

January 13, 2000

FOR: The Commissioners
FROM: William D. Travers /RA/
Executive Director for Operations
SUBJECT: RULEMAKING PLAN, REACTOR FIRE PROTECTION RISK-INFORMED, PERFORMANCE-BASED RULEMAKING (WITS ITEM 199900032)

- [PURPOSE:](#)
- [BACKGROUND:](#)
- [DISCUSSION:](#)
- [RESOURCES:](#)
- [COORDINATION:](#)
- [RECOMMENDATION:](#)

PURPOSE:

To obtain Commission approval of the rulemaking plan for the reactor fire protection risk-informed, performance-based rulemaking. This rulemaking plan responds to the staff requirements memorandum ([SRM](#)) dated June 24, 1999, which directed the staff to provide its closure plan for the risk-informed, performance-based reactor fire protection rulemaking.

BACKGROUND:

On June 7, 1999, the staff submitted [SECY-99-152](#), "Status of Reactor Fire Protection Projects," to inform the Commission about the status of National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants." 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 that the fire protection rulemaking be deferred and 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. This standard, if successfully developed, could be endorsed by the staff in a future rulemaking as an alternate method of meeting the NRC's fire protection requirements. In the [SRM](#) dated June 30, 1998, the Commission approved the staff's proposal.

DISCUSSION:

There has been substantial progress on the development of the standard since the last status report sent to the Commission in [SECY-99-152](#). The technical committee working on the development of NFPA 805 has completed its revision of the standard based on the proposals received on the working draft that was issued for public review in October 1998. NFPA expects to publish the revised standard for public comment in January 2000. This public comment period will close on March 31, 2000. The technical committee will meet in May and June 2000 to consider the public comments and revise the standard as necessary. The final report of the technical committee is scheduled to be published in September 2000 and the NFPA general membership will vote on it in November 2000. If approved by the NFPA membership and the NFPA Standards Council, NFPA will publish the standard for public use in March 2001.

Following the issuance of NFPA 805 for public use, the staff will review the standard and if found acceptable would submit a final rule and its accompanying regulatory guide for Commission approval adopting the standard as an alternative to the NRC's existing fire protection requirements in March 2002. The staff's rulemaking plan is attached.

RESOURCES:

NRR currently has 1 FTE budgeted for FY 2000 as well as 0.5 FTE budgeted for FY 2001 and 0.5 FTE budgeted for FY 2002 for the rulemaking. Program funds of \$150K are also budgeted to support the completion of NFPA 805 and the supporting rulemaking in FY 2000. Any additional resources required to complete the rulemaking will be factored into the budget process.

COORDINATION:

The Office of the General Counsel has reviewed this Commission paper and has no legal objections.

The Office of the Chief Financial Officer has reviewed this Commission paper for resource implications and has no objections.

The Office of the Chief Information Officer (OCIO) has reviewed the rulemaking plan for information technology and information management implications and concurs in it. However, the plan suggests changes in information collection requirements that must be submitted to the Office of Management at the same time the proposed rule is forwarded to the Federal Register for publication.

The staff has sent a copy of this paper to the ACRS for information.

RECOMMENDATION:

That the Commission note, unless directed otherwise, that the staff plans to implement the rulemaking plan to revise [10 CFR 50.48](#) within 10 days of the date of this paper. We consider this action within the delegated authority of the Executive Director for Operations.

/RA/

William D. Travers
Executive Director for Operations

CONTACT: Ed Connell, SPLB/DSSA/NRR
301-415-2838

Attachment: [Rulemaking Plan](#)

ATTACHMENT

Rulemaking Plan

10 CFR 50.48

Reactor Fire Protection Risk-Informed, Performance-Based Rulemaking

- [Regulatory Issue](#)
- [Existing Regulatory Framework](#)
- [Rulemaking Options/Alternatives](#)
- [Impact on Licensees](#)
- [Benefits](#)
- [Office of General Counsel \(OGC\) Legal Analysis](#)
- [Supporting Documents Needed](#)
- [Issuance](#)
- [Management Steering Group](#)
- [Public/Industry Participation](#)

Regulatory Issue

To revise the NRC's existing deterministic fire protection regulations to endorse a risk-informed, performance-based consensus standard, National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," as a voluntary alternative to the NRC's existing fire protection requirements. The staff recommended this approach in SECY-98-058, "Development of a Risk-Informed, Performance-Based Regulation for Fire Protection at Nuclear Power Plants," dated March 26, 1998, and the Commission approved it in the staff requirements memorandum (SRM) of June 30, 1998.

Existing Regulatory Framework

The NRC's existing fire protection requirements are derived from General Design Criterion 3, "Fire protection," of Appendix A to 10 CFR Part 50, 10 CFR 50.48, "Fire protection," and for plants operating before January 1, 1979, certain provisions of Appendix R to 10 CFR Part 50. For those plants to which certain provisions of Appendix R apply, the staff has granted approximately 900 exemptions from the technical requirements specified in Appendix R where the licensee submitted for staff review and approval a technical evaluation demonstrating that an alternate fire protection approach satisfied the underlying purpose of Appendix R. Initially, exemptions were granted under the provisions of 10 CFR 50.48(c)(6). Exemptions requested after the licensee's initial implementation period for Appendix R have been reviewed in accordance with the provisions specified in 10 CFR 50.12.

Rulemaking Options/Alternatives

The Commission approved the approach presented in this rulemaking plan in the SRM dated June 30, 1998, and did not object to the staff's proposal in the SRM dated June 24, 1999. Therefore, no rulemaking options or alternatives are included in this plan.

Impact on Licensees

As stated in SECY-98-058, if the NRC determines that the NFPA standard, when completed, is acceptable for meeting NRC fire protection requirements, licensees may adopt the standard voluntarily, and any additional burden associated with the adoption of the standard will be at their choice. The staff expects that additional analysis, beyond that currently documented by licensees, will be required by licensees that choose to adopt NFPA Standard 805. The level of effort required for each plant will

depend upon the degree to which risk-informed and performance-based approaches are adopted over the plant's existing deterministic approaches.

Benefits

The current fire protection requirements were developed before the staff or the industry had the benefit of probabilistic risk assessments (PRAs) for fires and before there was a significant body of operating experience. As stated in SECY-93-143, "Report on the Re-assessment of the NRC Fire Protection Program," a revised 10 CFR 50.48 could accomplish the following:

(1) establish a more reactor-safety-oriented fire protection rule; (2) add appropriate flexibility in some areas; (3) eliminate the potential for confusion; (4) better cover shutdown conditions; and (5) codify the appropriate role and limitations of fire watches. In addition, as discussed in SECY-96-134, "Options for Pursuing Regulatory Improvement in Fire Protection Regulations for Nuclear Power Plants," dated June 21, 1996, a revised fire protection rule that would allow flexibility and facilitate the use of alternate approaches to meet the fire safety objectives may reduce the need for exemptions.

As discussed in SECY-98-058, the NRC's adoption of the NFPA standard is consistent with (1) the Commission's policy specified in Direction Setting Issue (DSI) 13, "The Role of Industry"; (2) Office of Management and Budget Circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities"; and (3) Public Law 104-113, "National Technology Transfer Act of 1995." These encourage the U.S. Government's adoption of national consensus standards to carry out its policy objectives or activities.

Office of General Counsel (OGC) Legal Analysis

The proposed rule would endorse the NFPA Standard 805 as an alternative fire protection requirement for nuclear power plants. The proposed rule would provide nuclear power plant licensees the option of complying with either the existing fire protection requirements in 10 CFR § 50.48 and 10 CFR Part 50, Appendix R, or the alternative requirements in NFPA Standard 805. We note that while the staff proposes to endorse an industry-developed consensus standard, the agency bears the burden of justifying in the statement of consideration for the rule the technical acceptability of NFPA Standard 805. The rulemaking language should include specific provisions how each licensee who chooses to voluntarily comply with NFPA Standard 805 will document its decision in a legally-enforceable manner. In addition, the statement of considerations (SOC) and, if necessary the rulemaking language itself, should address: (i) whether the fire protection plan and/or procedures which *initially implement* NFPA Standard 805 at each plant must be submitted to the NRC for review and approval, or (ii) whether licensees are free to *amend* their fire protection plan and procedures implementing NFPA Standard 805 without NRC review and approval and if so, whether the NRC intends to set forth criteria for such licensee-initiated changes.

The NRC will have to obtain the approval of the Office of the Federal Register (OFR) for incorporation by reference of NFPA Standard 805 into the Commission's regulations. ⁽¹⁾ OGC does not anticipate any significant issues being raised by OFR in connection with their review of the incorporation by reference of NFPA Standard 805.

The proposed rule will require preparation of an environmental assessment, as it appears that there are no categorical exclusions in 10 CFR § 51.22(c) which would apply to this rulemaking.

We do not believe that the proposed rule will constitute a backfit as defined in 10 CFR § 50.109(a)(1). This is because the rule would provide a voluntary alternative to nuclear power plant licensees who wish to comply with NFPA Standard 805. ⁽²⁾ Attention must be given to ensuring that licensees choosing not to change their fire protection programs may continue to comply with their current licensing basis with respect to fire protection.

It is unclear whether the rule is a "major rule" under the Small Business Regulatory Enforcement Fairness Act, inasmuch as there is insufficient information provided as to whether the rule is likely to result in a \$100 million impact upon nuclear power plant licensees. If the rule is not a major rule, then the mandated 60-day period prior to effectiveness of major rules is not applicable and the normal 30-day period for effectiveness in the Administrative Procedures Act would apply.

It is also unclear whether the proposed rule will require licensees choosing the voluntary alternative to generate and maintain records related to their fire protection programs. If the proposed rulemaking involves recordkeeping and reporting requirements, review by the Office of Management and Budget for purposes of the Paperwork Reduction Act will be required.

The proposed rulemaking is consistent with the requirements of the National Technology Advancement and Transfer Act of 1995, since the proposed rule would endorse a voluntary consensus standard. Nonetheless, the notice of proposed rulemaking should contain a request for public comment regarding whether there are other voluntary consensus standards that should be considered as an alternative to NFPA Standard 805.

In conclusion, OGC has determined that there are no known bases for legal objection to the contemplated rulemaking.

Supporting Documents Needed

The schedule presented in this rulemaking plan is contingent upon the issuance of NFPA Standard 805, scheduled for March 2001, and the Commission's acceptance of the standard for providing adequate protection of the public health and safety. Staff from the Office of Nuclear Reactor Regulation and the Office of Nuclear Regulatory Research are participating on the technical committee that is developing the standard. The staff anticipates the need to develop a regulatory guide to endorse

the NFPA standard. The Nuclear Energy Institute has indicated their willingness to develop the implementing guidance on a schedule compatible with the staff's rulemaking plan. The results of the NRC fire risk research program, described in SECY-98-230, "Insights from NRC Research on Fire Protection and Related Issues," dated October 2, 1998, will be used to support both of these efforts.

A clearance package will be submitted to the Office of Management and Budget (OMB) at the same time the proposed rule is forwarded to the Federal Register for publication.

Issuance

This planned rulemaking represents a significant policy issue and we recommend that the Commission issue this rule.

Management Steering Group

None. This rulemaking effort would not be expected to benefit from the use of a steering group.

Public/Industry Participation

Any individual or an individual representing an organization has the opportunity to participate in the development of the NFPA standard in accordance with the NFPA's "Regulations Governing Committee Projects," dated October 22, 1996, and amended on November 18, 1998. In addition, the staff plans to conduct a public meeting with all interested stakeholders following the issuance of the NFPA standard. The rulemaking will also be available on the NRC's rulemaking website upon publication in the Federal Register in accordance with established NRC policy.

Resources

NRR Staff Lead: Edward A. Connell (DSSA/SPLB)

OGC Staff Contact: Geary Mizuno

Other Office Contacts: Nathan Siu (RES)
Raj Auluck (DRIP/RGEB)

Anticipated Effort: 1 FTE FY 2000
0.5 FTE FY 2001 and 2002

Program Funds Required: \$150K in FY 2000

Schedule

Public Meeting: Two months after publication of the NFPA Standard

Proposed rule to EDO, published proposed rule in Federal Register and submit OMB clearance package: Two months after the public meeting

Final rule to EDO: Eight months after publication of the proposed rule

-
1. The Office of the Federal Register's requirements for incorporation by reference are set forth at 1 CFR Part 51.
 2. Backfitting issues associated with alternative approaches for addressing fire protection were addressed in a May 27, 1998 Memorandum from Karen D. Cyr, General Counsel, to the Commission.