

RULEMAKING ISSUE NOTATION VOTE

July 15, 2002

SECY-02-0132

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: 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 (WITS 199900032)

PURPOSE:

To obtain Commission approval to publish the proposed rule.

BACKGROUND:

The National Fire Protection Association (NFPA) Standards Council approved NFPA Standard 805, "Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805) on January 13, 2001, as a performance-based American National Standard for light-water nuclear power plants. Published in February 2001, NFPA 805 describes a methodology for 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 modes of operation, as well as a methodology for establishing fire protection procedures, systems, and features for decommissioning and permanent shutdown.

CONTACT: Leon Whitney, SPLB/DSSA/NRR
301-415-3081

Current deterministic fire protection requirements seek to establish fire protection engineering margin through the post-fire survival of limited safety systems capable of safe hot and cold reactor shutdown. The current requirements were developed before the NRC staff or the industry had the benefit of probabilistic risk assessments (PRAs) for fires, and before recent advances in performance-based methods such as fire modeling. As discussed in SECY-96-134, "Options for Pursuing Regulatory Improvement in Fire Protection Regulations for Nuclear Power Plants," dated June 21, 1996, a revision to the fire protection rule which provides a voluntary alternative would facilitate licensee use of alternative approaches to meet fire safety objectives. Also, a voluntary alternative to the fire protection rule should reduce the need for exemptions, reduce unnecessary regulatory burden associated with the current deterministic approaches, and will maintain reactor safety while adding appropriate flexibility to licensees' fire protection activities.

The Commission has provided the NRC staff with guidance for identifying and assessing performance-based approaches to regulation. Specifically, the Commission's guidance includes SECY-00-0191, "High-Level Guidelines for Performance-Based Activities," dated September 1, 2000, and a Commission White Paper, titled "Risk-Informed and Performance-Based Regulation," which was issued as a Staff Requirements Memorandum to SECY-98-144, dated March 1, 1999. This guidance augments the risk-related guidance in the NRC's Probabilistic Risk Assessment (PRA) Policy Statement and Regulatory Guide 1.174, "An Approach for Using PRA in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis."

DISCUSSION:

The NRC staff cooperatively participated in the development of NFPA 805. The staff believes that, with certain exceptions noted in the proposed rule language, NFPA 805 is an acceptable approach for meeting the fire protection requirements of 10 CFR 50.48 (a). By giving licensees a regulatory option to adopt NFPA 805, as excepted, the Commission would enable licensees to focus their resources primarily on the most risk-significant fire protection equipment and activities for each reactor plant. Therefore, as discussed in SECY-98-058, "Development of a Risk-Informed, Performance-Based Regulation for Fire Protection at Nuclear Power Plants," NRC adoption of the proposed rule would be consistent with (1) the Commission's policy specified in Direction Setting Issue (DSI) 13, "The Role of Industry," (2) Public Law 104-113, "National Technology Transfer and Advancement Act of 1995;" and (3) Office of Management and Budget OMB Circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities."

The Nuclear Energy Institute (NEI) is developing an implementation guidance document for the NFPA 805 fire protection rule, which is intended to assist licensees in implementing NFPA 805 in a manner that is acceptable to the NRC. The NRC staff plans to comment on the first draft of the NEI-developed implementation guidance by August 2002. Industry peer review of NEI's second draft is planned for spring 2003, and a third draft is planned for pilot application in the second half of calendar year (CY) 2003. If the NRC staff determines that NEI's final implementation guidance document is acceptable, the staff would endorse it in a regulatory guide in early CY 2004.

Attachment 1 to this Commission paper is a draft *Federal Register* notice (FRN) concerning the proposed rulemaking, which includes the staff's proposed rule language. Paragraph 50.48(c) of the proposed rule would provide a new, risk-informed and performance-based set of fire protection requirements which a licensee may voluntarily choose to comply with in lieu of the existing fire protection requirements in 10 CFR 50.48 (b) and (f), or existing fire protection license conditions or technical specifications.

Attachment 2 to this Commission paper presents the draft regulatory analysis, which addresses (1) the level of agreement of the proposed rule with the "High-Level Guidelines for Performance-Based Activities" of SECY-00-0191; (2) the safety impact of the potential new NFPA 805-based fire protection regulation option; and (3) the technical acceptability and technical depth of NFPA 805, as excepted. In addition, the staff's regulatory analysis assesses the effect of the proposed rule revision on regulatory burden.

Lastly, Attachment 3 to this Commission paper presents the draft environmental assessment and finding of no significant environmental impact for the proposed rule revision.

RESOURCES:

The following resources are included in the proposed NRC budget to complete and implement this rulemaking through FY 2005: approximately 1 FTE in FY 2002, 1.5 FTE in FY 2003, 2.5 FTE in FY 2004, and 1.5 FTE in FY 2005.

These estimates include approximately 1 FTE in FY 2002 to complete the proposed rulemaking; 1 FTE each year in FY 2003 and FY 2004 to review and respond to public comments on the proposed rule language, to brief the Advisory Committee on Reactor Safeguards (ACRS) and the Committee to Review Generic Requirements (CRGR), and to prepare and submit a final rule package; and, assuming that licensees adopt the NFPA 805 rulemaking, an estimated 0.5 FTE each year in FY 2004 and FY 2005 to process the license amendment requests.

The staff will monitor licensee implementation of NFPA 805 as part of the regularly scheduled fire protection inspections in the Reactor Oversight Process.

Beginning in FY 2004, the NRC staff plans to develop and conduct an NFPA 805 inspector training program, and a Temporary Instruction (TI) for inspectors that will contain inspection criteria for acceptable NFPA 805 methodologies (e.g., PRA, circuit analysis and fire modeling) and the conditions under which their application is appropriate, at an estimated cost of 1 to 1.5 FTE over the two year period of FY 2004 and FY 2005. The NRC staff will also develop a regulatory guide endorsing the NEI guidance document that will establish methods acceptable to the NRC for meeting the regulation. Estimated resources to develop a draft, and final version of the regulatory guide are approximately 0.5 FTE each year in FY 2003 and FY 2004.

In addition to the resources that are currently included in the proposed NRC budget, staff has also identified the potential need for an as-yet-undetermined level of resources to review and approve specific methodologies which may be proposed by licensees to support their conduct of the NFPA 805 analytical process (in lieu of the methodologies in Appendices B, C and D of

the standard to be approved in this rulemaking). If the need for such additional, unbudgeted resources emerges, staff will address the resource requirements through the PBPM process.

COORDINATION:

The Office of the General Counsel has no legal objection to the proposed rule change. The Advisory Committee on Reactor Safeguards reviewed the proposed rule change during its meeting on June 7, 2002, and issued a letter on June 17, 2002. The Committee to Review Generic Requirements was briefed on this rulemaking during its meeting on June 11, 2002. The Office of Chief Financial Officer has reviewed this Commission paper for resource implications and has no objections.

RECOMMENDATIONS:

The staff recommends that the Commission take the following actions:

1. Approve publication in the *Federal Register* of the attached notice of proposed rulemaking (Attachment 1), allowing 75 days for public comment.
2. Certify that this proposed rule change, if promulgated, would not have a significant impact on a substantial number of small entities under the requirements of the Regulatory Flexibility Act, 5 U.S.C. 605 (b). This certification is included in the attached *Federal Register* notice.

In taking the recommended actions, the Commission should note the following:

- (1) The draft Regulatory Analysis (Attachment 2) and the draft Environmental Assessment (Attachment 3) will be available in the Public Document Room and on the NRC's rulemaking Web site: <http://ruleforum.llnl.gov/>.
- (2) The NRC staff will request comments from State Liaison Officers regarding the draft Environmental Assessment (Attachment 3).
- (3) The NRC staff will inform the U.S. Small Business Administration, Chief Counsel for Advocacy, of the Commission's certification regarding economic impact on small entities and the reasons for it, as required by the Regulatory Flexibility Act.
- (4) In accordance with the National Technology Transfer and Advancement Act of 1995, within the attached draft FRN the staff is requesting public comment on the possible existence of alternative consensus standards that could be used in addition to, or as an alternative to, NFPA 805, as excepted.
- (5) The NRC staff will distribute copies of the *Federal Register* notice to all light-water power reactor licensees and, upon request, to interested members of the public.

- (6) OMB Paperwork Reduction Act clearance will be required for the information collection requirements contained in the rule. An OMB clearance package has been provided to OCIO by the NRC staff for submission to OMB.
- (7) The NRC staff will issue a press release and will inform the appropriate Congressional committees.
- (8) The NRC staff has determined that this action would not constitute a “major rule,” as defined by the Small Business Regulatory Enforcement Fairness Act. The staff will verify this determination with the OMB before submitting the final rule for signature.

William D. Travers
Executive Director
for Operations

Attachments: 1. Draft Federal Register Notice
2. Draft Regulatory Analysis
3. Draft Environmental Assessment

- (6) OMB Paperwork Reduction Act clearance will be required for the information collection requirements contained in the rule. An OMB clearance package has been provided to OCIO by the NRC staff for submission to OMB.
- (7) The NRC staff will issue a press release and will inform the appropriate Congressional committees.
- (8) The NRC staff has determined that this action would not constitute a "major rule," as defined by the Small Business Regulatory Enforcement Fairness Act. The staff will verify this determination with the OMB before submitting the final rule for signature.

/RA/

William D. Travers
Executive Director
for Operations

Attachments: 1. Draft Federal Register Notice
2. Draft Regulatory Analysis
3. Draft Environmental Assessment

PACKAGE ACCESSION NO. ML021300046
COMMISSION PAPER ACCESSION NO. ML021300017
ATTACHMENT 1 ACCESSION NO. ML021300030
ATTACHMENT 2 ACCESSION NO. ML021300034
ATTACHMENT 3 ACCESSION NO. ML021300039

* SEE PREVIOUS CONCURRENCES

DOCUMENT NAME: G:\SPLB\SECTION C - WEISS\WHITNEY\805 COMMISSION PAPER.WPD

OFFICE	OGC	D:OA	D:OE	D:RES	CIO:OCIO
NAME	KCyr*	MSpringer*	FCongel*	AThadani*	SReiter*
DATE	06/21/02	05/23/02	06/03/02	06/04/02	06/03/02
OFFICE	CFO:OCFO	RA:RI	RA:RII	RA:RIII	RA:RIV
NAME	JFunches*	HMiller*	LReyes*	JDyer*	EMerschhoff*
DATE	05/31/02	05/23/02	05/13/02	05/29/02	05/21/02
OFFICE	D:DLPM:NRR	D:DRIP:NRR	D:DIPM:NRR	D:DE:NRR	Tech Ed
NAME	JZwolinski*	DMatthews*	BBoger*	CCasto*	PGarrity*
DATE	05/14/02	05/03/02	05/15/02	05/13/02	05/08/02
OFFICE	D:PMAS:NRR	SPLB:NRR	SPLB:NRR	BC:SPLB:NRR	D:DSSA:NRR
NAME	MCase*	LWhitney*	EWeiss*	JHannon*	GHolahan*
DATE	06/10/02	06/24/02	06/24/02	06/24/02	06/25/02
OFFICE	D:ADPT:NRR	D:NRR	DEDO:RP	EDO	
NAME	BSheron	SCollins	WKane	WTravers	
DATE	06/25/02	06/28/02	07/15/02	07/15/02	

OFFICIAL RECORD COPY