



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 19, 2016

MEMORANDUM TO: Alexander R. Klein, Chief
Fire Protection Branch
Division of Risk Assessment
Office of Nuclear Reactor Regulation

FROM: Daniel M. Frumkin, Sr. Fire Protection Engineer */RA/*
Fire Protection Branch
Division of Risk Assessment
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE FEBRUARY 4, 2016, CATEGORY 2 FIRE
PROTECTION MANAGEMENT MEETING BETWEEN NUCLEAR
REGULATORY COMMISSION AND NUCLEAR ENERGY INSTITUTE
REPRESENTATIVES

On February 4, 2016, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting with the Nuclear Energy Institute (NEI) and industry stakeholders to discuss issues related to fire protection for nuclear power plants. The meeting discussed license amendment reviews and implementation of National Fire Protection Association Standard 805 (NFPA 805), "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," and other topics of interest to NRC staff and industry stakeholders. The meeting notice was made available at Agencywide Document Access and Management System (ADAMS) Accession No. [ML16019A089](#).

During the opening remarks of the call industry stakeholders listed the following topics of high interest: revision of the monitoring program frequently asked question, probabilistic risk assessment realism, and development of a process for changing committed modifications during the implementation period. The discussion of the monitoring program frequently asked question will be pursued as part of a future frequently asked questions meeting. The discussion of the other topics is included in the summary below.

Status of NFPA 805 License Amendment Requests

The NRC staff provided an update on the status of NFPA 805 license amendment request reviews. There has been notable progress in the NFPA 805 review effort. To date, the NRC staff has issued 16 license amendments to transition to NFPA 805. The amendments most recently issued were for Browns Ferry Units 1, 2 and 3 (ADAMS Accession No. [ML15212A796](#)) and Ginna (ADAMS Accession No. [ML15271A101](#)). The NRC currently has 11 amendment requests under review, with 1 additional amendment request expected to be submitted in Fiscal Year (FY) 2017. The NRC's most recent "NFPA 805 Project Status List – 02/02/2016" is available at ADAMS Accession No. [ML16033A254](#).

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Modification Changes during Implementation

The NRC staff discussed that the NRC staff is developing a letter to provide guidance regarding information to be submitted by licensees to support modification changes during implementation. This information would be to support a license amendment request. Three types of requests or options were discussed. Option a. applies to changes that used methods that had been accepted in the requesting licensee's safety evaluation. This option requires the least submitted information. The staff expects to perform a streamlined review on such an application and expects it to be reviewed the fastest of the three options. Option b. applies to changes that used methods that have been accepted in another plant's NFPA 805 safety evaluation, that is, not the requesting plant. Option b. requires the submittal of more information and the staff will judge whether a streamlined review could be achieved for option b. The last option, Option c. involves methods that have been accepted for use by the NRC, but not yet been approved in an NRC NFPA 805 safety evaluation. This option involves submitting similar information as Option b., but is expected to have the longest review time as a streamlined review is not possible. Option C. would apply to the first use of the new fire HRRs from NUREG-2178.

The NRC staff indicated that licensees are encouraged to request pre-submittal meeting with the NRC staff.

Expectations for Licensee Submittals Prior to Safety Evaluation Issuance

The NRC staff reminded licensees with NFPA 805 applications that they should be prepared to submit a revised license condition and a final clean copy of plant modifications and implementation items towards the end of the NRC license amendment request review. The NRC's plant project manager will request this information. Licensees should look at the most recently issued safety evaluations to understand potential changes to the license condition.

Generic Issues Affecting NFPA 805 Reviews

The NRC staff discussed that many licensees with NFPA 805 applications are conducting due diligence reviews of modifications late in the review process. The NRC staff pointed out that if licensees conduct the due diligence review, the licensees should notify the NRC via letter on the docket of their intent along with a schedule for completion and submission of the final modifications. The NRC is not in position to stop or delay a review based on an oral communication, for example, during a status phone call.

Research Update

NRC's Office of Nuclear Regulatory Research (RES) and the Electric Power Research Institute (EPRI) representatives discussed the status of nuclear power plant fire research projects. Of note, RES staff indicated that they were looking for information on long-term compensatory measures from industry stakeholders. This information has been provided in the past as part of the RES/EPRI memorandum of understanding, and is used for a periodic report about metrics in fire protection.

NRR staff indicated that collection of operating experience related to very early warning fire detection systems is important for ongoing risk-informed treatment of those systems. It was pointed out that since these systems are designed to notify plant staff of a potential fire, an actual fire may not occur. This would be considered a success of the system, but the data of these successes is not collected.

There are numerous other projects ongoing between RES and EPRI to improve probabilistic risk assessment realism. These projects address fire modeling, heat release rates of nuclear power plant electrical fires, high energy arcing faults (there will be an NRC Regulatory Information Conference, or RIC, session on this topic), cable coatings, quantifying control room evacuation, and control transformer testing. The information from these activities will be released either for public comment or when the information is finalized.

EPRI is working on a consolidated fire reporting system. They are also updating the fire events database to add another 5 years of data. EPRI representative indicated that the fire events database would be updated every three to five years to allow time to analyze the new data. Other activities include looking at the following aspects of transient fires, duration, heat release rate, operating experience. The review of transient fires will include a literature review, perhaps some testing.

The NRC staff indicated that they had a list of topics relating to probabilistic risk assessment realism from EPRI. The NRC staff is evaluating the list and will discuss the list at another meeting with EPRI and industry stakeholders.

The NRC has had a working group with EPRI to discuss deterministic circuit failure issues, called Jacque-Fire 3. This working group is finishing up. Although the working group couldn't come to agreement on everything they came to resolution on most items, proper polarity, duration, high impact components, how many spurious to consider. The outstanding topic related to treatment of shorting switches in deterministic analysis. The working group will develop stand-alone white papers on these topics to be discussed at a future public meetings to determine the regulatory footprint for this information. A revision of industry implementing documents (NEI 00-01) or the NRC fire protection regulatory guide (RG 1.189) are considered options.

Discussion of Expanding the Scope of these Meetings to Include Deterministic Fire Protection Topics

Both NRC and industry stakeholders were supportive of expanding the scope of the meeting to discuss deterministic topics. The previous paragraph relating to Jacque-Fire 3, is an example of that expansion.

Industry stakeholders asked about a letter they had sent on June 24, 2014 (ADAMS Accession No. [ML14178B223](#)) relating to a circuit analysis task interface agreement (TIA 2013-02). The NRC staff indicated that the letter was still being actively worked on. The NRC staff indicated that the final answer will take more time, and may not be on a schedule to support the Jacque-Fire 3 work discussed above.

Industry stakeholders discussed a prospect of reducing the resources to inspect very low risk significance items. Industry stakeholders did not dispute that performance deficiencies existed and had to be resolved. The NRC indicated that making changes to the inspection process was a bigger issue than fire protection. Industry stakeholders suggested that it might be useful to evaluate the goals of the fire protection triennial inspection.

Industry stakeholders were concerned that some inspectors were using older guidance. The discussion related to compensatory measure guidance, and the NRC representatives said they would look into it.

Closing Remarks and Public Comments

Attendees agreed that the next meeting should be held in three months and that it should be a face-to-face meeting.

An opportunity for public comment was provided near the end of the meeting. No public comments were received. The meeting was then adjourned.

A list of meeting attendees is enclosed with this memorandum.

Enclosure:
As stated

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Date	02 / 16 / 2016	02 / 17 / 2016	02 / 19 / 2016

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**FIRE PROTECTION MANAGEMENT MEETING BETWEEN NUCLEAR REGULATORY
COMMISSION AND NUCLEAR ENERGY INSTITUTE REPRESENTATIVES
LIST OF ATTENDEES**

February 4, 2016

**U. S. Nuclear Regulatory
Commission Staff**

NRC/NRR/DRA

J. Giitter
R. Felts
A. Klein
S. Rosenberg
J. Robinson
H. Barrett
D. Frumkin
J.S. Hyslop
L. Fields
A. Wu
C. Moulton

NRC/RES/DRA

R. Correia
L. Lund
M. Salley
G. Taylor
S. Cooper
N. Melly

NRC Regional Staff

J. Rogge
D. Jones
S. Shaffer
J. Montgomery
D. Szwarc
A. Dahbor
M. Jeffers
S. Alferink

Stakeholders

Industry

V. Anderson (NEI)
J. Ventosa (Entergy)
S. Hutchins (Exelon/NEI)
T. Basso (Exelon)
J. Stone (Exelon)
J. Ertman (Duke)
A. Lindeman (EPRI)
A. Ratchford (Jenson Hughes)
T. Jutras (EPM)
F. Joglar (Jenson Hughes)
B. Simril (TVA)
E. Kleinsorg (Jenson Hughes)

Public

S. Dolley (Platts)

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