

June 16, 2009

MEMORANDUM TO: AFPB Files

FROM: Alexander R. Klein, Branch Chief */RA/*
Fire Protection Branch
Division of Risk Assessment
Office of Nuclear Reactor Regulation

SUBJECT: CLOSE-OUT OF NATIONAL FIRE PROTECTION ASSOCIATION 805
FREQUENTLY ASKED QUESTION 07-0035 ON BUS DUCT COUNTING
GUIDANCE FOR HIGH ENERGY ARCING FAULTS

Frequently Asked Question (FAQ) 07-0035 was proposed by the Nuclear Energy Institute (NEI), through its National Fire Protection Association (NFPA) 805 Task Force, to clarify the bus duct counting guidance for high energy arcing faults from NEI 04-02, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program under Title 10 of the *Code of Federal Regulations* (10 CFR) 50.48(c)." NEI 04-02 cited the fire ignition frequencies as provided in NUREG/CR-6850 (EPRI 1011989), "EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities," as appropriate for use in developing Fire Probabilistic Risk Assessments. The authors believed that there was a need for clarification regarding the treatment of high energy arcing faults specific to bus duct failures. Appendix M of NUREG/CR-6850 (EPRI 1011989) provides guidance for the treatment of high energy arc faults only in switchgear and load centers, that is, it does not cover the treatment of bus duct fires. Further, while the document mentions bus ducts as a potential source of high energy arcing fault events, no fire event frequency or treatment guidance is provided.

Subsequent technical exchange between the Task Force and Nuclear Regulatory Commission (NRC) staff has led to the proposed resolution documented in Revision 2 to this FAQ. The NRC staff has reviewed this proposal and finds that nothing in this FAQ would prevent continued endorsement of NEI 04-02. In accordance with RIS 2007-19, "Process for Communicating Clarifications of Staff Positions Provided in Regulatory Guide 1.205 Concerning Issues Identified during the Pilot Application of NFPA Standard 805," the guidance in this FAQ is acceptable for use by licensees in transition. The final endorsement of this FAQ will be addressed by a revision to Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants."

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References:

For details regarding this FAQ, please see the following:

- FAQ 07-0035, Revision 0 (Agency-wide Documents Access and Management System (ADAMS) accession number ML071650151)
- NRC Staff Response to FAQ 07-0035, Revision 0 (ADAMS accession number ML073540262)
- Industry Response to the NRC Staff Response to FAQ 07-0035, Revision 0 (ADAMS accession number ML081960709)
- FAQ 07-0035, Revision 1 (ADAMS accession number ML090850012)
- NRC Staff Response to FAQ 07-0035, Revision 1 (ADAMS accession number ML090930500)
- FAQ 07-0035, Revision 2 (ADAMS accession number ML091610189)
- Summary of August 17, 2007, Category 1 Public Meeting on FAQ 07-0035, "High Energy Arcing Faults in Bus Ducts Expert Panel," (ADAMS accession number ML072560081)
- NUREG/CR-6850 (EPRI 1011989) (ADAMS accession numbers ML050940183 (Vol. 1) and ML050940189 (Vol. 2))
- NEI 04-02, Revision 1 (ADAMS accession number ML052590476)
- NFPA 805, 2001 Edition (available through the Public Document Room or NFPA)
- Regulatory Guide 1.205 (ADAMS accession number ML061100174)
- NFPA 805 FAQ Process Document, Revision 1 (ADAMS accession number ML061660105)
- RIS 2007-19 (ADAMS accession number ML071590227)

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