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

May 13, 2016

MEMORANDUM FOR: AFPB Files

FROM: Greg A. Casto, Chief ***/RA/***
Fire Protection Branch
Division of Risk Assessment
Office of Nuclear Reactor Regulation

SUBJECT: CLOSE-OUT OF NATIONAL FIRE PROTECTION ASSOCIATION 805 FAQ 14-0071 REGARDING THE USE OF NON RATED CABLES IN CRANE APPLICATIONS

The Nuclear Energy Institute through its National Fire Protection Association (NFPA) 805 Task Force (Task Force), pursued a frequently asked question (FAQ) regarding the use of specialty cables that have special properties, specifically flexibility to support crane applications, which are not qualified to an accepted Nuclear Regulatory Commission (NRC) fire test standard. The Task Force submitted Revision 0 of FAQ 14-0071 (Agency-wide Documents Access and Management System (ADAMS) Accession No. ML14191B265), "Acceptable Uses for Non IEEE [Institute of Electrical and Electronics Engineers] 383 Cables," on May 27, 2014. Note that the term IEEE 383 is used as shorthand to describe an NRC accepted test standard, but other tests have been accepted (see Background below). Subsequently, technical exchanges took place between the Task Force and NRC staff as discussed in FAQ meeting summary dated June 1, 2015 (ML15148A686), and concluded with Task Force submittal of FAQ Revision 0b, dated April 7, 2016, which was received by the NRC on April 7, 2016 (ADAMS Accession No. ML16118A085).

BACKGROUND

NFPA 805, Chapter 3, Section 3.3.5, "Electrical," Subsection 3.3.5.3 states that, "Electric cable construction shall comply with a flame propagation test as acceptable to the AHJ [authority having jurisdiction]." The NRC is the responsible AHJ. FAQ 06-0022, "Acceptable Electrical Cable Construction Tests," proposes a list of acceptable cable fire tests. FAQ 06-0022 is in ADAMS Accession No. ML090830220. The NRC accepted this FAQ as described in the Close-Out Memorandum for FAQ 06-0022 (ADAMS Accession No. ML091240278). The Task Force submitted FAQ 14-0071 to request the acceptance of special purpose cables, such as flexible crane cables, which do not meet any acceptable flame propagation tests that were previously found acceptable to the NRC in FAQ 06-0022.

CONTACT: Daniel Frumkin, NRR/DRA
(301) 415-2280

DISCUSSION

The information provided in FAQ 14-0071, Revision 0b, states that cables that don't meet an accepted NRC cable fire test standard may be used if they are required for crane applications under certain conditions. The first condition is that the cables have fire resistance properties as shown by meeting low intensity fire tests. The second condition is that the cables have been determined to not have an adverse impact on a plants approved fire protection program, safe shutdown analysis, or fire probabilistic risk assessment.

The FAQ recommends a revision to NEI 04-02, "Guidance for Implementing a Risk Informed, Performance-Based Fire Protection Program Under, Title10 of the *Code of Federal Regulations* Part 10CFR 50.48 (c)," to include language that the use of crane cables under the conditions above is acceptable. Regulatory Issue Summary (RIS) 2007-19, "Process for Communicating Clarification of Staff Positions Provided in Regulatory Guide 1.205 Concerning Issues Identified during the Pilot Application of National Fire Protection Association Standard 805," describes the process for getting FAQs accepted by the NRC staff. Following acceptance of the FAQ, which is being provided by this memorandum, the information in the FAQ is considered acceptable for licensee use, and will be considered for the next scheduled revision of Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants."

The NRC staff determined that a low intensity fire test is appropriate for such specialized crane cables, since the use of the cables will also involve an evaluation of the fire protection program, safe shutdown analysis, and fire probabilistic risk assessment. Therefore, the NRC staff concludes that the use of a low intensity test, in the specific case of crane cables under these conditions, is acceptable and meets the intent of NFPA 805 3.3.5.3.

CONCLUSION

The staff has reviewed the proposed FAQ and its incorporation into Nuclear Energy Institute, NEI 04-02, would not prevent continued endorsement of NEI 04-02. In accordance with RIS 2007-19, the guidance in this FAQ is acceptable for use by licensees in transition. The final endorsement of this FAQ will be addressed by the next revision to Regulatory Guide 1.205.

DISCUSSION

The information provided in FAQ 14-0071, Revision 0b, states that cables that don't meet an accepted NRC cable fire test standard may be used if they are required for crane applications under certain conditions. The first condition is that the cables have fire resistance properties as shown by meeting low intensity fire tests. The second condition is that the cables have been determined to not have an adverse impact on a plants approved fire protection program, safe shutdown analysis, or fire probabilistic risk assessment.

The FAQ recommends a revision to NEI 04-02, "Guidance for Implementing a Risk Informed, Performance-Based Fire Protection Program Under, Title10 of the *Code of Federal Regulations* Part 10CFR 50.48 (c)," to include language that the use of crane cables under the conditions above is acceptable. Regulatory Issue Summary (RIS) 2007-19, "Process for Communicating Clarification of Staff Positions Provided in Regulatory Guide 1.205 Concerning Issues Identified during the Pilot Application of National Fire Protection Association Standard 805," describes the process for getting FAQs accepted by the NRC staff. Following acceptance of the FAQ, which is being provided by this memorandum, the information in the FAQ is considered acceptable for licensee use, and will be considered for the next scheduled revision of Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants."

The NRC staff determined that a low intensity fire test is appropriate for such specialized crane cables, since the use of the cables will also involve an evaluation of the fire protection program, safe shutdown analysis, and fire probabilistic risk assessment. Therefore, the NRC staff concludes that the use of a low intensity test, in the specific case of crane cables under these conditions, is acceptable and meets the intent of NFPA 805 3.3.5.3.

CONCLUSION

The staff has reviewed the proposed FAQ and its incorporation into Nuclear Energy Institute, NEI 04-02, would not prevent continued endorsement of NEI 04-02. In accordance with RIS 2007-19, the guidance in this FAQ is acceptable for use by licensees in transition. The final endorsement of this FAQ will be addressed by the next revision to Regulatory Guide 1.205.

DISTRIBUTION:
HBarrett BMiller GCasto RidsOgcRp Resource CMoulton

ADAMS Memo Accession No.: ML16126A543

OFFICE	NRR/DRA/AFPB	NRR/DRA/AFPB
NAME	DFrumkin	GCasto
DATE	05 / 12 / 2016	05 / 13 / 2016

OFFICIAL RECORD COPY