

March 28, 2002

MEMORANDUM TO: Sher Bahadur, Associate Director
Technical Support, ACRS/ACNW

FROM: John Hannon, Chief/**RA**/
Plant Systems Branch
Division of Systems Safety and Analysis
Office of Nuclear Reactor Regulation

SUBJECT: REQUEST FOR FULL ACRS COMMITTEE MEETING ON NFPA 805
FIRE PROTECTION RULEMAKING AND SUBCOMMITTEE MEETING
ON NEI 00-01 POST-FIRE SAFE-SHUTDOWN CIRCUIT ANALYSIS

The purpose of this memorandum is to request an appearance before the Full ACRS Committee in early June 2002, to discuss the Plant Systems Branch National Fire Protection Association (NFPA) Standard 805 Fire Protection Rulemaking proposed rule language, and an appearance before the ACRS Fire Protection Subcommittee to discuss NEI 00-01, an industry-developed post-fire safe shutdown/circuit analysis guidance document in late May/early June 2002.

NFPA 805 Rulemaking Background: The current deterministic fire protection requirements (10 CFR 50.48, 10 CFR 50 Appendix R and equivalent review items in NUREG 0800 ["Standard Review Plan"]) have been described by industry representatives and some members of the public as "prescriptive" and an "unnecessary regulatory burden." In the late 1990s the Commission provided the NRC staff with guidelines to identify and assess performance-based approaches to regulation (see SECY-00-0191, and a Commission White Paper, "Risk-informed and Performance-Based Regulation," issued as a Staff Requirements Memorandum (SRM) to SECY-98-144). This guidance was in addition to 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."

On January 13, 2001, the National Fire Protection Association Standards Council approved NFPA 805 "Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants", 2001 Edition as an American National Standard for light water nuclear power plants with an effective date of February 9, 2001. As stated in the standard, NFPA 805 is a performance-based standard that describes the methodology for applying performance-based requirements, fundamental fire protection program design and elements, determination of fire protection systems and features, for all phases of plant operation including decommissioning and permanent shutdown. The NRC staff had cooperatively participated in the development of NFPA 805.

CONTACTS: L. Whitney, (NFPA 805) SPLB/DSSA/NRR
301-415-3081

M. Salley, (NEI 00-01) SPLB/DSSA/NRR
301-415-2840

In the opinion of the NRC staff, with certain exceptions, NFPA 805 could serve as a risk-informed, performance-based, voluntary alternative to the fire protection requirements of 10 CFR 50.48 and 10 CFR 50, Appendix R. Therefore, the staff requested (in SECY-00-009) and received Commission approval for proceeding with a rulemaking to permit reactor licensees to adopt NFPA 805, as excepted, as a voluntary licensing basis for fire protection to replace the requirements of 10 CFR 50.48 and 10 CFR 50, Appendix R. However, licensees which choose not to change their fire protection licensing basis would continue to be subject to the requirements of 10 CFR 50.48 and 10 CFR 50, Appendix R as before.

NFPA 805 Rulemaking Schedule: As of February 3, 2002, public and industry comments on draft rulemaking language placed on the NRC's Rulemaking Forum web site (<http://ruleforum.llnl.gov>) were received. Subsequently, proposed rule language was developed. The rulemaking plan calls for proposed rule language to have received NRR Associate Director concurrence by May, 2002.

Fire Protection Circuit Analysis Background: In the late 1990's the staff noted a number of problems involving Post-Fire Safe-Shutdown circuit analyses. On July 23, 1998, the staff held a public workshop to discuss a variety of safety, technical, and regulatory matters associated with post-fire safe-shutdown circuit analysis. After further review, the staff issued Information Notice 99-17 "Problems Associated with Post-Fire Safe-Shutdown Analyses" to alert licensee of these problems. In order to help resolve this issue, NEI formed a Circuit Analysis Issue Task Force. The goal of the industry task force was to develop a risk-significance screening methodology for addressing fire-induced circuit failure. This effort involves, "identifying potential circuit failure modes for specific conditions and arrangements, developing risk-informed methods for assessing the likelihood of fires in plant-specific locations and their potential to cause multiple circuit failures, and developing deterministic circuit failure analysis methods that could be applied to plant-specific configurations that are not screened by the assessment of circuit failure modes or the risk assessment." In response to NEI's industry initiative, on November 29, 2000, the staff decided to temporarily halt certain associated circuit lines of inspection during the ongoing triennial fire protection inspections. On October 18, 2001, NEI provided the staff a copy of NEI 00-01 "Guidance for Post-Fire Safe-Shutdown Analysis," Draft Revision C. The staff reviewed the NEI methodology and provided detailed comments to NEI on March 6, 2002.

Fire Protection Circuit Analysis Schedule: The schedule for this voluntary industry initiative is dependent on NEI's reaction to the staff's recent detailed comments on Draft Revision C, and subsequent discussions between NEI and the staff.

NEI has agreed to discuss with ACRS their NFPA 805 fire protection rulemaking implementation guidance document, which will be in initial draft form by June, 2002. NEI has also agreed to discuss NEI 00-01, an industry developed methodology for post-fire safe shutdown analysis/fire protection circuit analysis at the subcommittee meeting.

We look forward to meeting with the Full ACRS Committee in early June, 2002 to discuss these two important issues and receive ACRS comments. We will provide you with an advance copy of the NFPA 805 rulemaking package (SECY Letter, FRN, Regulatory Analysis, Environmental Analysis, proposed rule language), and NEI 00-01 Draft Rev. C and any related staff review documentation upon request.

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DISTRIBUTION: ADAMS SPLB R/F LWhitney MSalley JHannon
 GHolahan EWeiss JBirmingham BSweeney MCrutchley
 Schoenfeld, EDO ASingh, ACRS SDuraiswamy, ACRS

* See previous concurrence

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OFFICE	SPLB:DSSA:NRR	SPLB:DSSA:NRR	RGEB:DRIP	SC:SPLB:DSSA	BC:SPLB
NAME	LWhitney:bw	MSalley	JBirmingham	EWeiss	JHannon
DATE	03/21/02*	03/22/02*	03/21/02*	03/28/02	03/28/02