suppression capability, and limitation of fire damage. Section 50.48(a)(2) states that the fire protection plan must describe the specific features necessary to implement the program described in paragraph (a)(1) including administrative controls and personnel requirements; automatic and manual fire detection and suppression systems; and the means to limit fire damage to structures, systems, and components (SSCs) to ensure the capability to safely shut down the plant. Section 50.48(a)(3) requires that the licensee retain the fire protection plan and each change to the plan as a record until the Commission terminates the license.

GDC 3, referenced in 10 CFR 50.48(a)(1), provides broad performance objectives for an acceptable fire protection program. GDC 3 specifies, in part, that SSCs important to safety be designed and located to minimize, consistent with other safety requirements, the probability and effects of fires and explosions; noncombustible and heat resistant materials be used wherever practical; fire detection and fighting systems of appropriate capacity and capability be provided and designed to minimize the adverse effects of fires on SSCs important to safety; and fire

fighting systems be designed to assure their rupture or inadvertent operation does not significantly impair the safety capability of the SSCs.

Section 50.48(b) references Appendix R to 10 CFR 50 and states that Appendix R establishes fire protection features required to satisfy GDC 3 with respect to certain generic issues for nuclear power plants licensed to operate before January 1, 1979. As stated in 10 CFR 50.48(b)(1), with the exception of Sections III.G, III.J, and III.O of Appendix R, nuclear power plants that were licensed to operate before January 1, 1979, are exempt from the requirements of Appendix R. These plants are exempt to the extent that:

Features proposed or implemented by the licensee have been accepted by the NRC staff as satisfying the provisions of Appendix A to BTP APCS 9.5-1 that are reflected in NRC fire protection safety evaluation reports (SERs) issued before the 10 CFR 50.48 effective date of February 19, 1981; or,

Features that were accepted by the NRC staff in comprehensive SERs before Appendix A to BTP APCS 9.5-1 was published in August 1976. Otherwise, these nuclear power plants must meet 10 CFR 50, Appendix R, as well as any requirements contained in plant specific fire protection license conditions and/or technical specifications. These nuclear power plants must also comply with 10 CFR 50.48(a).

Nuclear power plants that were licensed to operate after January 1, 1979, must comply with 10 CFR 50.48(a) as well as any plant-specific fire protection license conditions and/or technical specifications. Their fire protection license conditions typically reference SERs generated by the NRC as the product of initial licensing reviews against either Appendix A to BTP APCS 9.5-1 and the criteria of certain sections of 10 CFR 50, Appendix R, or Section 9.5.1 of NUREG-0800, the NRC Standard Review Plan (SRP) which includes similar criteria specified in 10 CFR 50, Appendix R. These fire protection requirements are considered to be deterministic.

The NRC has issued approximately 900 exemptions from the technical requirements specified in Appendix R. These exemptions were granted to licensees that submitted a technical evaluation demonstrating that an alternative fire protection approach satisfied the underlying safety purpose of Appendix R. During the initial implementation period for “Pre-1979 Appendix R plants,” the NRC granted exemptions under the provisions of 10 CFR 50.48(c)(6), which has since been deleted. For exemptions requested by “Pre-1979 plants” after the licensee’s initial Appendix R implementation period, the NRC conducted its reviews in accordance with the provisions specified in 10 CFR 50.12, “Specific exemptions.” “Post-1979 plants” have also requested and, when acceptable to the NRC, received approval to deviate from their licensing requirements. The processing of exemption and deviation requests has placed a significant burden on the resources of the NRC and the nuclear industry.

Industry representatives and some members of the public have described the current deterministic fire protection requirements as “prescriptive” and an “unnecessary regulatory burden.” Beginning in the late 1990s, the Commission provided the NRC staff with guidance for identifying and assessing performance-based approaches to regulation (see SECY-00-0191, “High-Level Guidelines for Performance-Based Activities,” dated September 1, 2000, and Staff Requirements Memorandum (SRM), dated March 1, 1999, entitled, “SECY-98-0144: White Paper on Risk-Informed and Performance-Based Regulation.” This guidance augmented the risk-related guidance in the NRC’s Probabilistic Risk Assessment (PRA) Policy Statement (60 FR 42622, August 16, 1995) and Regulatory Guide (RG) 1.174, “An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis,” dated July 1998.

In SECY-98-0058, “Development of a Risk-Informed, Performance-Based Regulation for Fire Protection at Nuclear Power Plants,” dated March 26, 1998, the NRC staff proposed to the Commission that the staff work with the NFPA and the industry to develop a performance-

based, risk-informed consensus standard for fire protection for nuclear power plants and, if the standard was acceptable, the staff would endorse the standard in a rulemaking. In an SRM dated June 30, 1998, the Commission approved the staff's proposal and the staff began cooperative participation in the development of NFPA 805.

As a result of its interaction with NFPA, the NRC staff determined that the likelihood of an acceptable standard was sufficiently high that rulemaking to endorse NFPA 805 should be approved. In SECY-00-0009, dated January 13, 2000, titled "Rulemaking Plan, Reactor Fire Protection Risk-Informed, Performance-Based Rulemaking," the staff requested Commission approval to proceed with rulemaking to permit reactor licensees to adopt NFPA 805 as a voluntary alternative to existing fire protection requirements. In an SRM dated February 24, 2000, the Commission directed the staff to proceed with this rulemaking.

The NFPA Standards Council issued NFPA 805, 2001 Edition, January 13, 2001, with an effective date of February 9, 2001. It was approved as an American National Standard on February 9, 2001. The standard specifies the minimum fire protection requirements for existing light water nuclear power plants during all modes ("phases" in NFPA 805) of plant operation, including, shutdown, degraded conditions, and decommissioning.

In a memorandum dated October 9, 2001, the NRC staff informed the Commission that it planned to submit to the Commission by July 2002 a proposed rule that would revise 10 CFR 50.48 and a final rule 12 months after the proposed rule was published for public comment. Additionally, the staff informed the Commission that it was working with the Nuclear Energy Institute (NEI) to develop implementing guidance.

On December 20, 2001 (66 FR 65661), the NRC published draft rule language proposing to endorse NFPA 805 in the *Federal Register*. The NRC also posted this draft language on the NRC's interactive Rulemaking Forum Web site at <http://ruleforum.llnl.gov>. The NRC requested public comment on the draft rule language.

In response to this preliminary request for public comment, the NRC received five sets of comments from industry, consultants, licensees, industry organizations, and NRC staff. Based on those comments and on reviews by NRC Program Offices and Committees, the NRC revised the draft rule language. In SECY-02-0132, dated July 15, 2002, the staff requested the Commission's approval to publish the proposed rule in the *Federal Register* and on October 3, 2002, the Commission approved the publication of the proposed rule in the *Federal Register* for public comment. The proposed rule was published in the *Federal Register* for a 75-day public comment period (67 FR 66578; November, 1, 2002).

II. Discussion

In this rule, the NRC is allowing licensees to adopt NFPA 805 as a performance-based alternative to complying with paragraph (b) of § 50.48 for plants licensed to operate before January 1, 1979; or the fire protection license conditions for plants licensed to operate after January 1, 1979. Paragraph (b) of § 50.48 refers to fire protection features that 10 CFR 50, Appendix R requires to satisfy GDC 3. Paragraph (b) discusses the extent to which those features are regulatory requirements for certain licensees, and specifically to plants licensed before January 1, 1979. Requirements for plants licensed after that date are specified in plant fire protection license conditions. The NRC considers that NFPA 805 specifies fire protection requirements or provides an acceptable methodology and performance criteria for licensees to identify fire protection requirements that are an acceptable alternative to the Appendix R fire protection features. A description of NFPA 805 and the NFPA 805 methodology follows.

NFPA 805 is a performance-based standard for fire protection prepared by the NFPA Technical Committee on Fire Protection for Nuclear Facilities. Issued by the Standards Council on January 13, 2001, it was approved as an American National Standard on February 9, 2001. NFPA 805 describes a methodology for establishing fundamental fire protection program

design requirements and elements, determining required fire protection systems and features, applying performance-based requirements, and administering fire protection for existing light water reactors during operation, decommissioning, and permanent shutdown. It provides for the establishment of a minimum set of fire protection requirements but allows performance-based or deterministic approaches to be used to meet performance criteria.

Under NFPA 805, a licensee adopts the performance goals, objectives, and criteria itemized in Chapter 1 of NFPA 805 and then meets those goals, objectives, and criteria through the implementation of performance-based or deterministic approaches. Those goals, objectives, and criteria contain provisions for nuclear safety, radioactive release, life safety, and business interruption. Relative to its mission to protect the public health and safety, the NRC is concerned with the nuclear safety and radioactive release goals, objectives, and criteria, and the protection of essential personnel aspect of the life safety goals, objectives, and criteria. Therefore, the NRC is not endorsing the Plant Damage/Business Interruption and Life Safety Goals of NFPA 805.

After a licensee adopts the performance goals, objectives, and criteria itemized in Chapter 1, it establishes plant fire protection requirements using the methodology in Chapter 2 of NFPA 805. The initial step in this methodology is to establish the minimum fire protection program elements and design criteria contained in Chapter 3 of NFPA 805. NFPA 805 does not permit the Chapter 3 elements and design criteria to be subject to the performance-based approaches allowed elsewhere within NFPA 805. However, to provide regulatory flexibility, the final rule provides for licensees to request a license amendment to apply NFPA 805 performance-based approaches to the Chapter 3 fire protection program elements and minimum design criteria.

After establishing the fundamental fire protection program elements and minimum design requirements of Chapter 3, the licensee performs a plant-wide analysis to identify fire

areas and fire hazards required to meet the performance criteria and the SSCs in each fire area to which the performance criteria apply. The licensee may apply either a performance-based or a deterministic approach to meet the performance criteria. For a deterministic approach, the performance criteria are deemed to be satisfied when the plants existing fire protection requirements are met. For a performance-based approach, the licensee must perform engineering analyses to demonstrate that the performance-based requirements are met. These engineering analyses may include engineering evaluations, probabilistic safety assessments, and fire modeling calculations.

If the approach chosen to meet the performance criteria results in a change to the approved design basis, the licensee must evaluate any resulting changes in risk and determine whether the changes in risk are acceptable to the AHJ (Authority Having Jurisdiction, i.e., NRC). NRC guidance on the acceptability of changes in risk is in RG 1.174 and is referenced by NFPA 805. The licensee must also evaluate the change to determine whether defense-in-depth and safety margins are maintained. The licensee implements a monitoring program to monitor plant performance as it applies to fire risk and must adjust the fire protection program as necessary as levels of risk change. For the resulting fire protection program, the licensee documents the results of the analyses, ensures the quality of the analyses, and maintains configuration control of the resulting plant design and operation. Section 2.7 of NFPA 805 provides requirements for program documentation, configuration control, and quality.

NFPA 805 does not supersede the requirements of GDC 3, 10 CFR 50.48(a), or 10 CFR 50.48(f). Those regulatory requirements continue to apply to licensees that adopt NFPA 805. However, under NFPA 805, the means by which GDC 3 or 10 CFR 50.48(a) requirements may be met is different than under 10 CFR 50.48(b). Specifically, whereas GDC 3 refers to SSCs important to safety, NFPA 805 identifies fire protection systems and features required to meet the Chapter 1 performance criteria through the methodology in Chapter 4 of

NFPA 805. Also, under NFPA 805, the 10 CFR 50.48(a)(2)(iii) requirement to limit fire damage to SSCs important to safety so that the capability to safely shut down the plant is ensured is satisfied by meeting the performance criteria in Section 1.5.1 of NFPA 805. The Section 1.5.1 criteria include provisions for ensuring that reactivity control, inventory and pressure control, decay heat removal, vital auxiliaries, and process monitoring are achieved and maintained.

This methodology specifies a process to identify the fire protection systems and features required to achieve the nuclear safety performance criteria in Section 1.5 of NFPA 805. Once a determination has been made that a fire protection system or feature is required to achieve the performance criteria of Section 1.5, its design and qualification must meet any applicable requirements of NFPA 805, Chapter 3. Having identified the required fire protection systems and features, the licensee selects either a deterministic or performance-based approach to demonstrate that the performance criteria are satisfied. This process satisfies the GDC 3 requirement to design and locate SSCs important to safety to minimize the probability and effects of fires and explosions.

The methodology in NFPA 805 for performance-based approaches is to a large degree consistent with the principles for performance-based regulation contained in the "White Paper on Risk-Informed, Performance-Based Regulation," attached to the SRM for SECY-98-0144. The NFPA 805 methodology incorporates the following attributes: (1) measurable or calculable parameters exist to monitor the system, including facility performance; (2) objective criteria to assess performance are established based on risk insights, deterministic analyses, and/or performance history; (3) plant operators have the flexibility to determine how to meet established performance criteria in ways that will encourage and reward improved outcomes; and (4) a framework exists in which the failure to meet a performance criterion, while undesirable, will not in and of itself constitute or result in an immediate safety concern.

Technical Acceptability of NFPA 805 as an Alternative to 10 CFR 50.48(b)

With respect to the certain required fire protection features required to satisfy GDC 3, 10 CFR 50.48(b) references Appendix R, whereas 10 CFR 50.48(c) references NFPA 805. The NRC evaluated whether the technical approaches, methodologies, and engineering analyses specified in NFPA 805 provide criteria to establish fire protection features sufficient to satisfy GDC 3. The acceptability of NFPA 805 with exceptions and supplementation versus Appendix R is discussed below.

Appendix R, Section I, states that Appendix R sets forth the fire protection features required to satisfy GDC 3 with respect to certain generic issues. Section I also discusses the need to limit fire damage to systems required to achieve and maintain safe shutdown conditions and that protection be provided so that a fire within only one such system will not damage the redundant system.

Appendix R, Section II, provides the general requirements for a fire protection program, discusses defense-in-depth, defines the fire hazards analysis required to be performed, describes fire prevention features, and requires alternate or dedicated shutdown capability for areas where the fire protection features cannot ensure safe shutdown capability in the event of a fire in that area.

Appendix R, Section III, provides specific requirements for certain fire protection features. The fire protection features in Section III are: A. Water supplies for fire suppression systems, B. Sectional isolation valves, C. Hydrant isolation valves, D. Manual fire suppression, E. Hydrostatic hose tests, F. Automatic fire detection, G. Fire protection of safe shutdown capability, H. Fire brigade, I. Fire brigade training, J. Emergency lighting, K. Administrative controls, L. Alternative and dedicated shutdown capability, M. Fire barrier cable penetration seal qualification, N. Fire doors, and O. Oil collection system for reactor coolant pump.

NFPA 805 establishes performance goals, performance objectives, and performance criteria that require a licensee to provide reasonable assurance that a fire will not prevent the plant from achieving and maintaining the fuel in a safe and stable condition, the plant will not be placed in an unrecoverable condition, and will not result in a radiological release that adversely affects the public, plant personnel, or the environment. These goals, objectives, and criteria are described in Chapter 1 and elsewhere in the standard. NFPA 805 allows the use of either a deterministic or performance-based approach to achieve the performance goals, objectives, and criteria of Chapter 1. Subsequent chapters of the standard describe methodologies to be used to establish the required fire protection systems and features, including the analyses used to support the performance-based fire protection design that fulfills these goals.

NFPA 805 requires the licensee to use a deterministic or performance-based approach to assess whether the performance goals, objectives, and criteria in Section 1.5 of the standard are met. The methodologies for implementing these approaches are established in Chapters 2 and 4 of NFPA 805. Chapter 3 of NFPA 805 provides certain deterministic and administrative requirements for fire protection systems and features that are not subject to the NFPA 805 performance-based approach. The methodology in Chapter 2 describes how these approaches are to be developed and implemented. The methodology in Chapter 4 describes the process to be used to determine which fire protection systems and features are required to achieve the performance criteria outlined in Chapter 1.

NFPA 805 accomplishes the intent of the Appendix R, Section I, requirements through the methodology in Chapter 4 of NFPA 805. That methodology requires that a nuclear safety capability assessment be performed that determines that one success path is maintained free of fire damage from a single fire. The assessment may use either a deterministic or a performance-based approach. The deterministic approach requires protection for one success path of required cables and equipment to achieve and maintain the nuclear safety performance

criteria in Chapter 1. The nuclear safety performance criteria is considered to be satisfied when the protection scheme meets certain deterministic criteria such as when a 3-hour fire barrier encapsulation of one success path is provided. The performance-based approach requires that, using the Chapter 2 methodology, information on targets, damage thresholds, limiting conditions, and fire scenarios be used to determine the protection scheme necessary to ensure the nuclear safety success path(s) for required cables and equipment are maintained free of fire damage to achieve the nuclear performance criteria in Chapter 1.

Chapter 3 of NFPA 805 accomplishes the requirements for general fire protection program features described in Appendix R, Section II.A. and the general fire prevention features described in Appendix R, Section II.C. The defense-in-depth objectives described in Appendix R, Section II, *General Requirements*, are incorporated in NFPA 805. The defense-in-depth objectives of Appendix R, Section II, are (1) prevent fires from starting; (2) detect rapidly, control, and extinguish promptly those fires that do occur; and (3) provide protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant. These defense-in-depth objectives are stated in Section 1.2 of NFPA 805 and the methods to accomplish them are specified in the standard as described below:

1. Prevention of fires is specified in Section 3.3 of NFPA 805 and includes control of ignition sources, control of combustible and flammable materials, use of noncombustible or fire resistant structural materials, and control of cable construction and raceways.
2. Fire detection and suppression are required in Sections 3.4 through 3.11 of NFPA 805 and include on-site fire-fighting capability, fire alarms, manual and fixed suppression systems, and passive fire protection features.
3. Protection of SSCs important to achieve the nuclear safety performance criteria is specified in Chapter 4 of NFPA 805. Chapter 4 establishes the methodology to

determine the fire protection systems and features required to achieve the performance criteria and specifies that at least one success path to achieve the nuclear safety performance criteria shall be maintained free of fire damage by a single fire. The nuclear safety performance criteria specified in Section 1.5 are: (1) reactivity control, (2) inventory and pressure control, (3) decay heat removal, (4) vital auxiliaries, and (5) process monitoring.

The methodologies described in NFPA 805 Chapters 2 and 4 and the fundamental fire protection program and design elements in Chapter 3 require a general fire hazards analysis similar to that described in Appendix R, Section II.B. Appendix R, Section II.D, which describes alternative or dedicated shutdown capability, is discussed later in this section.

The NRC has evaluated Appendix R, Section III, *Specific Requirements*, and determined that, with certain differences (e.g., cold shutdown, alternate or dedicated shutdown, shutdown methods and emergency lighting), NFPA 805 Chapter 3 and the methodologies in Chapters 2 and 4 provide acceptable alternative criteria to the specific fire protection requirements in Section III.

For example, Appendix R, Section III.A, *Water supplies for fire suppression systems*, is the design criteria for fire suppression system water supplies and it requires certain design features, such as the duration of the water supply and configuration of the water sources, to be met. NFPA 805 has similar requirements in Chapter 3 for water supply and configuration that are acceptable alternatives to the requirements in Appendix R.

Another example is Appendix R, Section III.K, *Administrative controls*, which requires controls to govern the activities related to the handling of combustible materials and ignition sources and govern actions by emergency and general plant personnel. NFPA 805 has requirements in Chapter 3 for administrative controls that are acceptable alternatives to the requirements in Appendix R.

Appendix R, Section III.G, *Fire protection of safe shutdown capability*, provides the deterministic requirements to ensure that one train of systems necessary to achieve and maintain hot shutdown is free of fire damage and systems necessary to achieve and maintain cold shutdown can be repaired within 72 hours. The final rule (45 FR 76602; November 19, 1980) that promulgated 10 CFR 50.48 and Appendix R, dated November 19, 1980, stated that the objective for the protection of safe shutdown capability is to ensure that at least one means of achieving and maintaining safe shutdown conditions will remain available during and after any postulated fire in the plant. NFPA 805 requires that, in the event of a fire, the plant be able to achieve and maintain the fuel in a safe and stable condition and that the plant is not placed in an unrecoverable condition in lieu of the analyzed shutdown method delineated in Section III.G. Specific criteria for the NFPA 805 conditions are provided in Section 1.5 of NFPA 805. These differences in requirements for plant shut down result from the fact that NFPA 805 is performance-based rather than deterministic. The shutdown methods delineated in Section III.G are not required by NFPA 805 because they are not needed to achieve the performance criteria of NFPA 805. However, NFPA 805, Chapter 4, requires that one success path necessary to achieve and maintain the nuclear safety performance criteria be maintained free of fire damage by a single fire. Therefore, NFPA 805 has a similar objective for the protection of safe shutdown via its requirement of one success path. These minor differences from Appendix R are acceptable because achieving the nuclear safety goals, objectives, and performance criteria of NFPA 805 provide controls for maintenance of the reactor fuel and the plant condition that ensure adequate protection of public health and safety.

The criteria and methodologies contained in NFPA 805 provide acceptable alternatives to the requirements in Appendix R, Sections I, II, and III regarding fire protection features required to satisfy GDC 3.

In addition to the requirements of 10 CFR 50.48(b) and Appendix R, the NRC reviewed the NFPA 805 fire protection criteria versus the guidance in RG 1.189, "Fire Protection for Operating Nuclear Power Plants." Section C of RG 1.189, "Regulatory Position," describes eight elements of an acceptable fire protection program. The NRC review determined that NFPA 805 provides adequately for each element. These eight elements are:

1. Delineation of organization, staffing, and responsibilities.
2. Performance of a fire hazards analysis sufficient to ensure safe shutdown functions and minimize radioactive material releases in the event of a fire.
3. The limitation of damage to SSCs important to safety so that the capability to safely shut down the reactor is ensured.
4. Evaluation of fire test reports and fire data to ensure they are appropriate and adequate for ensuring compliance with regulatory requirements.
5. Evaluation of compensatory measures for interim use for adequacy and appropriate length of use.
6. Training and qualification of fire protection personnel appropriate for their level of responsibility.
7. Quality assurance.
8. Control of fire protection program changes.

For example, element 3, limitation of damage to SSCs important to safety so that the capability to safely shut down the reactor is ensured, is addressed in NFPA Chapter 4. Chapter 4 of the standard establishes methods to determine the fire protection needed to limit fire damage to SSCs required to achieve the nuclear safety performance criteria in Section 1.5 of NFPA 805 and specifies that the design and qualification of those fire protection systems or features meet the applicable requirements of Chapter 3. The criteria in the standard are adequate to meet the intent of this element of RG 1.189.

NFPA 805 Differences with Respect to Appendix R

NFPA 805 does not explicitly include some requirements of Appendix R. NFPA 805 has no deterministic requirements for cold shutdown and emergency lighting, no provision for an alternative shutdown capability, and allows the use of recovery actions. NFPA 805 requires that the fuel be maintained in a safe and stable condition rather than prescribing the requirement for hot shutdown, cold shutdown, or the provisions for an alternate or dedicated shutdown. These differences result from the fact that NFPA 805 is performance-based rather than deterministic, with a performance goal to achieve a safe and stable condition. Deterministic requirements for emergency lighting for operation of safe shutdown equipment are not included in NFPA 805 because varying degrees of lighting and duration of lighting may be implemented by a performance-based approach provided that the performance goal to achieve a safe and stable condition can be demonstrated and met. The use of feasible recovery actions are allowed in NFPA 805 provided that the performance-based approach is used and can demonstrate and meet the performance goal. Also, the additional risk resulting from the use of recovery actions must be evaluated. These differences from Appendix R are acceptable because the nuclear safety performance criteria of NFPA 805 must be met in order to achieve a safe and stable condition. Meeting the performance criteria ensures adequate protection of public health and safety.

NFPA 805 includes some specific requirements that are not included in Appendix R. For example, NFPA 805 applies during all phases of plant operation including shutdown and degraded conditions. NFPA 805, Chapter 5, applies to plants that have permanently ceased operation and requires that the fire protection plan specified in Chapter 3 of NFPA 805 be maintained. The application of fire protection criteria for all phases of plant operation is more inclusive than 10 CFR 50.48(b) and Appendix R, resulting in a more comprehensive fire protection program.

Appendix R, Section II.B, requires a fire hazards analysis to determine the consequences of fire on the ability to minimize and control the release of radioactivity to the environment. Similarly, NFPA 805, Chapter 1, requires that radiation release goals, objectives, and performance criteria be met. The radioactive release goal of NFPA 805 is to provide reasonable assurance that a fire will not result in a radiological release that adversely affects the public, plant personnel, or the environment. NFPA 805, Chapter 1, states the radioactive release performance criteria to maintain radiation release from the effects of a fire as low as reasonably achievable and not to exceed 10 CFR Part 20 limits. NFPA 805, Chapter 4, requires the evaluation for demonstrating how the criteria are met. The NFPA 805 approach to radioactive release is more comprehensive than 10 CFR 50.48(b) and Appendix R and is considered adequate to ensure the protection of public health and safety.

Acceptability of NFPA 805 for Decommissioning Plants

The first paragraph of 10 CFR 50.48(f) is revised to include the statement that a fire protection program that complies with NFPA 805 is deemed to be acceptable for complying with the requirements of paragraph (f). Section 50.48(f) requires licensees to maintain a fire protection program to prevent, detect, control, and extinguish fires that could result in a radiological hazard and to ensure that the risk of fire-induced radiological hazards to the public, environment, and plant personnel is minimized. Further, 10 CFR 50.48(f) requires licensees to assess and revise the fire protection program throughout the stages of decommissioning as the fire hazard threat changes and allows licensees to make changes to the fire protection program if the changes do not reduce the effectiveness of the fire protection program, taking into account the decommissioning plant conditions and activities.

The NRC reviewed NFPA 805, Chapter 5, and determined that it requires a fire protection plan to be maintained throughout decommissioning and permanent shutdown. It also specifies that the plan maintain a fire protection program as specified by Section 3.1 of NFPA

805. The fire protection program specified in Section 3.1 requires that fundamental fire protection program elements and minimum design requirements be established and maintained as part of the plant fire protection program. NFPA 805, Section 5.2, requires controls governing the identification of fire hazards, fire prevention, fire detection, fire fighting capability, and emergency response. Section 5.2 also requires the maintenance of a fire protection program that is commensurate with the fire hazards as decommissioning progresses. NFPA 805, Section 5.3, identifies specific fire protection program elements and requires that the fire protection program elements be established and maintained as decommissioning progresses after permanent shutdown. As a plant progresses into decommissioning, the fire protection program that meets the nuclear safety criteria in NFPA 805, Chapter 1, changes because the fuel has been removed from the reactor and the reactor is no longer operating. The focus of the fire protection program changes to control fires that may cause the release of radioactivity, taking into consideration changes in plant configuration, maintenance, and activities as the plant progresses beyond permanent shutdown. Section 5.3, of NFPA 805, requires that the fire protection program be maintained commensurate with these changes in fire hazards and the potential for release of hazardous and radiological materials to the environment. Because the NFPA 805 fire protection program requirements for a decommissioning plant are technically equivalent to the requirements of paragraph (f), the NRC considers that a fire protection program that complies with NFPA 805 is acceptable for complying with the requirements of paragraph (f).

Statement of Acceptability of 10 CFR 50.48(c) and NFPA 805

The NRC considered whether 10 CFR 50.48(c) provides requirements and criteria for licensees to implement fire protection features for certain generic issues referenced in 10 CFR 50.48(b) and as established in Appendix R to 10 CFR 50, or as required by plant license conditions resulting from NRC reviews of plant licenses to those features established in Appendix R. The NRC reviewed the requirements in Chapter 3 of NFPA 805 for the establishment of fundamental fire protection program elements and minimum design requirements; the performance goals, objectives, and criteria in Chapter 1 of NFPA 805; the methodology in Chapter 4 for identifying fire protection systems and features required to meet the Chapter 1 performance criteria; and the methodology in Chapter 2 for the implementation of deterministic or performance-based approaches to establish those fire protection systems and features. The NRC determined that NFPA 805 contains requirements that address those generic issues referenced in 10 CFR 50.48(b) and provides sufficient requirements and criteria for licensees to implement fire protection features that satisfy GDC 3 with respect to those issues. Therefore, the NRC determined that compliance with 10 CFR 50.48(c) is an acceptable alternative to compliance with 10 CFR 50.48(b) for plants licensed to operate before January 1, 1979, or the fire protection license conditions for plants licensed to operate after January 1, 1979.

In addition, the NRC reviewed the requirements in Chapter 5 for licensees who have submitted the certifications required under 10 CFR 50.82(a)(1). The NRC considered the requirements in Chapter 5 to continue to maintain the fire protection systems and features needed to meet the performance criteria of Chapter 1, to continue to maintain a fire protection plan as specified in Section 3.2 of NFPA 805, and the criteria in Chapter 5 regarding issues applicable to a plant progressing through decommissioning and into permanent shutdown. The

NRC determined that a fire protection program that complies with NFPA 805 meets the requirements for a fire protection program as specified in 10 CFR 50.48(f).

Discussion of Provisions of the Rule

The following paragraphs discuss the bases for certain provisions in this rule. The final rule provides for licensees to request a license amendment that would permit them to maintain a fire protection program that complies with NFPA 805, identifies seven exceptions to NFPA 805, and provides a method for licensees to request to use risk-informed, performance-based alternatives to provisions in NFPA 805.

Provision for Adoption of NFPA 805

In accordance with 10 CFR 50.48(c)(3)(i), a licensee may maintain a fire protection program that complies with NFPA 805 as an alternative to complying with paragraph (b) of this section for plants licensed to operate before January 1, 1979, or the fire protection license conditions for plants licensed to operate after January 1, 1979. The licensee shall submit a request in the form of an application for license amendment under § 50.90. The application must identify any orders and license conditions that must be revised or superseded, and contain any necessary revisions to the plant's technical specifications and the bases thereof.

Provisions for Exceptions to NFPA 805

The NRC identified provisions of the NFPA 805 Standard that were determined to be unacceptable or inappropriate to endorse in this rulemaking. A description of each exception and the bases for the exception follows:

Life Safety and Plant Damage/Business Interruption Goals, § 50.48(c)(2)(i) and (ii)

The Life Safety and Plant Damage/Business Interruption goals, objectives, and criteria in Sections 1.3, 1.4, and 1.5 of NFPA 805 are not endorsed in this rule. The Plant Damage/Business Interruption goal to provide reasonable assurance that the potential economic consequences of the risk of a fire are acceptable is not within the regulatory

responsibility of the NRC under the Atomic Energy Act of 1954, as amended, to provide for the common defense and security and to protect the health and safety of the public. The Life Safety Goal provides for protection of plant personnel (including essential personnel) from the effects of a fire but is not fully within the regulatory responsibility of the NRC. Those portions of the Life Safety Goal that are within the scope of NRC regulatory responsibility, such as adequate protection for essential personnel, are required elsewhere in the standard. Therefore, the NRC is not endorsing the NFPA 805 Life Safety or Plant Damage/Business Interruption Goals.

Feed and Bleed, § 50.48(c)(2)(iii)

The NRC does not accept the use of a high-pressure charging/injection pump coupled with the pressurizer power operated relief valves (PORVs) as the sole fire protected shutdown path for maintaining reactor coolant inventory, pressure control, and decay heat removal capability (i.e., feed-and-bleed) for pressurized water reactors (PWRs). Reliance on feed-and-bleed as the sole method for achieving these criteria does not provide sufficient defense-in-depth. Therefore, feed-and-bleed as the sole means of demonstrating achieving the nuclear safety performance criteria in Section 1.5.1(b) and (c) is not permitted.

Uncertainty Analysis, § 50.48(c)(2)(iv)

The uncertainty analysis required by Section 2.7.3.5 of the standard is not required for the deterministic approach because conservatism is included in the deterministic criteria.

Existing Cables, § 50.48(c)(2)(v)

Section 3.3.5.3 of the standard provides that electric cable construction shall comply with a flame propagation test acceptable to the AHJ. For this rulemaking, the NRC is requiring compliance with 10 CFR 50.48(c)(2)(v), which provides for the use of flame-retardant coatings on electric cables or an automatic fixed fire suppression system in lieu of installing cables meeting an acceptable flame propagation test. The electrical flame propagation test

compliance was put in place after some licensees had installed cabling that could not be qualified to a flame propagation test. The NRC determined that flame-retardant coatings or a fixed fire suppression system provided an acceptable level of protection for these licensees (see Appendix A to BTP APCS 9.5-1). Licensees should have these configurations as part of their licensing basis, where applicable. This provision, therefore, carries forward a previously accepted alternative to meeting a flame propagation test.

Additionally, the italicized exception to Section 3.3.5.3 of the standard is not endorsed because it would allow cables that did not comply with an acceptable flame propagation test to remain in place in a reactor plant without mitigation even though they were not approved in the licensing basis. Cables that do not meet this requirement could contribute to failure of operating or shutdown systems and the contribution to risk has not been calculated or approved. The criteria that electric cable constructions should pass flame propagation testing has been in NRC guidance since 1976 (Appendix A to BTP APCS 9.5-1).

Water Supply and Distribution, § 50.48(c)(2)(vi)

The italicized exception to Section 3.6.4 of the standard is not endorsed. The exception would allow a licensee to have a “provisional” manual fire-fighting standpipe/hose station system in place of seismically qualified standpipes and hose stations even though it was not approved in the licensing basis. The NRC interprets Section 3.6.4, which is one of the fire protection elements and minimum design requirements of Chapter 3, as requiring seismically qualified standpipes and hose stations in all areas containing systems and components needed to perform the nuclear safety functions in the event of a safe shutdown earthquake. NRC guidance to supply water at least to standpipes and hose connections for manual fire-fighting in areas required for safe plant shutdown in the event of an earthquake, and that the standpipe system serving such hose stations be analyzed for seismic loading to assure system pressure integrity, has been in existence since 1976. Therefore, the NRC considers seismically qualified

standpipes and hose stations of such importance that licensees who wish to use the exception to Section 3.6.4 in NFPA 805 must obtain NRC review and approval in accordance with § 50.48(c)(2)(vii).

Performance-Based Methods, § 50.48(c)(2)(vii)

The prohibition in Section 3.1 of NFPA 805 that does not permit the use of performance-based methods for the Chapter 3 fundamental fire protection program elements and minimum design criteria is not endorsed. The NRC takes this exception in order to provide licensees greater flexibility in meeting the fire protection program elements and minimum design requirements of Chapter 3 by the use of performance-based methods (including the use of risk-informed methods) described in the NFPA 805 standard. This approach is acceptable to NRC because the rule requires NRC review and approval prior to the licensee's use of those methods, and the rule sets forth criteria for evaluating the acceptability of the licensee's proposed use of performance-based methods in meeting the fire protection program elements and minimum design requirements.

Alternatives to Compliance with NFPA 805, § 50.48(c)(4)

The final rule provides licensees the flexibility of requesting, via a license amendment, to use risk-informed or performance-based alternatives that deviate from compliance with NFPA 805. The NRC recognizes that licensees may propose acceptable approaches that are not encompassed by the criteria in NFPA 805. Therefore, the NRC is including a provision for requesting such approaches in the rule. However, to ensure adequate protection of public health and safety, the NRC is requiring that licensees obtain NRC review and approval to use those methods, and is providing criteria in § 50.48(c)(4) for review of their acceptability.

III. Comment Resolution on Proposed Rule

The 75-day public comment period for the proposed rule ended January 15, 2003. Comments were received from organizations and individuals. Copies of the comments are available for public inspection and copying for a fee at the Commission's Public Document Room, One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. The comments were submitted by an individual, an individual representing a public interest group, a utility with a nuclear reactor, two nuclear utility groups each representing six plants with nuclear reactors, a law firm, a law firm representing several utilities, and NEI. Most commenters supported the proposed rule and made recommendations to enhance or modify elements of the rule. One commenter opposed adoption of the proposed rule.

In the following paragraphs, the NRC discusses the resolution of the public comments by topic.

Need for License Amendment

A commenter suggested that the NRC amend 10 CFR 50.55a, "Codes and standards," to add a paragraph referencing NFPA 805, which could then be referenced in 10 CFR 50.48 as an optional alternative approach. The commenter stated that this approach would negate the need for licensees to obtain a license amendment in order to adopt NFPA 805 or approved alternative approaches under the provisions of 10 CFR 50.55a(c)(3). The commenter also stated that the process for obtaining NRC approval of alternate methods should not require a license amendment.

The NRC does not agree that amending 10 CFR 50.55a would negate the need for a license amendment in order for licensees to adopt NFPA 805. The NRC believes that, even if § 50.55a were revised as suggested by the commenter, it would not negate the need to change the license. To adopt NFPA 805, technical specifications and license conditions will need to be

changed and such changes are amendments to the license. Regarding the use of methods, licensees may use methods such as fire modeling and fire PSAs without prior NRC review and approval. However, such use is at the licensee's risk and is subject to subsequent inspection by the NRC.

Risk-informed Methodology

A commenter stated that NFPA 805 does not include risk-informed methodologies such as NEI 00-01, "Methodology for Post-Fire Circuit Analysis," therefore the regulatory text or implementing guidance should recognize the use of risk-informed methodologies to address the appropriate issues.

The NRC agrees that NFPA 805 does not include risk-assessment methods. Although fire models and fire PSA methods have been developed, technical issues remain regarding their acceptability for the full range of decisions in risk-informed regulation by industry.

Degraded Conditions

A commenter observed that the description of NFPA 805 in the Federal Register Notice (FRN) for the proposed rule states that the standard specifies the minimum fire protection requirements for existing light water reactors during all modes ("phases" in NFPA 805) of plant operation, including shutdown, degraded conditions, and decommissioning. The commenter stated that fires should not be postulated with degraded conditions unless the fire and the degraded condition have a common cause.

The NRC disagrees with this comment. In citing the paragraph from Section 1.1, "Scope," of the standard, the NRC was identifying the modes or phases of operation for which NFPA 805 was applicable. The NRC believes the wording is appropriate as it correctly identifies the scope of NFPA 805. However, the NRC was not imposing a requirement that a degraded condition be postulated in addition to a fire for purposes of analyses.

Existing Cables

A commenter stated that the italicized exception in Section 3.3.5.3 of NFPA 805 allowed existing cables in place prior to adoption of the standard to remain as is and argued that leaving these cables in place was consistent with the “safe today, safe tomorrow” philosophy.

Therefore, the exception should be retained in the rule.

The NRC disagrees with the suggestion that the italicized exception in Section 3.3.5.3 of NFPA 805 be retained in the rule because it would allow existing electrical cable which does not comply with a flame propagation test acceptable to the NRC to remain as is even if the existing license basis required the cables to be qualified.

Use of Feed-and-Bleed

A commenter agreed with the NRC that feed-and-bleed is one available flow path to achieve and maintain safe shutdown but should not be considered the “preferred” or “sole” path. However, the commenter felt that feed-and-bleed should be considered as a viable path for risk calculations.

The NRC agrees that feed-and-bleed may be used in risk calculations. However, as previously noted, feed-and-bleed should not be the sole path.

Regarding § 50.48(c)(2)(iii) of the proposed rule, a commenter noted that, “This paragraph does not accept the use of a high-pressure charging/injection pump coupled with the pressurizer PORVs as the sole fire protected shutdown path. . .” The commenter stated that feed-and-bleed should be considered as one of the multiple methods when used in a risk-informed analysis of safe shutdown capability.

The NRC agrees with this comment. The purpose of § 50.48(c)(2)(iii) is to identify that this path is not to be relied on as a sole fire protected shutdown path.

Previously Approved Licensing Basis

A commenter asserted that licensees may bring forward portions of their existing licensing basis or design configuration as alternatives to the Chapter 3 fundamental elements when adopting NFPA 805. The commenter stated that it is the licensee's responsibility to maintain the plant licensing basis, but the burden of proof is the NRC's if the NRC suggests that the licensing basis was not previously approved.

The NRC disagrees with the comment about the burden of proof. Because it is the licensee's responsibility to maintain the plant licensing basis, the burden of proof for previous approval is the licensee's. The NRC notes that this is the existing inspection and enforcement position which is generally applicable when a licensee claims that the NRC has previously approved a licensee commitment.

A commenter asked if the discussion under § 50.48(c)(3)(i) meant that existing approved exemptions remain valid under NFPA 805 and whether the licensee needed to identify that the associated safety evaluation remained in effect.

The NRC's position is that existing exemptions remain valid after transition to NFPA 805 as indicated in Section 3.1 of the standard, if not otherwise revoked by the NRC as part of the initial approval to transition to NFPA 805. The licensee's analysis of the facility to perform the transition to NFPA 805 should include a review of fire protection exemptions in effect at the time of application. The NRC will deny the application if the NRC determines that the licensee does not address the continued validity of any exemption in effect at the time of application. As stated in § 50.48(c)(3)(i), licensees must identify any orders or license conditions to be revised or superseded.

Burden Discussion

A commenter recommended that the text in the statement of considerations (SOC) for the proposed rule on "Unnecessary Burden" be replaced with the following, "Licensee adoption

of the proposed rule or use of the techniques in the rule is expected to reduce unnecessary regulatory burdens by enabling licensees to cost-effectively adopt safe alternatives to overly conservative deterministic requirements.”

NRC agrees that the rule provides licensees with the flexibility to adopt performance-based alternatives to existing prescriptive requirements and thus reduce unnecessary regulatory burden. The text of the final rule SOC has been modified accordingly.

Licensee Impact

A commenter stated that the discussion on licensee impact in the SOC should identify the primary impacts on licensees and that characterizing the impacts as “significant” is not accurate and should be deleted. The commenter provided a list of the primary impacts expected and stated that they should be reflected in the FRN for the final rule.

The NRC evaluated the primary impacts identified in the comment and agreed that they are appropriate and should be included in the discussion on licensee impact. The NRC modified the final rule discussion to reflect this comment. The NRC does not agree that the term significant is inaccurate because the analysis required by the final rule is expected to be approximately 11,250 person-hours per licensee.

Appendices

A commenter stated that, although NRC indicated in the SOC that it intended to allow licensees to adopt NFPA 805 including Appendices B, C and D the proposed language for 10 CFR 50.48(c) and 10 CFR 50.48(f) does not specifically adopt the appendices. The commenter also stated that the language in Appendices B, C, and D, was non-mandatory and that the NRC would need to develop additional guidance as to how the language of the appendices would be made mandatory. Another commenter noted that Appendices C and D of NFPA 805 are not methodologies but descriptions of attributes of methodologies.

The NRC agrees with the comment that the proposed rule did not incorporate Appendices B, C, and D by reference and that these appendices are not part of the standard. The NRC does not endorse the appendices in this rule and expresses no position as to their acceptability for use. However, licensees may, at their discretion and risk, use the appendices subject to subsequent NRC inspection. Further, the NRC agrees with the comment that Appendices C and D are not methodologies but are considered to be guidance for application of fire modeling or fire probabilistic safety assessment respectively.

Seismic Standpipes and Hose Stations

A commenter stated that the italicized exception to Section 3.6.4 of NFPA 805, which requires that provisions be made to supply water to standpipes and hose stations for manual fire suppression in the event of a safe shutdown earthquake (SSE), should be endorsed in the rule. The exception would allow provisions to restore a water supply and distribution system for manual fire-fighting purposes following an SSE.

The NRC does not agree that the exception should be endorsed because it would allow licensees to use alternate provisions to seismically qualified standpipes and hose stations even if the licensing basis requires seismically qualified standpipes and hose stations. Licensees with approved exemptions or deviations or whose licensing basis does not require seismically qualified standpipes and hose stations may comply with their existing licensing basis.

A commenter noted that Appendix A to BTP APCS 9.5-1 did not require seismically qualified standpipes and hose stations for operating plants and plants with construction permits issued prior to July 1, 1976.

NRC agrees that Appendix A to BTP APCS 9.5-1 made separate provisions for operating plants and plants with construction permits issued prior to July 1, 1976, and did not require seismically qualified standpipes and hose stations for those plants. Therefore, the requirement in Section 3.6.4 of NFPA 805 is not applicable to licensees with nonseismic

standpipes and hose stations previously approved in accordance with Appendix A to BTP APCSB 9.5-1.

Use of NFPA 805 Methods by Other Licensees

A commenter stated that licensees who do not adopt NFPA 805 should not be precluded from using risk tools from NFPA 805.

The NRC agrees with the comment. However, licensees not adopting NFPA 805 in accordance with the final rule are not covered by the provisions for transitioning to NFPA 805. Such licensees who wish to use the risk tools in NFPA 805 will need to separately determine if their existing licensing basis would permit the use of such tools, and take appropriate action as necessary to change their licensing basis.

Approaches Used in Different Fire Areas

A commenter asked whether, in light of the fact that the rule is not intended to be implemented on a partial or selective basis, the NFPA 805 deterministic approach can be selected for one fire area and the performance-based approach for another.

Chapter 2 of the standard requires a licensee to select a deterministic or a performance-based approach to determine how to meet the performance criteria that apply to each fire area. Thus, Chapter 2 allows the use of different approaches for different fire areas. However, Chapter 2 does not allow NFPA 805 to be only partially implemented.

Meaning of the Term “Element”

A commenter stated that the word “element” in the discussion of plant change evaluations (Section 2.2.9 of the standard) should be changed to “attribute” to be consistent with language or terminology used in NFPA 805, Section 3.1. The term is used in Sections 2.2.1, 2.2.9, and 2.4.4 and Figure 2.2 of Chapter 2.

The NRC does not agree that the word “element” should be changed in Section 2.2.9 of the standard. In Chapter 2, the term “element” includes the fundamental elements of the fire

protection program described in Chapter 3 of the standard (Section 2.2.1). Fundamental elements are necessary components of an acceptable fire protection program. Attributes are features or characteristics of the fundamental elements and may vary based on the plant licensing basis. Section 3.1 states that previously approved alternatives from the fundamental protection program attributes described in Chapter 3 take precedence over the requirements contained in Chapter 3. Therefore, Section 2.2.9 applies to previously approved program elements as well as previously approved attributes and the terminology in Section 2.2.9 is appropriate.

Additional Issue for Public Comment

The NRC requested public comment on whether a licensee is likely to revert to their previous licensing basis after being approved to use NFPA 805 and, if they did, would a license amendment be required to revert to their previous compliance basis. Two commenters stated that licensees were not likely to revert to their previous status because the regulatory environment under the requirements of NFPA 805 would be more flexible. The commenters also stated that a license amendment would be required to revert to the previous licensing basis after being approved to use NFPA 805.

The NRC has determined that the final rule need not include provisions governing the process for reversion from NFPA 805 to a licensee's former fire protection licensing basis, because it is unlikely that such reversions will occur.

Regulatory Analysis Burden Estimate, Problem Statement, and Estimated Consequences

A commenter stated that the NRC estimate of 20,000 to 65,000 person-hours needed for the initial plant-wide analysis for each licensee was excessive by a factor of three and should be revised.

The NRC agrees with this comment. The estimate of 20,000 to 65,000 person-hours was for four plants per year. The NRC estimate for the initial analysis for one plant is 11,250

person-hours. The NRC clarified the Regulatory Analysis and the OMB statement to state that the hours shown were an annualized estimate of four plants adopting NFPA 805.

A commenter noted that the Statement of the Problem section of the Regulatory Analysis states that the “alternative regulatory structure would potentially reduce the number and complexity of future licensee exemption or deviation requests” The commenter stated that this section is inconsistent with the Alternatives section which states that use of the NFPA 805 methods would preclude the need for exemptions or deviations. The commenter stated that the text should be revised.

The NRC does not agree with this comment. The text in the Alternatives section of the Regulatory Analysis states that licensees may use approaches and methods contained in NFPA 805 rather than submitting an exemption or deviation request. Thus, use of the NFPA 805 methods should reduce the need for exemption or deviation requests. This text is consistent with the text in the Statement of the Problem section.

A commenter stated that the wording in the Estimated Consequences section suggests that fire protection features no longer required will be removed. The commenter stated that such features will likely be “abandoned in place” or continued to be used as the licensee determines. The NRC agrees with this comment and has revised the section to indicate that fire protection features no longer required may continue to be used, “abandoned in place,” or removed at the discretion of the licensee.

One commenter stated that the NRC discussion in the Estimated Consequences section did not follow guidance in NUREG/BR-0058, Revision 3, “Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission,” in that NRC had not adequately demonstrated that the cost savings attributed to the action (in the proposed rule) would be substantial enough to justify taking the action. Further, the commenter stated that the cost savings calculation should be based on an assumption that all licensees will take advantage of the change as noted in

Section 2.2 of the NUREG. The commenter noted that the NRC had not included reporting and recordkeeping costs in the regulatory analysis.

Based on this comment, the NRC reviewed the draft Regulatory Analysis and the draft Office of Management and Budget (OMB) statement for recordkeeping and reporting costs and determined that the person-hour estimates shown were for four plants adopting NFPA 805 annually, rather than a per-plant figure. Hence the number of hours shown as required was high by a factor of four for that of an individual plant. The NRC clarified the Regulatory Analysis and the OMB statement to state that the hours shown were an annualized estimate of 4 plants adopting NFPA 805. The NRC stated in the draft Regulatory Analysis that it was not possible to estimate the cost savings per plant as the savings would vary significantly for each plant. However, for some plants the savings in reduced downtime and spare parts maintenance could be several times the cost of adopting NFPA 805; therefore, for these plants the action is justified. Plants that do not adopt NFPA 805 are not affected.

The NRC based its cost calculations on an estimate of the number of plants likely to adopt NFPA 805 rather than on all plants. This approach is acceptable because NRC does not expect all plants to adopt NFPA 805. Industry estimates that approximately 25 plants may adopt NFPA 805 and NRC used that estimate in its calculations. Plants that do not adopt NFPA 805 are not affected. The NRC has revised the Regulatory Analysis to include reporting and recordkeeping costs.

Later Versions of NFPA 805

A commenter stated that the proposed rule should allow for the voluntary adoption of later versions of NFPA 805, unless NRC notifies licensees that a specific revision to NFPA 805 is not to be used. The commenter suggested language to be used in the rule for this purpose.

The NRC may not legally provide regulatory approval of future versions of NFPA 805 by rulemaking, because the NRC has no basis for determining the acceptability of all future versions of NFPA 805.

Other Comments

1. Comments on Implementation and Inspection Issues

A commenter requested that NRC consider skipping the first post-transition triennial inspection in reliance on the extensive program review being conducted by each licensee.

The NRC agrees that the inspection program should recognize the extent of the fire protection program review that would be conducted by the licensee. The NRC is considering alternatives to the triennial inspection or possibly modifying the focus of the triennial inspection to reflect the programmatic review performed by plants transitioning to NFPA 805.

A commenter suggested that, as has been done for other rules, the NRC should exercise enforcement discretion for noncompliances identified during the transition to the new fire protection requirements.

The NRC agrees with the comment and is requesting Commission permission to allow enforcement discretion for noncompliances identified during the transition to the new requirements. This action would encourage licensees to self-identify problems for placement in their corrective action programs.

A commenter asserted that the NRC should conform inspection guidance and the process for resolving noncompliances to the risk-informed, performance-based methodology in the new rule.

The NRC agrees with this comment and will conform the inspector guidance and the process for resolving noncompliances to the risk-informed, performance-based methods in the rule, for those licensees that transition to NFPA 805. No change will occur for licensees that continue to comply with their existing fire protection licensing basis.

A commenter suggested that the NRC follow the inspection practice for the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code and adopt a 10-year inspection cycle.

The NRC believes that the frequency appropriate for NRC inspection of fire protection programs differs significantly from the frequency appropriate for licensee inspection of piping and supports conducted under 10 CFR 50.55a, which references requirements in the ASME Boiler and Pressure Vessel Code. A significant difference is that § 50.55a itself establishes a 10-year interval for licensee conduct of inservice inspection and inservice testing under a fixed version of the ASME Code edition and addenda. Whereas, the greater frequency of NRC inspections of licensee fire protection programs is appropriate because of the likelihood for changes to plant configurations, procedures, and practices affecting fire protection programs to occur more often. Accordingly, the NRC does not intend to change the inspection frequency.

A commenter suggested that the NRC exercise enforcement discretion to eliminate the need to come into compliance with deviations from current licensing basis requirements if compliance will be attained by transitioning to the new requirements under NFPA 805.

The NRC is requesting Commission permission to allow enforcement discretion during the transition period to the new requirements. If enforcement discretion is implemented, licensees would need to take appropriate compensatory actions for any identified noncompliance and to place the noncompliance in the corrective action program. Corrective actions may be to restore compliance with existing requirements or to implement a performance-based approach that meets the requirements of NFPA 805.

2. Comments on the Process for Adopting NFPA 805

A commenter suggested that the final rule define the scope of fundamental attributes broadly enough to encompass current fire protection programs and adopt a simple and

predictable process for finding that fundamental attributes have been previously approved by the NRC.

The NRC disagrees with the commenter's suggestion that the final rule should define the scope of fundamental attributes to encompass current fire protection programs. The NRC considers Chapter 3 of NFPA 805 sufficient to describe the fundamental fire protection elements for a risk-informed, performance-based fire protection program using NFPA 805. The attributes of current fire protection program elements vary from plant-to-plant and determining generic fundamental fire protection elements applicable to the full range of as-yet-unknown risk-informed or deterministic approaches is beyond the scope of this rulemaking. Section 3.1 of NFPA 805 provides that previously approved attributes of a licensee's current fire protection program may be retained. Therefore, licensees may evaluate previously approved attributes for their plants and determine whether they wish to retain those attributes. The NRC is working with industry to develop a predictable process to be described in the implementing guidance document for identifying previously approved attributes. The licensee is responsible for maintaining its licensing basis including previous NRC approvals.

A commenter stated that the final rule should have a simple, swift process for approving the transition license amendment.

The NRC believes the process described in the rule for approving the license amendment is appropriate. The NRC expects that the implementing guidance will provide additional guidance that will help with the approval process.

3. Comments on the Acceptability of NFPA 805 as a Fire Protection Program

Performance-Based Program A commenter expressed concerns about whether a risk-informed or performance-based fire-protection program provides a sufficient level of protection of public health and safety compared to existing deterministic requirements. The commenter noted events where the industry experienced unexpected consequences from methods for

maintenance and testing, and cited events at Browns Ferry and Davis-Besse as examples. The commenter also expressed a concern that, in light of the terrorist attacks on the World Trade Center, blast and fire standards should be deterministic.

The NRC disagrees with the comment. The NRC evaluated the NFPA 805 program and determined that, when implemented as an integrated whole, NFPA 805 provides criteria for an acceptable fire protection program and provides an acceptable level of protection of public health and safety. This determination is based on a review of the program versus regulatory requirements of GDC 3 and 10 CFR 50.48(a), as well as the criteria for an acceptable fire protection program in RG 1.189, the risk application methods criteria in RG 1.174, and the NFPA 805 criteria for the use of performance-based methods and risk information. The NRC agrees that unexpected consequences may result from maintenance and testing and notes that such consequences may occur whether under a deterministic or a performance-based fire protection program. The events at Browns Ferry and Davis-Besse emphasize the importance of defense-in-depth and the maintenance of safety margins. Both of these fundamental aspects of fire protection must be maintained under NFPA 805. Thus, the NRC believes that proper implementation of NFPA 805 will be as effective as the current deterministic-based requirements in providing reasonable assurance of adequate protection with respect to fire protection.

Regarding terrorist type of attacks, the NRC has taken action as a result of the events that occurred at the World Trade Center and continues to evaluate additional actions that may be appropriate.

Use of Fire Models A commenter questioned the use of fire models under NFPA 805 because of the uncertainty associated with them.

The NRC disagrees that fire models should not be used because of the uncertainty associated with them. NFPA 805 provides for the use of fire models to support performance-

based approaches and gives information on the use and application of fire modeling in Appendix C. Section 2.4.1.2.2 of the standard provides that fire models must be applied within the limitations of the fire model. Any uncertainty associated with a fire model must be quantified and included, as appropriate, in the performance-based approach. The NRC believes that NFPA 805 provides appropriate requirements for use of fire models relative to associated uncertainty.

Use of NEI 00-01 A commenter questioned whether industry document, NEI 00-01, “Guidance for Post-Fire Safe Shutdown Circuit Analysis,” was sufficiently a “consensus” standard to be used in the NFPA 805 environment.

The NRC disagrees with the comment. The NRC has reviewed and commented on NEI 00-01 throughout its development and is considering endorsing NEI 00-01. If endorsed, NEI 00-01 will be a tool that licensees may use to determine the risk significance of fire effects on certain circuits. Such tools do not need to be consensus standards to be used within the NFPA 805 structure.

IV. Section-by-Section Analysis

Section 50.48(c). *National Fire Protection Standard NFPA 805.*

The final rule adds a new paragraph (c) to 10 CFR 50.48 that permits nuclear power reactor licensees to voluntarily adopt NFPA 805, with certain exceptions stated in the regulatory text, as an alternative set of fire protection requirements for the operation of light-water reactors. NFPA 805, if adopted by licensees, constitutes an acceptable means for licensees of currently operating reactors to comply with 10 CFR 50.48(a), and is an alternative to meeting their existing fire protection requirements.

Section 50.48(c)(1). *Approval of incorporation by reference.*

This paragraph states that NFPA 805, 2001 Edition, was approved for incorporation by reference by the Director of the *Federal Register*. The appendices to NFPA 805, which are not part of the standard, are not incorporated by reference.

Section 50.48(c)(2). *Exceptions, modifications, and supplementation of NFPA 805.*

This paragraph states that references in § 50.48 to NFPA 805 are to the 2001 Edition, with certain delineated exceptions, modifications, and supplementation described in paragraphs (c)(2)(i)-(vii) of the final rule.

Section 50.48(c)(2)(i). *Life Safety Goal, Objectives, and Criteria.*

This paragraph provides that the Life Safety Goal, Objectives, and Criteria of NFPA 805 Chapter 1 are not endorsed by the NRC.

Section 50.48(c)(2)(ii). *Plant Damage/Business Interruption Goal, Objectives, and Criteria.*

This paragraph provides that the Plant Damage/Business Interruption Goal, Objectives, and Criteria of NFPA 805 Chapter 1 are not endorsed by the NRC.

Section 50.48(c)(2)(iii). *Use of feed-and-bleed.*

This paragraph provides that the use of a high-pressure charging/injection pump coupled with the PORVs is not acceptable as the sole fire-protected shutdown path for maintaining reactor coolant inventory, pressure control, and decay heat removal capability (i.e., feed-and-bleed) for PWRs.

Section 50.48(c)(2)(iv). *Uncertainty analysis.*

This paragraph provides that a licensee need not prepare an uncertainty analysis in accordance with Section 2.7.3.5 when using a deterministic approach as specified in Section 2.2.6 and Chapter 4 of NFPA 805.

Section 50.48(c)(2)(v). *Existing cables.*

This paragraph provides that in lieu of installing cables meeting flame propagation tests as required by Section 3.3.5.3 of the standard, a licensee may use either cables with a flame-retardant coating or an automatic fixed fire suppression system to provide an equivalent level of fire protection. In addition, the italicized exception to Section 3.3.5.3 is not endorsed.

Section 50.48(c)(2)(vi). *Water supply and distribution.*

This paragraph provides that a “provisional” manual fire-fighting standpipe/hose station system may not be used in place of seismically qualified standpipes and hose stations unless previously approved in the licensing basis. Licensees who wish to use the italicized exception in Section 3.6.4 of NFPA 805 must submit a request for a license amendment in accordance with paragraph (c)(2)(vii). However, because the NRC considers seismically qualified standpipes and hose stations of such importance, the NRC believes that licensees who wish to use the exception in Section 3.6.4 of NFPA 805 via a license amendment may have difficulty satisfying the three criteria in paragraph (c)(2)(vii).

Section 50.48(c)(2)(vii). *Performance-based methods.*

This paragraph takes exception to the prohibition in Section 3.1 of NFPA 805 to the use of performance-based methods (including the use of risk-informed methods) for the fire protection program elements and minimum design requirements in Chapter 3. The NRC included this exception to allow licensees flexibility in meeting the fire protection program elements and minimum design requirements in Chapter 3. However, the NRC considers that the fire protection program elements and minimum design requirements in Chapter 3 are not suited to the performance-based approaches permitted in NFPA 805 on a generic basis, and that any performance-based approaches for these program elements or minimum design requirements should be approved on a plant-specific basis via a license amendment.

Licensees proposing such performance-based approaches for the fire protection program elements and minimum design requirements in Chapter 3 must submit an application for a license amendment to the NRC in accordance with § 50.48(c)(4). The Director of the Office of Nuclear Reactor Regulation (NRR), or a designee, may approve the application if the Director or designee determines that the proposed performance-based approach:

- (i) Satisfies the performance goals, performance objectives, and performance criteria specified in NFPA 805 related to nuclear safety and radiological release.
- (ii) Maintains safety margins.
- (iii) Maintains fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire safe shutdown capability).

Section 50.48(c)(3)(i).

This paragraph allows licensees to adopt NFPA 805 as an alternative to complying with 10 CFR 50.48(b) or existing plant fire protection license conditions. This paragraph describes the method by which a licensee will submit their request to adopt NFPA 805. If the NRC approves a licensee's request to use NFPA 805, the Director of NRR or designee will issue a license amendment that: (1) removes superseded license conditions and (2) includes a license condition imposing the use of NFPA 805 together with an implementation schedule. In addition, if necessary, the NRC will issue an order revoking unnecessary and superseded exemptions and orders.

Licensees who are approved under paragraph (c)(3)(i) to use NFPA 805 may return to compliance with paragraph (b) and their previous licensing basis. However, each licensee must comply with all applicable requirements, including submitting an application for a license amendment, and, as applicable, a request for exemption if the licensee wishes to reinstate a revoked exemption.

Section 50.48(c)(3)(ii).

This paragraph requires licensees to complete all of the Chapter 2 methodology (including evaluations and analyses) and to modify their fire protection plan before making changes to the fire protection program or to the plant configuration. This process ensures that the transition to an NFPA 805 configuration is conducted in a complete, controlled, integrated, and organized manner. This requirement also precludes licensees from implementing NFPA 805 on a partial or selective basis (e.g., in some fire areas and not others, or truncating the methodology within a given fire area).

The evaluations and analyses process in Chapter 2 of NFPA 805 provides for the establishment of the fundamental fire protection program, identification of fire area boundaries and fire hazards, determination by analysis that the plant design satisfies the performance criteria, identification of SSCs required to achieve the performance criteria, conduct of plant change evaluations, establishment of a monitoring program, development of documentation, and configuration control. Chapter 2 of NFPA 805 also provides for the use of a deterministic or performance-based approach to determine that the performance criteria are satisfied and provides for the use of tools such as engineering analyses, fire models, nuclear safety capability assessments, and fire risk evaluations to support development of these approaches. The methodology for the use of these tools is established in Chapter 4 of NFPA 805.

Section 50.48(c)(4). *Risk-informed or performance-based alternatives to compliance with NFPA 805.*

This paragraph provides licensees with a mechanism to obtain NRC approval of alternatives to NFPA 805 including the use of performance-based approaches for the fire protection program elements and minimum design requirements in Chapter 3 of NFPA 805. The licensee's request should be in the form of a license amendment request and demonstrate

that the licensee's proposed alternative satisfies the performance goals, objectives, and criteria specified in NFPA 805 for nuclear safety and radiological releases. The proposed alternative must also maintain safety margins and fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire safe shutdown capability). Addressing these criteria allows the NRC to determine that the alternative implements the performance goals, objectives, and criteria in Chapter 1 and complies with the requirements of GDC 3.

Section 50.48(f).

This paragraph provides that licensees who have permanently ceased operations and submitted the certifications required by 10 CFR 50.82(a)(1) may maintain a fire protection program that complies with NFPA 805 and that fire protection program will be deemed to be acceptable for complying with the requirements of paragraph (f).

V. Availability of Documents

The NRC is making the documents identified below available to interested persons through one or more of the following methods as indicated.

Public Document Room (PDR). The NRC Public Document Room is located at One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

Rulemaking Web site (Web). The NRC's interactive Rulemaking Forum Web site is located at <http://ruleforum.llnl.gov>. These documents may be viewed and downloaded electronically via this Web site.

NRC's Public Electronic Reading Room (PERR). The NRC's public electronic reading room is located at <http://www.nrc.gov/reading-rm.html>. The subject document may be accessed using the ADAMS accession number (e.g., ML#####) provided below.

The NRC staff contact. The NRC project manager for this rulemaking in the Office of Nuclear Reactor Regulation is Joseph L. Birmingham. Mr. Birmingham can be reached by telephone at 301-415-2829, or via email to jlb4@nrc.gov.

Document	PDR	Web	PERR	NRC Staff
SECY-98-0058	X	X	ML992910106	
SECY-98-0144	X	X	ML992880068	
SECY-00-0009	X	X	ML003671923	
SECY-00-0191	X	X	ML003742883	
SRM dated 06/30/1998	X	X	ML003753120	
SRM dated 03/01/1999	X		ML003753601	
SRM dated 02/24/2000	X	X	ML003686350	
Federal Register Notice	X	X	ML040540680	X
Regulatory Analysis	X	X	ML040540542	X
Environmental Assessment	X	X	ML033440262	X
Comments Received	X	X	ML023570335	
Comments Received	X	X	ML030230288	
Comments Received	X	X	ML030160870	
Comments Received	X	X	ML030160873	
Comments Received	X	X	ML030170147	
Comments Received	X	X	ML030230293	
Comments Received	X	X	ML030230345	
Comments Received	X	X	ML030240260	

VI. Voluntary Consensus Standards

The National Technology Advancement and Transfer Act of 1995, Pub. L. 104-113, requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies, unless the use of such standards is inconsistent with applicable law or otherwise impractical. Public Law 104-113 requires Federal agencies to use industry consensus standards to the extent practical, it does not require Federal agencies to endorse a standard in its entirety. The law does not prohibit an agency from generally adopting a voluntary consensus standard while taking exception to specific portions of the standard if those provisions are deemed to be “inconsistent with applicable law or otherwise impractical.” Furthermore, taking specific exceptions furthers the Congressional intent of Federal reliance on voluntary consensus standards because it allows the adoption of substantial portions of consensus standards without the need to reject the standards in their entirety because of limited provisions which are not acceptable to the agency.

Under this final rule, the NRC is amending its regulations to incorporate by reference the National Fire Protection Association (NFPA) Standard 805, “Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition,” (NFPA 805), as excepted, as an alternative set of fire protection requirements. NFPA 805 is a national consensus standard developed by participants with broad and varied interests, in which all interested parties (including the NRC and licensees of nuclear power plants) participate.

In a staff requirements memorandum dated September 10, 1999, the Commission indicated its intent that a rulemaking identify all portions of an adopted voluntary consensus standard which are not adopted and to provide a justification for not adopting such portions. The portions of NFPA 805 which the NRC proposes not to adopt, or to partially adopt, are

identified in the preceding Section II. The justification for not adopting portions of NFPA 805, as set forth in these statements of consideration, satisfy the requirements of Section 12(d)(3) of Pub. L. 104-113, Office of Management and Budget (OMB) Circular A-119, and the Commission's direction in the staff requirements memorandum dated September 10, 1999.

In accordance with the National Technology Transfer and Advancement Act of 1995 and OMB Circular A-119, the NRC requested public comment during the proposed rulemaking regarding whether other national or international consensus standards could be endorsed as an alternative to NFPA 805 and no alternative standard was identified.

VII. Finding of No Significant Environmental Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that this rule is not a major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement is not required. Through its evaluation of the provisions and requirements of NFPA 805 for fire protection and prevention of radiological release, the NRC determined that there would not be any significant radiological or nonradiological impacts to the environment from implementation of the NFPA 805 fire protection program. Under NFPA 805, the environment would continue to be adequately protected because the methods used for fire detection, suppression, and mitigation are the same as those used under the existing fire protection requirements. Further, there will be no change in the release of radiological or nonradiological effluents to the environment from those releases expected under existing fire protection programs.

This determination is based on an evaluation of the goals, objectives, and performance criteria in NFPA 805. These criteria provide for defense-in-depth to control fires; control of plant reactivity, coolant inventory, and pressure; decay heat removal; vital auxiliaries; and process

monitoring to minimize radioactive releases. The NRC has determined that the environmental impacts of the proposed action, the no-action alternative, and an alternative in which the NRC would develop its own risk-informed standard, were similar. Further, the NRC determined that the proposed action does not involve the use of any different resources than those considered in the current rule.

The NRC provided every State Liaison Officer a copy of the environmental assessment and the proposed rule for this action and requested their comments on the environmental assessment. No comments were received from the State Liaison Officers and no changes were made to the environmental assessment.

VII. Paperwork Reduction Act Statement

This final rule contains information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These requirements were approved by the Office of Management and Budget, approval number 3150-0011.

There is a one-time burden to the public of 11,290 hours for each licensee, who chooses to use NFPA 805, to complete the required one-time plant-wide re-analysis of the reactor's fire protection systems, equipment, features, and procedures, and to submit a letter of intent to adopt NFPA 805. Send comments on any aspect of these information collections, including suggestions for reducing the burden, to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail to INFOCOLLECTS@NRC.GOV; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0011), Office of Management and Budget, Washington, DC 20503.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

IX. Regulatory Analysis

The Commission has prepared a Regulatory Analysis on this regulation. The analysis examines the costs and benefits of the alternatives considered by the Commission. The analysis is available for inspection at the NRC's Public Document Room, located at One White Flint North, Room 01-F15, 11555 Rockville Pike, Rockville, Maryland. The analysis is also available as indicated under the Availability of Documents heading of the Supplementary Information section.

X. Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission certifies that this rule would not have a significant economic impact on a substantial number of small entities. This final rule would affect only the licensing and operation of nuclear power plants. The companies that own these plants do not fall within the definition of "small entities" found in the Regulatory Flexibility Act or within the size standards established by the NRC in 10 CFR 2.810.

XI. Backfit Analysis

The NRC has determined that a backfit analysis is not required for this final rule, because the rule does not involve any provisions that would impose backfits as defined in 10 CFR 50.109(a)(1). The final rule establishes voluntary alternative fire protection requirements for licensees with construction permits prior to January 1, 1979 (all existing light-water reactor plants). Licensees may adopt NFPA 805 as an alternative set of fire

protection requirements by submitting a license amendment request. However, current licensees may continue to comply with existing requirements. Any additional burden incurred by adopting NFPA 805 would be at the licensee's discretion. The final rule does not impose any new requirements and, therefore, does not constitute a backfit as defined in 10 CFR 50.109(a)(1).

XII. Small Business Regulatory Enforcement Fairness Act

In accordance with the Small Business Regulatory Enforcement Fairness Act of 1996, the NRC has determined that this action is not a major rule and has verified this determination with the Office of Information and Regulatory Affairs of OMB.

List of Subjects in 10 CFR Part 50

Antitrust, Classified information, Criminal penalties, Fire protection, Incorporation by reference, Intergovernmental relations, Nuclear power plants and reactors, Radiation protection, Reactor siting criteria, and Reporting and recordkeeping requirements.

For the reasons given in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 552 and 553, the NRC is adopting the following amendments to 10 CFR Part 50.

PART 50 - DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

1. The authority citation for Part 50 continues to read as follows:

AUTHORITY: Secs. 102, 103, 104, 105, 161, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

Section 50.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951, (42 U.S.C. 5841) as amended by Pub. L. 102-486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851). Section 50.10

also issued under secs. 101, 185, 68 Stat. 955, as amended (42 U.S.C. 2131, 2235); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.13, 50.54(dd), and 50.103 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138). Sections 50.23, 50.35, 50.55, and 50.56 also issued under sec. 185, 68 Stat. 955 (42 U.S.C. 2235). Sections 50.33a, 50.55a and Appendix Q also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.34 and 50.54 also issued under sec. 204, 88 Stat. 1245 (42 U.S.C. 5844). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80-50.81 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Appendix F also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

2. In § 50.48, paragraph (c) is added and the introductory text of paragraph (f) is revised to read as follows:

§ 50.48. Fire protection.

* * * * *

(c) *National Fire Protection Association Standard NFPA 805.*

(1) *Approval of incorporation by reference.* National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805), which is referenced in this section, was approved for incorporation by reference by the Director of the Federal Register. Copies of NFPA 805 may be purchased from the NFPA Customer Service Department, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101 and in PDF format through the NFPA Online Catalog (www.nfpa.org) or by calling 1-800-344-3555 or 617-770-3000. Copies are also available for inspection at the NRC Library, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland 20852-2738, and at the NRC Public Document Room, Building One White Flint North, Room O1-F15, 11555 Rockville Pike, Rockville, Maryland 20852-2738. Copies are

also available at the Office of the Federal Register, 800 N. Capitol Street, Suite 700, Washington, DC.

(2) *Exceptions, modifications, and supplementation of NFPA 805.* As used in this section, references to NFPA 805 are to the 2001 Edition, with the following exceptions, modifications, and supplementation:

(i) *Life Safety Goal, Objectives, and Criteria.* The Life Safety Goal, Objectives, and Criteria of Chapter 1 are not endorsed.

(ii) *Plant Damage/Business Interruption Goal, Objectives, and Criteria.* The Plant Damage/Business Interruption Goal, Objectives, and Criteria of Chapter 1 are not endorsed.

(iii) *Use of feed-and-bleed.* In demonstrating compliance with the performance criteria of Sections 1.5.1(b) and (c), a high-pressure charging/injection pump coupled with the pressurizer power-operated relief valves (PORVs) as the sole fire-protected safe shutdown path for maintaining reactor coolant inventory, pressure control, and decay heat removal capability (i.e., feed-and-bleed) for pressurized-water reactors (PWRs) is not permitted.

(iv) *Uncertainty analysis.* An uncertainty analysis performed in accordance with Section 2.7.3.5 is not required to support deterministic approach calculations.

(v) *Existing cables.* In lieu of installing cables meeting flame propagation tests as required by Section 3.3.5.3, a flame-retardant coating may be applied to the electric cables, or an automatic fixed fire suppression system may be installed to provide an equivalent level of protection. In addition, the italicized exception to Section 3.3.5.3 is not endorsed.

(vi) *Water supply and distribution.* The italicized exception to Section 3.6.4 is not endorsed. Licensees who wish to use the exception to Section 3.6.4 must submit a request for a license amendment in accordance with paragraph (c)(2)(vii) of this section.

(vii) *Performance-based methods.* Notwithstanding the prohibition in Section 3.1 against the use of performance-based methods, the fire protection program elements and

minimum design requirements of Chapter 3 may be subject to the performance-based methods permitted elsewhere in the standard. Licensees who wish to use performance-based methods for these fire protection program elements and minimum design requirements shall submit a request in the form of an application for license amendment under § 50.90. The Director of the Office of Nuclear Reactor Regulation, or a designee of the Director, may approve the application if the Director or designee determines that the performance-based approach;

(A) Satisfies the performance goals, performance objectives, and performance criteria specified in NFPA 805 related to nuclear safety and radiological release;

(B) Maintains safety margins; and

(C) Maintains fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire safe shutdown capability).

(3) *Compliance with NFPA 805.*

(i) A licensee may maintain a fire protection program that complies with NFPA 805 as an alternative to complying with paragraph (b) of this section for plants licensed to operate before January 1, 1979, or the fire protection license conditions for plants licensed to operate after January 1, 1979. The licensee shall submit a request to comply with NFPA 805 in the form of an application for license amendment under § 50.90. The application must identify any orders and license conditions that must be revised or superseded, and contain any necessary revisions to the plant's technical specifications and the bases thereof. The Director of the Office of Nuclear Reactor Regulation, or a designee of the Director, may approve the application if the Director or designee determines that the licensee has identified orders, license conditions, and the technical specifications that must be revised or superseded, and that any necessary revisions are adequate. Any approval by the Director or the designee must be in the form of a license amendment approving the use of NFPA 805 together with any necessary revisions to the technical specifications.

(ii) The licensee shall complete its implementation of the methodology in Chapter 2 of NFPA 805 (including all required evaluations and analyses) and, upon completion, modify the fire protection plan required by paragraph (a) of this section to reflect the licensee's decision to comply with NFPA 805, before changing its fire protection program or nuclear power plant as permitted by NFPA 805.

(4) *Risk-informed or performance-based alternatives to compliance with NFPA 805.* A licensee may submit a request to use risk-informed or performance-based alternatives to compliance with NFPA 805. The request must be in the form of an application for license amendment under § 50.90 of this chapter. The Director of the Office of Nuclear Reactor Regulation, or designee of the Director, may approve the application if the Director or designee determines that the proposed alternatives:

- (i) Satisfy the performance goals, performance objectives, and performance criteria specified in NFPA 805 related to nuclear safety and radiological release;
- (ii) Maintain safety margins; and
- (iii) Maintain fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire safe shutdown capability).

* * * * *

(f) Licensees that have submitted the certifications required under § 50.82(a)(1) shall maintain a fire protection program to address the potential for fires that could cause the release or spread of radioactive materials (i.e., that could result in a radiological hazard). A fire protection program that complies with NFPA 805 shall be deemed to be acceptable for complying with the requirements of this paragraph.

* * * * *

Dated at Rockville, Maryland, this __th day of _____, 2004.

For the Nuclear Regulatory Commission.

Annette Vietti-Cook

Secretary of the Commission.

ATTACHMENT 2
REGULATORY ANALYSIS

REGULATORY ANALYSIS

REVISION TO 10 CFR 50.48, "FIRE PROTECTION"

1. Action

The U.S. Nuclear Regulatory Commission (NRC) is amending the fire protection requirements for nuclear power reactors in 10 CFR 50.48. The final rule gives holders of operating licenses for light-water reactors the option to voluntarily adopt the set of fire protection requirements contained in the national consensus standard promulgated by the National Fire Protection Association (NFPA), "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805), as an alternative to the existing fire protection requirements of 10 CFR 50.48(b), or existing fire protection license conditions or technical specifications. The final rule also allows for a fire protection program that complies with the fire protection requirements of NFPA 805 to be acceptable for decommissioning plants to comply with the requirements of 10 CFR 50.48(f).

2. Statement of the Problem

Holders of operating licenses for light water reactor are currently required to comply with 10 CFR 50.48, which in turn requires licensees to comply with GDC 3 and either the fire protection requirements of Appendix R to 10 CFR Part 50, or licensing conditions and technical specifications developed for the given facility on the basis of similar requirements contained in the NRC's Standard Review Plan (NUREG-0800). All light water reactor licensees are required to comply with 10 CFR 50.48(f) when permanently ceasing operations (i.e. submitted a written certification to the NRC in accordance with 10 CFR 50.82(a)(1)). The current deterministic fire protection requirements are prescriptive in nature. Licensees have requested and received more than 900 exemptions to those requirements. The processing of these exemption requests has placed a significant burden on the resources of the NRC.

Instead of the prescriptive, deterministic requirements in Appendix R, or NRC staff reviews under NUREG-0800, the final rule establishes an alternative, less burdensome regulatory structure for fire protection. The final rule permits licensees to voluntarily adopt NFPA 805, which would give licensees the option to use a performance-based and risk-informed approach to change the fire protection configurations and procedures of their light water reactor electric generating plants. This alternative regulatory structure will likely reduce the number of future licensee exemption or deviation requests related to fire protection changes in licensed reactor facilities, and permits licensees to apply acceptable analytical methods and approaches to establish and/or change reactor plant configurations and procedures to meet the performance objectives of NFPA 805.

3. Objectives

This amendment has the following objectives:

- (1) Provide licensees with a set of performance-based and risk-informed fire protection requirements for changing the fire protection configurations of light water reactor electric generating plants.
- (2) Comply with the Commission's direction to increase industry involvement by working with industry in the development of NFPA 805, 2001 Edition, in the regulation of nuclear

power reactors in accordance with the Commission's Direction Setting Issue (DSI) 13, "The Role of Industry."

- (3) Reduce the number of exemption or deviation requests to the requirements in 10 CFR 50.48, 10 CFR Part 50, Appendix R, fire protection technical specifications, license conditions, and orders.
- (4) Achieve a main technology transfer goal of Public Law 104-113, "National Technology Advancement and Transfer Act of 1995."

4. Backfit Rule Considerations

The NRC assessed the action for backfit considerations and determined that the final rule does not include any backfits as defined in 10 CFR 50.109(a)(1). Licensees are permitted, on a voluntary basis, to adopt NFPA 805, as excepted, as an alternative set of fire protection requirements. Alternatively, licensees may continue to comply with existing fire protection requirements. These licensees would not need to take any action as a result of the rule change.

5. Alternatives

Three alternatives were considered:

Alternative 1 - Make no change to 10 CFR 50.48.

This is the no-action option (the status quo). It results in licensees continuing to submit requests for exemptions or deviations, with the NRC conducting reviews of the exemption or deviation requests. It results in no incremental change in costs or benefits to licensees or the NRC. It is the base case used to compare costs and benefits of the other alternatives.

Alternative 2 - Approve NFPA 805, a national consensus standard, as an acceptable alternative to the requirements in 10 CFR 50.48 (b) and (f).

Licensees choosing to use the flexibilities provided by the rulemaking could use risk-informed and performance-based approaches and methods in NFPA 805 rather than submitting an exemption or deviation request each time they wish to depart from current requirements. By using the inherent flexibility of a performance-based regulatory approach, licensees may reduce costs over the lifetime of the plant.

It is difficult to estimate the cost benefits for licensees that implement NFPA 805 and acceptable fire protection approaches because the cost benefits depend on the number of licensees adopting NFPA 805, the cost-benefit of the fire protection approaches, and the number of years that the licensees would derive benefits. Discussions with industry representatives indicate that the cost benefits expected from implementing the rule would be sufficient to cause 20 to 25 licensees to adopt the NFPA 805 regulatory structure. Because the rule change applies to decommissioned plants as well as operating plants, the benefits derived from the rule change would also extend to reactor plants permanently ceasing operations who choose to implement a fire protection program that complies with NFPA 805.

Alternative 3 - Develop a separate NRC fire protection standard.

In this case, the expected outcome would be similar to or the same as allowing licensees to adopt NFPA 805 (Alternative 2). This is because (1) the basic principles that the NRC would use to develop a separate standard are the same as those principles used to develop NFPA 805, and (2) the NRC staff participated in the development of NFPA 805, and the logical processes and technical considerations used in the development of an NRC-developed approach would, therefore, likely result in a standard with requirements similar to those in NFPA 805. This approach would likely be inconsistent with the requirements of the National Technology Advancement and Transfer Act of 1995. This approach would also require an additional expenditure of NRC resources, as well as additional time to develop the NRC standard.

6. Estimated Consequences

Alternative 1 - Make no change to 10 CFR 50.48.

This is the status quo, for which there are no incremental costs or benefits.

Alternative 2 - Approve NFPA 805, a national consensus standard, as an acceptable alternative to the requirements in 10 CFR 50.48(b) and (f).

Each licensee choosing to implement the NFPA 805 fire protection requirements would have to conduct a one-time, plant-wide analysis of its fire protection systems, fire barriers, equipment, features, and procedures to establish that they meet the newly adopted standard. The costs of this analysis are estimated to be about \$1.68M for each facility that adopts the new standard. Recordkeeping requirements under NFPA 805 are similar to existing requirements and therefore ongoing recordkeeping costs under the NFPA 805 fire protection requirement are estimated to be the same as for the existing requirements.

Fire protection systems, equipment, and features identified as no longer required will likely be abandoned in place or continued to be used if the licensee determines it beneficial to do so. A cost benefit would be the elimination of recurring operating, training, and maintenance costs related to the existence of fire protection-related systems, equipment, and features that are no longer required.

For new performance-based and risk-informed systems, equipment, features, and procedures, there will be a plant-specific, one-time cost for their establishment (which can not be estimated with any certainty), in addition to recurring operating, training, and maintenance costs. However, licensees are expected to implement such systems and features only if the licensee determines them to be cost beneficial versus costs of continuing to meet existing deterministic requirements.

A benefit of the rule change to both licensees and the NRC would be the elimination of the need for exemption requests from existing deterministic requirements.

Although the costs and benefits discussed above cannot be estimated with any certainty, the proposed rulemaking, overall, is cost-beneficial because licensees who choose to adopt the

new standard will do so when they determine that the benefits (in terms of ongoing savings) outweigh the one-time implementation costs. Licensees not adopting NFPA 805 will see no change in costs as they will continue to operate under their existing licensing basis.

Alternative 3 - Develop a separate NRC fire protection standard.

In addition to the costs and benefits discussed for Alternative 2 (above), the NRC would incur an extra cost for developing a new standard to use in lieu of NFPA 805. Further, it would take additional time to develop a separate NRC standard.

7. Decision Rationale

Of the alternatives above, Alternative 2 is considered preferable. Alternative 2 would change the rule to allow licensees to voluntarily adopt NFPA 805, as excepted, as an alternative to the fire protection requirements of Sections 50.48 (b) or existing license conditions or technical specifications, and to comply with Section 50.48(f). This proposed change is considered to be a relaxation of requirements to the extent that it would allow licensees to use risk-informed and performance-based methods that meet the goals, objectives, and performance criteria of NFPA 805, in lieu of meeting the deterministic requirements contained in Appendix R to 10 CFR Part 50 or similar requirements resulting from the license review process for reactor plants licensed after January 1, 1979. Alternative 2 provides a more flexible regulatory structure that will allow some licensees to reduce their regulatory burden without increasing the burden to licensees not adopting NFPA 805.

Because licensees will likely adopt the alternative standard for fire protection only if they determine they will realize a net reduction in regulatory burden, and because the regulatory burden of licensees not adopting the NFPA 805 standard is unchanged, Alternative 2 results in a potential reduction in regulatory burden for some licensees with no increase in regulatory burden for other licensees. This result is considered superior to the no-action alternative (Alternative 1). Alternative 3 would result in a similar state of fire protection regulation as Alternative 2, however, Alternative 3 has additional costs without additional benefits.

Alternative 2 would not be an interim measure, although it is possible that the NRC could develop another voluntary alternative or endorse another industry consensus standard should one be developed and found to be technically acceptable.

Section 7.1 through 7.4 below discuss the decision criteria and goals that the NRC considered in making this determination.

7.1 Maintain Public Health and Safety

The NRC has determined that public health and safety and the common defense and security would continue to be adequately protected under this rule. This determination is based, in part, on the goals, objectives, and performance criteria specified in Chapter 1 of NFPA 805. Those goals, objectives, and performance criteria provide for defense-in-depth to control fires; prevention of radioactive releases that adversely affect the public; and control of plant reactivity, inventory, and pressure, as well as decay heat removal, vital auxiliaries, and process monitoring.

As stated in Section 2.4.4 of NFPA 805, the plant change evaluation process must consist of an integrated assessment of the acceptability of risk, defense-in-depth, and safety margins. This approach requires engineering evaluations to assess the adequacy of the fire protection elements (e.g., combustible and ignition control, fire detection and suppression, and fire confinement) and the nuclear safety element (e.g., post-fire safe shutdown capability), to ensure that the defense-in-depth philosophy is maintained. The NFPA 805 approach also includes requirements for the application of acceptable codes and standards to assess the calculated margin between designed and qualified fire protection features versus specified nuclear safety and radioactive release performance criteria, as well as provisions for evaluating acceptable change in risk in terms of Core Damage Frequency (CDF) and Large Early Release Frequency (LERF) based on risk acceptance guidelines as presented in NRC Regulatory Guide 1.174. (For example, when the calculated risk increase is in the range of 10^{-6} per reactor year to 10^{-5} per reactor year, the increase is acceptable if it can be reasonably shown that the total CDF is less than 10^{-4} per reactor year.)

Chapters 1 and 2 of NFPA 805 specify measurable or calculable parameters and objective nuclear safety and radioactive release performance criteria; provide flexibility for the program, processes, and analytical approach; and ensure that a performance failure will not result in an immediate safety concern (through application of the fire protection defense-in-depth philosophy and the assurance of adequate safety margins). Potential performance failures are assessed in advance to determine that the licensee is capable of detecting the performance failure and that adequate time is available to take corrective actions upon detection.

In summary, the overall approach of NFPA 805 is consistent with the key principles for evaluating licensing basis changes as described in NRC Regulatory Guide 1.174. Namely, the proposed change is consistent with defense-in-depth philosophy, maintains sufficient safety margins, and, when the proposed change results in an increase in CDF or risk, the increase is small and consistent with the intent of the Commission's Safety Goal Policy Statement. Therefore, the concepts and processes in NFPA 805 comprise a risk-informed, integrated, performance-based decision making process for evaluating plant changes related to fire protection systems and features.

7.2 Reduce Unnecessary Burden

This rule would reduce the need for licensees adopting NFPA 805 to develop exemption requests targeted at obtaining relief from the existing deterministic fire protection requirements. Additionally, the increased regulatory flexibility resulting from this rule is expected to result in a net reduction in operating, training, and maintenance costs over the remaining life and decommissioning of the plants.

7.3 Increase Public Confidence

NFPA 805 reflects the most recent fire protection recommendations of the National Fire Protection Association for existing light water electric generating plants. This rule allows licensees to use risk-informed and performance-based approaches to more appropriately allocate fire protection resources on the bases of risk information, while maintaining NRC oversight of reactor fire protection configurations and licensee fire protection activities (see Section 8 below).

7.4 Increase NRC Efficiency and Effectiveness

This rule takes advantage of the involvement of the NRC staff in the development of NFPA 805, 2001 Edition, and would reduce the NRC resources needed to process exemption requests related to the existing deterministic, prescriptive fire protection requirements.

8. Implementation

The NRC will implement this change by an amendment to the current requirements in 10 CFR 50.48 to allow licensees to voluntarily adopt NFPA 805. This rule would become effective 30 days after being published.

A licensee may undertake the implementation of NFPA 805 by performing an assessment of its facility for compliance with NFPA 805, as excepted, and identifying changes and completing actions necessary to bring the facility into compliance. The rule language states that an adopting licensee must complete its implementation of the methodology in Chapter 2 of NFPA 805 (including all required evaluations and analyses) and modify the fire protection plan required by paragraph (a) of 10 CFR 50.48 to reflect the licensee's decision to comply with NFPA 805. Licensees must submit a request in the form of an application for license amendment under 10 CFR 50.90. The application must identify orders and license conditions that must be revised or superseded and contain any necessary revisions to the plant technical specifications and the bases thereof. The Director of the Office of Nuclear Reactor Regulation, or a designee of the Director, may approve the application if the Director or designee determines that the licensee has identified orders, license conditions, and the technical specifications that must be revised or superseded, and that any necessary revisions are adequate.

The NRC will inspect a licensee's compliance with NFPA 805, as excepted, as part of its normal oversight processes.

9. References

SECY-02-0132, "Proposed Rule: Revision of 10 CFR 50.48 to Permit Light-Water Reactors to Voluntarily Adopt National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805) as an Alternative Set of Risk-Informed, Performance-Based Fire Protection Requirements," dated July 15, 2002.

SECY-98-0058, "Development of a Risk-Informed, Performance-Based Regulation for Fire Protection at Nuclear Power Plants," dated March 26, 1998.

U.S. Code of Federal Regulations (CFR), Title 10, Section 50.48, "Fire protection," 65 FR 38190, June 20, 2000.

U.S. Code of Federal Regulations (CFR), Title 10, Section 50.90, "Application for Amendment of License or Construction Permit."

U.S. Code of Federal Regulations (CFR), Title 10, Part 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979."

U.S. Nuclear Regulatory Commission, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," NUREG-0800, 1987.

U.S. Nuclear Regulatory Commission, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission, NUREG/BR-0058, Revision 3, June 2000,

U.S. Nuclear Regulatory Commission, "Regulatory Analysis Technical Evaluation Handbook," NUREG/BR-0184, Final Report, January 1997.

Office of Management and Budget, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities," OMB Circular NO. A-119, Revised, February 10, 1998.

National Fire Protection Association (NFPA), Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition," NFPA, Quincy, MA.

ATTACHMENT 3
ENVIRONMENTAL ASSESSMENT

**ENVIRONMENTAL ASSESSMENT AND FINDING OF
NO SIGNIFICANT IMPACT
FINAL RULE 10.CFR50.48**

The U.S. Nuclear Regulatory Commission (NRC) has evaluated the environmental impacts of a final rule revision to 10 CFR 50.48, "Fire protection" and determined that there is no significant environmental impact. In accordance with 10 CFR 51.21, the NRC prepared this environmental assessment documenting its finding of no significant impact.

ENVIRONMENTAL ASSESSMENT

Identification of the Rule Action

The rule action permits nuclear power reactor licensees to voluntarily adopt the fire protection requirements contained in the national consensus standard promulgated by the National Fire Protection Association (NFPA) in Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805), with certain exceptions, as an alternative to the existing operating and/or decommissioning fire protection requirements of 10 CFR 50.48(b), existing license conditions or technical specifications, and 10 CFR 50.48(f).

The Need for the Rule Action

The rule action is needed to implement the Commission's goals of increasing regulatory efficiency and effectiveness, increasing public confidence, maintain safety, and reduce unnecessary regulatory burden. The rule action takes advantage of the knowledge and expertise of the NFPA, NRC, and industry by endorsing a national consensus standard which is in accordance with Public Law 104-113, "National Technology Advancement and Transfer Act of 1995."

Environmental Impacts of the Rule Action

Under NFPA 805, the environment would continue to be adequately protected because the methods used for fire detection, suppression, and mitigation are the same as those used under the existing fire protection requirements. Further there will be no change in the release of radiological or nonradiological effluents to the environment. This determination is based on the goals, objectives and performance criteria specified in Chapter 1 of NFPA 805 which provide for defense-in-depth to control fires; prevention of radioactive releases; and control of plant reactivity, inventory, and pressure, decay heat removal, vital auxiliaries, and process monitoring.

The rule action (incorporating by reference NFPA 805 into 10 CFR 50.48) will not have a significant radiological environmental impact for the following reasons:

- (1) The alternative set of fire-protection requirements will not significantly increase the probability or consequences of an accident, because fire events will continue to be

quickly detected and suppressed, and post-fire safe shutdown capability will remain available during and after fire events.

- (2) The alternative set of fire-protection requirements will not alter the types or quantities of radiological effluents, because the existence of any new fire protection systems, equipment, features, or procedures will not change the current radiological effluent production and flowpaths.
- (3) The alternative set of fire protection requirements will not significantly increase occupational or public radiation exposure because fire events will continue to be detected and suppressed, and post-fire safe shutdown capability will remain available during and after fire events.

The NRC also concludes that the rule action will not have a significant nonradiological impact for the following reasons:

- (1) The alternative set of fire-protection requirements does not have the potential to affect any historic sites because fire events will continue to be detected and suppressed, and post-fire safe shutdown capability will remain available during and after fire events.
- (2) The alternative set of fire-protection requirements will not significantly alter the types or quantities of nonradiological plant effluents because the existence of any new fire protection systems, equipment, features, or procedures will not change the current nonradiological effluent production and flowpaths.
- (3) The alternative set of fire-protection requirements will not significantly disrupt the environment because NFPA 805 requires that the public, plant personnel, and the environment be protected from the effects of a plant fire. As described in NFPA 805, fire protection is based on fire-protection defense-in-depth and requires that fire prevention, detection, control, suppression, and mitigation of consequences be provided. These actions, as detailed further in NFPA 805, are considered adequate to protect the environment from a significant nonradiological impact.

Accordingly, the NRC concludes that the rule action will not have any significant radiological or nonradiological environmental impacts.

Environmental Impacts of Alternatives to the Rule Action

The NRC considered the no-action alternative. Maintaining the status quo (not revising 10 CFR 50.48 to incorporate by reference NFPA 805) would result in no change in the current environmental impacts. The environmental impacts of the rule action would be similar to those associated with the no-action alternative because the methods for fire detection, suppression, and mitigation will not change significantly. Further, the goals, objectives, and performance criteria for defense-in-depth to control fires, plant reactivity, inventory, and pressure, decay heat removal, vital auxiliaries, and process monitoring to minimize the probability of radioactive releases to the environment is the same for both alternatives.

The NRC also considered the alternative of developing its own risk-informed standard. However, because the principles used to develop such a standard, as well as the expected outcomes, would be similar to those associated with NFPA 805, the NRC considers the environmental impact of that approach to be the same as that of the rule action.

Alternative Use of Resources

This action does not involve the use of any resources (i.e., land, water, or other physical materials) other than those considered in the current rule.

Agencies and Persons Consulted

The NRC sent a copy of the environmental assessment for the proposed rule to every State Liaison Officer and requested their comments on the environmental assessment. No comments were received.

FINDING OF NO SIGNIFICANT IMPACT

In accordance with the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, the NRC has determined that this rule would not constitute a major Federal action that significantly affects the quality of the human environment; therefore, an environmental impact statement is not required.

ATTACHMENT 4

REVISION OF ENFORCEMENT POLICY

NUCLEAR REGULATORY COMMISSION

[NUREG - 1600]

NRC Enforcement Policy

AGENCY: Nuclear Regulatory Commission.

ACTION: Policy statement: revision.

SUMMARY: The Nuclear Regulatory Commission (NRC) is revising its General Statement of Policy and Procedure for NRC Enforcement Actions (NUREG-1600) (Enforcement Policy or Policy) to include an interim enforcement policy regarding enforcement discretion for certain issues involving fire protection programs at operating nuclear power plants.

DATES: This revision is effective **[insert date 30 days after publication in the *Federal Register*]**. Comments on this revision to the Enforcement Policy may be submitted on or before **[insert date 30 days after publication in the *Federal Register*]**.

ADDRESSES: Submit written comments to: Michael T. Lesar, Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, Mail Stop: T6D59, U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Hand deliver comments to: 11555 Rockville Pike, Rockville, Maryland, between 7:30 a.m. and 4:15 p.m., Federal workdays. Copies of comments received may be examined at the NRC Public Document

Room, Room O1F21, 11555 Rockville Pike, Rockville, MD. You may also email comments to nrcprep@nrc.gov.

The NRC maintains the current Enforcement Policy on its Web site at <http://www.nrc.gov>, select **What We Do, Enforcement**, then **Enforcement Policy**.

FOR FURTHER INFORMATION CONTACT: Joseph Birmingham, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, (301) 415-2829, e-mail (JLB4@nrc.gov) or Renée Pedersen, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, (301) 415-2742, e-mail (RMP@nrc.gov).

SUPPLEMENTARY INFORMATION:

In a separate action published in today's *Federal Register*, the NRC is revising its regulations in 10 CFR 50.48 governing fire protection at operating nuclear power plants. The revision adds a new paragraph (c) to §50.48 that allows reactor licensees to voluntarily comply with the risk-informed, performance-based fire protection approaches in National Fire Protection Association (NFPA) Standard 805 (NFPA 805), "Performance-based Standard For Fire Protection For Light Water Reactor Electric Generating Plants," 2001 Edition (with limited exceptions stated in the rule language), as an alternative to complying with §50.48(b) or the requirements in their fire protection license conditions.

As part of the transition to 10 CFR 50.48(c), licensees will establish the fundamental fire protection program identified in NFPA 805. Licensees will perform a plant-wide assessment to

identify fire areas and fire hazards and evaluate compliance with their existing fire protection licensing basis. This fire protection assessment is beyond the normal licensee review of their fire protection program.

During the assessment process, licensees may identify noncompliances with their existing fire protection licensing basis which must be evaluated to restore compliance with the existing plant requirements or to establish compliance with a performance-based approach under NFPA 805. These noncompliances would normally be identified by the licensee as part of the above fire protection assessment, entered into the licensee's corrective action program, and dispositioned for corrective action, including any compensatory measures. The NRC believes it is appropriate to provide incentives for licensees initiating efforts to identify and correct subtle violations that are not likely to be identified by routine efforts. Therefore, the NRC is issuing an interim policy that provides enforcement discretion for certain fire protection noncompliances identified as part of the transition to 10 CFR 50.48(c).

For those noncompliances discussed above, the enforcement discretion period would begin upon receipt of a letter of intent from the licensee stating their intention to adopt the risk-informed, performance-based fire protection program under 10 CFR 50.48(c) and providing a schedule for the transition to 10 CFR 50.48(c). The enforcement discretion period would be in effect for up to two years under the letter of intent and, if the licensee submits a license amendment request to complete the transition to 10 CFR 50.48(c), will continue until the NRC approval of the license amendment request is completed.

If the licensee decides not to complete its transition to 10 CFR 50.48(c), the licensee must submit a letter stating their intention to retain their existing license basis and withdrawing their letter of intent. Enforcement discretion would be provided for those violations that were identified under the letter of intent to transition to NFPA 805 provided those violations are resolved under the existing licensing basis and meet the criteria included in this policy for these violations. Violations identified after the date of the withdrawal letter will be dispositioned in accordance with normal enforcement practices.

Additionally, licensees who plan to comply with 10 CFR 50.48(c) may have existing identified noncompliances which could reasonably be corrected under 10 CFR 50.48(c). For these noncompliances, the NRC is providing enforcement discretion for the implementation of corrective action so that those noncompliances may be corrected in accordance with the requirements of 10 CFR 50.48(c). Those noncompliances must be entered into the licensee's corrective action program, must not be associated with findings that the Reactor Oversight Process Significance Determination Process would evaluate as Red, or would not be categorized at Severity Level I, and appropriate compensatory measures have been taken. To prevent undue delay in either restoring these existing noncompliances to 10 CFR 50.48(b) (and any other requirements in fire protection license conditions) or establishing compliance to 10 CFR 50.48(c), the letter of intent must be submitted within 6 months of the effective date of the final rule amending 10 CFR 50.48.

This interim enforcement discretion policy is consistent with the long-standing policy included in Section VII.B.3, "Violations Involving Old Design Issues," of the Enforcement Policy addressing discretion when licensees voluntarily undertake a comprehensive review and assessment. This exercise of discretion provides appropriate incentives for licensees initiating

efforts to identify and correct subtle violations that are not likely to be identified by routine efforts.

However, the NRC may take enforcement action when a violation that is associated with a finding of high safety significance is identified. The staff intends to normally rely on the licensee's risk assessment of an issue when making a decision on whether to exercise enforcement discretion under this policy.

Accordingly, the proposed revision to the NRC Enforcement Policy reads as follows:

GENERAL STATEMENT OF POLICY AND PROCEDURE FOR NRC ENFORCEMENT
ACTIONS

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INTERIM ENFORCEMENT POLICIES

Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fitness-for-Duty Issues (10 CFR Part 26)

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Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48)

This section sets forth the interim enforcement policy that the NRC will follow to exercise enforcement discretion for certain violations of requirements in 10 CFR 50.48, Fire protection (or fire protection license conditions) that are identified as a result of the transition to a new risk-informed, performance-based fire protection approach included in paragraph (c) of 10 CFR 50.48 and for certain existing identified noncompliances that reasonably may be resolved by compliance with 10 CFR 50.48(c). Paragraph (c) allows reactor licensees to voluntarily comply with the risk-informed, performance-based fire protection approaches in National Fire Protection Association (NFPA) Standard 805 (NFPA 805), "Performance-Based Standard For Fire Protection For Light Water Reactor Electric Generating Plants," 2001 Edition (with limited exceptions stated in the rule language).

For those noncompliances identified during the licensee's transition process, this enforcement discretion policy will be in effect for up to two years from the date of a licensee's letter of intent to adopt the requirements in 10 CFR 50.48(c) and will continue to be in place until NRC approval of the license amendment request to transition to 10 CFR 50.48(c). This discretion policy may be extended upon a request from the licensee with adequate justification.

If, after submitting the letter of intent to comply with 10 CFR 50.48(c) and before submitting the license amendment request, the licensee determines not to complete the transition to 10 CFR 50.48(c), the licensee must submit a letter stating their intent to retain their existing license basis and withdrawing their letter of intent to comply with 10 CFR 50.48(c). Any violations identified prior to the date of the above withdrawal letter will be eligible for discretion, provided they are resolved under the existing licensing basis and meet the criteria included in

this policy for these violations. Violations identified after the date of the above withdrawal letter will be dispositioned in accordance with normal enforcement practices.

A. Noncompliances identified during the licensee's transition process

Under this interim enforcement policy, enforcement action normally will not be taken for a violation of 10 CFR 50.48(b) (or the requirements in a fire protection license condition) involving a problem such as in engineering, design, implementing procedures, or installation, if the violation is documented in an inspection report and it meets all of the following criteria:

- (1) It was licensee-identified as a result of its voluntary initiative to adopt the risk-informed, performance-based fire protection program included under 10 CFR 50.48(c) or, if the NRC identifies the violation, it was likely in the NRC staff's view that the licensee would have identified the violation in light of the defined scope, thoroughness, and schedule of the licensee's transition to 10 CFR 50.48(c) provided the schedule reasonably provides for completion of the transition within two years of the date of the licensee's letter of intent to implement 10 CFR 50.48(c) or other period granted by NRC;
- (2) It was corrected or will be corrected as a result of completing the transition to 10 CFR 50.48(c). Also, immediate corrective action and/or compensatory measures are taken within a reasonable time commensurate with the risk significance of the issue following identification (this action should involve expanding the initiative, as necessary, to identify other issues caused by similar root causes);

- (3) It was not likely to have been previously identified by routine licensee efforts such as normal surveillance or quality assurance (QA) activities; and
- (4) It was not willful.

The NRC may take enforcement action when these conditions are not met or when a violation that is associated with a finding of high safety significance is identified.

While the NRC may exercise discretion for violations meeting the required criteria where the licensee failed to make a required report to the NRC, a separate enforcement action will normally be issued for the licensee's failure to make a required report.

B. Existing identified noncompliances

In addition, licensees may have existing identified noncompliances that could reasonably be corrected under 10 CFR 50.48(c). For these noncompliances, the NRC is providing enforcement discretion for the implementation of corrective actions until the licensee has transitioned to 10 CFR 50.48(c) provided that the noncompliances meet all of the following criteria:

- (1) The licensee has entered the noncompliance into their corrective action program and implemented appropriate compensatory measures,

- (2) The noncompliance is not associated with a finding that the Reactor Oversight Process Significance Determination Process would evaluate as Red, or it would not be categorized at Severity Level I, and

- (3) The licensee submits a letter of intent within 6 months of the effective date of the final rule stating their intent to transition to 10 CFR 50.48(c).

After the 6 month period described in (3) above, this enforcement discretion for implementation of corrective actions for existing identified noncompliances will not be available and the requirements of 10 CFR 50.48(b) (and any other requirements in fire protection license conditions) will be enforced in accordance with normal enforcement practices.

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Dated at Rockville, Maryland, this ____th day of _____, 2004.

For the Nuclear Regulatory Commission.

Annette Vietti-Cook

Secretary of the Commission.