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MEMORANDUM TO: Dennis C. Morey, Chief
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Division of Licensing Project
Office of Nuclear Reactor Regulation

FROM: Joseph J. Holonich, Senior Project Manager /RA Leslie Perkins Acting for/
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SUBJECT: SUMMARY OF OCTOBER 11, 2017, MONTHLY MEETING TO
DISCUSS NEI 96-07, APPENDIX D

On October 11, 2017, U.S. Nuclear Regulatory Commission (NRC) staff met with representatives from the Nuclear Energy Institute (NEI). The purpose of the meeting was to continue discussions on draft NEI 96-07, Appendix D, "Supplemental Guidance for Application of 10 CFR 50.59 to Digital Modifications," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16126A197). All information related to the meeting and discussed in this summary can be found in the ADAMS Package Accession No. ML17201A048.

The focus of the meeting was to discuss Criterion (b)(2)(vi) of *Title 10 of the Code of Federal Regulations*, Section 50.59, "Changes, tests, and experiments," (10 CFR 50.59). NEI made a presentation for addressing 10 CFR 50.59, Criterion (b)(2)(vi). Throughout the presentation, NRC staff and NEI engaged in discussions and questions and answers. Based on the discussions at the meeting, NEI stated that it could provide a revision to NEI 96-07, Appendix D by October 16.

One area discussed in more detail was the use of the term "safety analysis." NEI agreed that it would consider changes to using "plant-level result" wording in NEI 96-07, Appendix D but that the NRC staff perspective was needed. However, NEI said that this would need more work than some of the other revisions and thus this would not be included in the October 16, 2017, NEI 96-07, Appendix D update. NEI stated during the meeting that the concept of "plant-level result" as used in NEI 96-07, Appendix D essentially equates to "Accident Analysis (e.g., Chapter 15 of the Final Safety Analysis Report (FSAR))", based upon the understanding and interpretation of safety analysis as defined in NEI 96-07, Revision 1.

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The NRC Staff agreed that the safety analysis included the accident analysis, but disagreed with the NEI position that, for Criterion (b)(2)(vi), only accident analysis results should be used.

The NRC staff stated its position that safety analysis was more than just the accident analysis and noted three quotations (below) that support the NRC staff understanding of 10 CFR 50.59, Criterion (b)(2)(vi) which states:

“Create a possibility for a malfunction of an SSC [structure, system, component] important to safety with a different result than any previously evaluated in the final safety analysis report (as updated);”

Continuing, the NRC staff explained it did not agree with the NEI stated position of “any” as meaning only those described in the accident analyses. Furthermore the NRC staff referenced, 10 CFR 50.34(b) which states:

“(b) Final safety analysis report. Each application for an operating license shall include a final safety analysis report. The final safety analysis report shall include information that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility as a whole, and shall include the following...”

The NRC staff noted that the last sentence clearly says the safety analysis should address two things:

- (1) “a safety analysis of the structures, systems, and components,” and
- (2) “[a safety analysis] of the facility as a whole”

Specifically, the NRC staff discussed its countervailing view of the NEI understanding that the safety analysis of concern under 10 CFR 50.59 is only “of the facility as a whole”, and not of the “structures, systems, and components.”

In addition, the NRC staff made the point that its definition of “safety analysis” was supported by, NEI 96-07, Revision 1, (in the discussion under the definition of safety analysis), which states:

“Safety analyses are those analyses or evaluations that demonstrate that acceptance criteria for the facility’s capability to withstand or respond to postulated events are met. Containment, ECCS [emergency core cooling system] and accident analyses typically presented in Chapters 6 and 15 of the UFSAR [Updated FSAR] clearly fall within the meaning of “safety analyses” as defined above. Also within the meaning of this definition for purposes of 50.59 are:

- Supporting UFSAR analyses that demonstrate that SSC design functions will be accomplished as credited in the accident analyses
- UFSAR analyses of events that the facility is required to withstand such as turbine missiles, fires, floods, earthquakes, station blackout and ATWS [anticipated transient without scram].”

The NRC staff indicated that it saw NEI focusing only on the second bullet of the discussion of safety analysis above. The NRC staff specifically asked how the first bullet was addressed.

Finally, NEI 96-07 Revision 1, was cited by the NRC staff as important because it further emphasizes the inclusiveness of the safety analysis, and states:

“Design bases functions are functions performed by systems, structures and components (SSCs) that are (1) required by, or otherwise necessary to comply with, regulations, license conditions, orders or technical specifications, or (2) credited in licensee safety analyses to meet NRC requirements.

...

As used above, "credited in the safety analyses" means that, if the SSC were not to perform its design bases function in the manner described, the assumed initial conditions, mitigative actions or other information in the analyses would no longer be within the range evaluated (i.e., the analysis results would be called into question). The phrase "support or impact design bases functions" refers both to those SSCs needed to support design bases functions (cooling, power, environmental control, etc.) and to SSCs whose operation or malfunction could adversely affect the performance of design bases functions (for instance, control systems and physical arrangements). Thus, both safety-related and nonsafety-related SSCs may perform design functions.”

It was also agreed that before the next scheduled monthly meeting on November 16, 2017, a separate meeting on 10 CFR 50.59, Criterion (b)(2)(vi) might be needed. The NRC staff and NEI agreed that the interaction could be a public conference call or a face-to-face meeting. An action from the meeting was to look at scheduling this interaction.

During these exchanges, a number of actions were identified. These included:

- 1) NEI will look at:
 - a. changing wording in NEI 96-07, Appendix D related to the Updated FSAR;
 - b. reviewing NEI 01-01, “Guideline on Licensing Digital Upgrades: EPRI [Electric Power Research Institute] TR [Technical Report]-102348, Revision 1, NEI 01-01: A Revision of EPRI TR-102348 to Reflect Changes to the 10 CFR 50.59 Rule” (ADAMS Accession No. ML020860169), to consider incorporating some of its wording on procedures into NEI 96-07, Appendix D, Section 4.3.6;
 - c. moving the failure modes and effects analysis definition into NEI 96-07, Appendix D; and
 - d. considering removing the term “plant-level results” in NEI 96-07, Appendix D and replacing it with safety analysis.
- 2) The NRC staff and NEI will look at scheduling an interaction before the monthly meeting for NEI 96-07, Appendix D scheduled for November 16, 2017.
- 3) The NRC staff will provide any follow-up actions from its review of NEI 96-07, Appendix D once the next revision is submitted.

D. Morey

- 4 -

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