June 25, 2014

MEMORANDUM TO: Hossein G. Hamzehee, Chief

PRA Licensing Branch

Division of Risk Assessment

Office of Nuclear Reactor Regulation

FROM: Mehdi Reisi Fard, Reliability and Risk Analyst /RA/

PRA Licensing Branch
Division of Risk Assessment

Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF JUNE 17, 2014 CATEGORY 2 MEETING

REGARDING FIRE PROBABILISTIC RISK ASSESSMENT METHODS AND FREQUENTLY ASKED QUESTIONS

On June 17, 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 fire probabilistic risk assessment (FPRA) Frequently Asked Questions (FAQs). Prior to this meeting, NEI provided draft of the FPRA FAQ 14-0008, "Main Control Board Treatment," (available at Agencywide Documents Access and Management System (ADAMS) Accession No. ML14133A527), revision of FPRA FAQ 14-0008 (ADAMS Accession No. ML14167A296) and a revision to "Finalizing Licensing Basis Information for NFPA 805 PRAs," (freeze point paper) to address NRC comments (ADAMS Accession No. ML14156A369). In addition, the NRC staff provided comments on the first draft of FPRA FAQ 14-0008 (ADAMS Accession No. ML14157A069) before the meeting.

A summary of the topics discussed at this meeting is provided below:

• The NRC staff discussed the status of the NRC letter to NEI regarding the main control room abandonment. This letter contains the guidance on the use of a generic, screening human error probability of 0.1 for main control room abandonment for loss of habitability and indicates that further work is needed to address the main control room abandonment on loss of habitability and function. The NRC staff stated that the letter is under the management review. The NRC staff agreed to formally issue this letter in two weeks following the meeting.

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- The NRC staff and the industry discussed the draft of FPRA FAQ 14-0008. The NRC staff stated that the draft FAQ reflected NRC comments provided to the industry during previous interactions in defining main control board and requiring a specific physical connection between front and back panels. The NRC staff asked the industry the reason for not requiring an electrical connection between those panels. The industry explained that requiring an electrical connection would not be necessary to apply Appendix L to NUREG/CR-6850, "Fire PRA Methodology for Nuclear Power Facilities." The NRC staff agreed to take the explanation by the industry into consideration and provide feedback by the end of the following week. If the NRC staff agrees with the industry's position on not requiring an electrical connection, the staff will finalize and formally issue this FAQ. Otherwise, further discussions with the industry will be held to resolve the issue.
- The NRC staff received a revision of the white paper on freeze point before the meeting.
  The industry indicated that in this revision all NRC comments are either incorporated or
  an explanation is provided. The staff agreed to review the white paper and provide
  feedback by the next FPRA FAQ public meeting. The NRC staff is already implementing
  this concept for the treatment of the new reactor coolant pump shutdown seals in fire
  PRA.
- The industry discussed a potential new FAQ that clarifies the scope of analysis for well-sealed electrical cabinets. The industry stated that the new FAQ would be used for 440V well-sealed panels, where no guidance for frequency of arcing faults versus non-arcing faults exists. The near-term goal of this FAQ is to provide a common understanding of the analyses needed to address requests for addition information related to license amendment requests (LARs) for adopting National Fire Protection Association Standard (NFPA) 805. The NRC staff did not provide a final position, as this issue was a new topic. The NRC staff expressed an interest in getting the process for addressing this issue started. In addition, the NRC staff stated that as this new FAQ affects many LARs, a timely resolution of this issue is important. The industry agreed to provide a draft of the new FAQ by the end of the following week.

The meeting participants decided to hold the next FPRA FAQ public meeting on Wednesday, July 23, 2014.

Meeting notice and agenda for this public meeting is available at ADAMS Accession No. ML14132A147.

A list of meeting attendees is enclosed with this memorandum.

Enclosure: As stated

- The NRC staff and the industry discussed the draft of FPRA FAQ 14-0008. The NRC staff stated that the draft FAQ reflected NRC comments provided to the industry during previous interactions in defining main control board and requiring a specific physical connection between front and back panels. The NRC staff asked the industry the reason for not requiring an electrical connection between those panels. The industry explained that requiring an electrical connection would not be necessary to apply Appendix L to NUREG/CR-6850, "Fire PRA Methodology for Nuclear Power Facilities." The NRC staff agreed to take the explanation by the industry into consideration and provide feedback by the end of the following week. If the NRC staff agrees with the industry's position on not requiring an electrical connection, the staff will finalize and formally issue this FAQ. Otherwise, further discussions with the industry will be held to resolve the issue.
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### **DISTRIBUTION:**

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#### ADAMS Accession No.: ML14171A321

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DATE	6/23/14	6/25/14

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# FIRE PROBABILISTIC RISK ASSESSMENT FREQUENTLY ASKED QUESTIONS PROCESS

### **LIST OF ATTENDEES**

June 17, 2014

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

- J. Giitter
- H. Hamzehee
- A. Klein
- H. Barrett
- B. Correll\*
- S. Dinsmore
- D. Frumkin
- T. Hilsmeier
- J. Hyslop
- C. Moulton
- M. Reisi Fard
- M. Salley\*

### **Stakeholders**

- P. Amico (Hughes Associates)\*
- V. Anderson (Nuclear Energy Institute)\*
- B. Brogan (Entergy)\*
- J. DeJoseph (Duke Energy)\*
- A. Hazelhoff (Entergy)\*
- F. Joglar (Hughes Associates)\*
- A. Linedman (Electric Power Research Institute)\*
- B. Morgen (Duke Energy)\*
- A. Ratchford (RDS)\*
- M. Schairer (Engineering Planning and Management, Inc.)\*
- S. Short (Pacific Northwest National Laboratories)\*
- K. Smith (Entergy)\*
- T. Swiecicki (Entergy)\*
- M. Tschiltz (Nuclear Energy Institute)\*
- F. Yanik (Entergy)\*
- K. Zee (ERIN Engineering and Research, Inc.)\*

<sup>\*</sup>participated via phone