

September 4, 2014

MEMORANDUM TO: Hossein G. Hamzehee, Chief  
PRA Licensing Branch  
Division of Risk Assessment  
Office of Nuclear Reactor Regulation

FROM: David Gennardo, Reliability and Risk Analyst */RA/*  
PRA Licensing Branch  
Division of Risk Assessment  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF AUGUST 6, 2014 CATEGORY 2 MEETING  
REGARDING FIRE PROBABILISTIC RISK ASSESSMENT  
METHODS AND FREQUENTLY ASKED QUESTIONS

On August 6, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff held a Category 2 public meeting, via teleconferencing, with the nuclear industry and the Nuclear Energy Institute (NEI) to discuss the fire probabilistic risk assessment (FPRA) Frequently Asked Question (FAQ) on treatment of well-sealed electrical panels greater than 440V. Prior to this meeting, NEI provided the new draft of the "Technical Basis for Treatment of Potential Propagation from MCCs" (available at Agencywide Documents Access and Management System (ADAMS) Accession No. ML14216A387) in order to support the development of FPRA FAQ 14-0009, "Treatment of Well-Sealed Electrical Panels Greater than 440V."

The NRC staff provided background information on the FPRA FAQ related to well-sealed electrical cabinets and stated that even under well-sealed conditions, a fraction of fires propagate outside the cabinet. The industry then explained the technical basis for determining the fraction of fires which could propagate from a well-sealed, robustly secured, Motor Control Center (MCC) or electrical cabinet with voltages greater than 440V. A summary of the topics discussed at this meeting is provided below:

- The industry representatives provided a method to estimate the fraction of fires that could develop due to energetic faults based on the number of conductors/connections at 440VAC or higher within the cabinet. The NRC stated that use of the higher factor would be conservative.
- The industry representatives also provided a separate analysis where they applied work previously performed by the EPRI-led Fire PRA Methods Panel (ADAMS Package Accession No. ML121730370) and re-evaluated events from the old fire events database to determine a new ratio for events that breached or could have breached a well-sealed, robustly secured electrical enclosure.

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- The NRC staff suggested that the new fire events database could be used to provide more detailed information in support of developing the fraction of fires which breach the enclosure, although it was noted that the fire ignition frequencies report which includes the binning and resulting frequencies was still in draft status.
- The NRC agreed to review the new approaches and the supporting data further. The industry representatives took the action to revise the technical basis document to support the next meeting on FAQ 14-0009.

The meeting notice and agenda for this public meeting are available at ADAMS Accession No. ML14205A109.

A list of meeting attendees is enclosed with this memorandum.

Enclosure:  
As stated

- The NRC staff suggested that the new fire events database could be used to provide more detailed information in support of developing the fraction of fires which breach the enclosure, although it was noted that the fire ignition frequencies report which includes the binning and resulting frequencies was still in draft status.
- The NRC agreed to review the new approaches and the supporting data further. The industry representatives took the action to revise the technical basis document to support the next meeting on FAQ 14-0009.

The meeting notice and agenda for this public meeting are available at ADAMS Accession No. ML14205A109.

A list of meeting attendees is enclosed with this memorandum.

Enclosure:  
As stated

DISTRIBUTION:

JGiitter, NRR	SLee, NRR	HHamzehee, NRR	AKlein, NRR
HBarrett, NRR	SDinsmore, NRR	RGallucci, NRR	JHyslop, NRR
NIqbal, NRR	PLain, NRR	BMetzger, NRR	CMoulton, NRR
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ADAMS Accession No.: **ML14247A479**

OFFICE	NRR/DRA/APLA	NRR/DRA/APLA	NRR/DRA/APLA
NAME	DGennardo	J. Hyslop	H. Hamzehee
DATE	9/03/14	9/04/14	09/04/14

**FIRE PROBABILISTIC RISK ASSESSMENT  
FREQUENTLY ASKED QUESTIONS PROCESS**

**LIST OF ATTENDEES**

August 6, 2014

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

H. Hamzehee  
A. Klein  
H. Barrett  
S. Dinsmore  
J. Hyslop  
D. O'Neal  
C. Moulton  
B. Metzger  
D. Gennardo  
T. Hilsmeier  
B. Miller  
N. Melly\*  
M. Salley\*

**Stakeholders**

V. Anderson (Nuclear Energy Institute)\*  
P. Amico (Hughes Associates)\*  
A. Lindeman (Electric Power Research Institute)\*  
K. Zee (ERIN Engineering)\*  
C. LaFleur (Sandia National Laboratories)\*  
S. Short (Pacific Northwest National Laboratory)\*  
A. Ratchford (RDS)\*  
D. Miskiewicz (Engineering Planning and Management, Inc.)\*  
V. Rubano (Florida Power and Light)\*  
M. Hulet (Palo Verde Nuclear Generating Station)\*  
C. Rochon (Westinghouse Electric Co.)\*  
G. Loignon, Jr. (V.C. Summer Nuclear Station)\*  
F. Yanik (Applied Reliability Inc.)\*  
N. Pratt (Nexus)\*  
J. Voskuil (Palisades Nuclear Plant)\*  
B. Brogan (Palisades Nuclear Plant)\*  
F. Joglar (Hughes Associates)\*  
R. Rishel (Duke Energy)\*

Et al.

\*participated via phone

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