

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



September 28, 2016

MEMORANDUM TO: Mark Henry Salley, Chief  
Fire and External Hazards Analysis Branch  
Division of Risk Analysis  
Office of Nuclear Regulatory Research

FROM: Gabriel Taylor, Senior Fire Protection Engineer */RA/*  
Fire and External Hazards Analysis Branch  
Division of Risk Analysis  
Office of Nuclear Regulatory Research

SUBJECT: SUMMARY OF PUBLIC MEETING WITH THE NUCLEAR  
ENERGY INSTITUTE ON SEPTEMBER 20, 2016 TO DISCUSS  
VERY EARLY WARNING FIRE DETECTION SYSTEMS

The U.S. Nuclear Regulatory Commission (NRC) staff held a Category 2 public meeting with the Nuclear Energy Institute (NEI) on September 20, 2016. The purpose of this meeting was for the NRC staff to present their positions regarding concerns raised in an NEI letter dated July 28, 2016, and provide feedback on an NEI led tabletop pilot exercise of draft NUREG-2180, "Determining the Effectiveness, Limitations, and Operator Response for Very Early Warning Fire Detection Systems in Nuclear Facilities." The meeting had representatives from NEI, industry, public stakeholders, and NRC staff.

The meeting notice and agenda can be found in the Agencywide Documents Access and Management System (ADAMS) under accession number ML16237A397. The meeting notice is also posted on the NRC's public website. The attendance list for the meeting is enclosed. The other documents referenced and presented during the discussion can be found in ADAMS under the Accession numbers given below:

- NEI Letter dated July 28, 2016 and attachments - ML16237A397
- NRC Slides - ML16266A210
- NEI Slides - ML16266A209

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Summary of Meeting:

On September 20, 2016, the NRC conducted a public meeting with representatives from the Nuclear Energy Institute (NEI), nuclear power plant (NPP) licensees, and contractors, to provide the NRC staff's response to NEI letter dated July 28, 2016. The NEI letter and attachments (Agencywide Documents Management and Access System (ADAMS) Accession No. ML16237A397) provided results from an industry tabletop pilot exercise of draft NUREG-2180, "Determining the Effectiveness, Limitations, and Operator Response for Very Early Warning Fire Detection Systems in Nuclear Facilities," along with specific concerns related to the draft report.

The staff presentation followed the items on the meeting agenda that included: completeness, risk improvement, wording in appendix D, and component versus cabinet damage. The staff's presentations started with an overview of the confirmatory research project documented in draft NUREG-2180. The completeness of the report was presented, along with how test data and all available operating experience has been identified, reviewed, and incorporated into NUREG-2180. This discussion included details of how fire ignition frequency is developed and the potential for very early warning fire detection (VEWFD) operating experience to be misrepresented. Consistent with the recommendation in NUREG-2180, the staff expressed the need for operating experience to be collected in a consistent, detailed, and complete manner to allow for a holistic evaluation of VEWFD system performance. The staff also communicated that the tabletop pilot results demonstrated a risk reduction when using the risk quantification approach presented in Part II of NUREG-2180. The staff clarified a statement related to the use of expert judgment found in Appendix D of the draft NUREG-2180 and provided clarification as to the intent and purpose for such a statement. The staff discussed why one end state in the event tree presented in Section 6 of the draft NUREG-2180 document was removed in the pre-publication version. Finally the staff provided feedback on the tabletop pilot exercise of NUREG-2180 performed by NEI.

Representatives from NEI presented an industry proposal for a path forward on incipient detection in fire PRA. The NEI recommended path forward included delaying finalization of NUREG-2180, providing support and resources to conduct a formal elicitation process, and proposed interim regulatory treatment. The presentation restated concerns raised in the NEI July 28, 2016 letter. A conceptual fire growth framework was presented, as well as recent operating experience (2016) from the Shearon Harris NPP was also presented.

Greg Casto from the Office of Nuclear Reactor Regulation (NRR) presented background information on the FAQ 08-0046 retirement letter sent to NEI on July 1, 2016, along with the NEI response letter to the FAQ retirement dated July 28, 2016. NRR is in the process of preparing a clarification letter that will be sent to NEI. The staff's response and expectations for applicants using VEWFD and currently under review, as well as licensees whom already have received safety evaluations accepting VEWFD credit, were also discussed.

There were opportunities for the public to provide comments and ask questions, but none were provided.

The NRC managers present expressed appreciation for NEI and industry attendance and stated that a letter in response to the July 28, 2016 letter would be forthcoming.

Enclosure:  
As stated

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**ADAMS Accession No.: ML16270A592**

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DATE	09/28/16	09/28/16

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