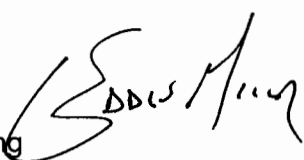




UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 19, 2018

MEMORANDUM TO: Michael T. Markley, Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: G. Edward Miller, Project Manager
Special Projects and Process Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation 

SUBJECT: SUMMARY OF MAY 22, 2018, PUBLIC MEETING WITH NUCLEAR
ENERGY INSTITUTE REGARDING 10 CFR 50.69 LICENSE
AMENDMENT REQUESTS

On May 22, 2018, a Category 2 public meeting¹ was held between representatives of the U.S. Nuclear Regulatory Commission (NRC), Nuclear Energy Institute (NEI), Electric Power Research Institute (EPRI), and licensees. The purpose of the meeting was to discuss approaches to license amendment requests (LARs) to implement a risk-informed program for categorization and treatment of structures, systems, and components (SSCs) for nuclear power reactors in accordance with Section 50.69, "Risk-informed categorization and treatment of structures, systems, and components for nuclear power reactors," of Title 10 of the *Code of Federal Regulations* (10 CFR 50.69). This public meeting was a continuation of public meetings held on August 18, 2016,² and January 25,³ June 21,⁴ September 6,⁵ October 23, 2017,⁶ and January 18, 2018,⁷ on the same topic. Specifically, this meeting focused on potential approaches to consider seismic risk for categorization of SSCs during implementation of 10 CFR 50.69 as alternatives to the use of a seismic probabilistic risk assessment (SPRA) or a seismic margins analysis for a group of sites.

The NEI staff, supported by the EPRI staff, presented slides⁸ that discussed unique risk insights that may be obtained using SPRAs in the categorization of SSCs. The insights were developed using information from four sites where the ground motion response spectra (GMRS) is high compared to the safe shutdown earthquake (SSE) and the corresponding licensee has performed an SPRA to support its response to the March 12, 2012, 50.54(f) letter.⁹ The slides

¹ The meeting notice is available in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML18117A135.

² The meeting summary for the August 18, 2016, meeting is available under ADAMS Accession No. ML16250A548.

³ The meeting summary for the January 25, 2017, meeting is available under ADAMS Accession No. ML17027A251.

⁴ The meeting summary for the June 21, 2017, meeting is available under ADAMS Accession No. ML17177A063.

⁵ The meeting summary for the September 6, 2017, public meeting is available under ADAMS Accession No. ML17265A020.

⁶ The meeting summary for the October 23, 2017, public meeting is available under ADAMS Accession No. ML17305A242.

⁷ The meeting summary for the January 18, 2018, public meeting is available under ADAMS Accession No. ML18025B737.

⁸ The NEI slides are available under ADAMS Accession No. ML18142C215.

⁹ The March 12, 2012, 50.54(f) letter is available under ADAMS Accession No. ML12056A046.

indicated that in two of the four cases, inclusion of the SPRA did not uniquely identify any SSCs with high safety significance (i.e., all SSCs identified by the SPRA were also identified as high safety significance (HSS) by another PRA model. One of the remaining two cases resulted in the identification of 5 components as HSS that were not identified by other PRA models. A fourth plant was examined and the results were stated to be consistent with the previous three examples. In response to an NRC staff question, the industry representatives clarified that the fourth case indicated that at least one component was uniquely identified by the SPRA as HSS. Based on the conclusion of the analysis that explicit consideration of seismic risks in the categorization process was not necessary for certain plants NEI proposed a three-tiered approach for seismic categorization.

The NRC staff indicated that the proposed approach to the consideration of seismic risk as part of 10 CFR 50.69 applications may be feasible, but indicated that it would be a deviation from the currently endorsed guidance. Similar to prior meetings on this topic, the NRC staff indicated that although not an exhaustive list, if such an approach was pursued, the following would need to be addressed using the insights from the four case studies and other engineering or qualitative arguments:

- Justification for how the studies presented can be generalized to be applicable for the remainder of the fleet considering that the external hazards risk insights are generally more site specific. Additionally, all four case studies were performed on tier 3 plants and the industry approach would apply those insights to tier 1 and tier 2 plants.
- Justification of any changes needed to address the impact on the categorization process:
 - Potential impact on integrated importance assessment where, because of using the proposed approach, weighted importance measures for seismic will not be added to weighted importance measures from other hazards.
 - Additional information that may need to be provided to the integrated decision-making panel.
- Specific entry conditions of usage for the analysis such as:
 - Magnitude and spectrum of the site-specific seismic hazard.
 - Containment type.
 - Component limitations.
 - Estimated seismic risk.
- Relevance of the Near Term Task Force (NTTF) 2.1 evaluations to determine the appropriate tier for the proposed alternative approaches considering the difference in scope and purpose.
- Justification for using a seemingly deterministic approach for establishing the tiers based on a comparison between the new hazard and the design basis in a risk-informed framework.

Additionally, the following NRC staff comments were provided during the meeting:

- The approach should address the vintage of peer reviews for the internal events PRA models used in the case studies to ensure they are acceptable for deriving risk insights and developing SPRA models.
- The approach would need to discuss the acceptability of SPRAs that are used in the case studies considering that the peer-review findings could potentially affect the SPRA risk insights.

- The approach should include details on specific risk-significant SSCs identified by the SPRA in each case study and compare those results with the risk significance of similar SSCs in other PRA models.
- It would be most efficient to have only one pilot LAR and allowing that review to complete before submitting additional LARs.
- It would introduce inefficiencies in the review if the pilot did not have a fire PRA.
- Although not required, the NRC staff indicated that it would likely be helpful if the pilot plant had one or more systems categorized and available for review/audit.

The feedback provided by the NRC staff is not all-inclusive and it is possible that additional questions could arise during an actual review where this concept is applied.

No regulatory decisions were made and both the NRC staff and the NEI indicated that they would consider the items discussed in the meeting.

Following the discussion, an opportunity was afforded to any other participants who wished to ask questions or make comments. No questions or comments were received.

The list of attendees is enclosed to this summary.

Enclosure:
List of Attendees

ENCLOSURE
LIST OF ATTENDEES

SUBJECT: SUMMARY OF MAY 22, 2018, PUBLIC MEETING WITH NUCLEAR ENERGY INSTITUTE REGARDING 10 CFR 50.69 LICENSE AMENDMENT REQUESTS DATED JUNE 19, 2018

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***via e-mail**

OFFICE	NRR/DORL/LSPB/PM	NRR/DORL/LSPB/LA	NRR/DRA/APLA/BC
NAME	GEMiller	JBurkhardt	SRosenberg
DATE	06/13/18	5/25/18	5/31/18
OFFICE	NRR/DRA/APLB/RILIT/TL	NRR/DORL/LPL2-1/BC	NRR/DORL/LSPB/PM
NAME	MReisiFard	MMarkley	GEMiller
DATE	5/31/18	06/19/18	06/19/18

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