

October 18, 2017

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

FROM: Joseph J. Holonich, Senior Project Manager */RA/*  
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SUBJECT: SUMMARY OF SEPTEMBER 19, 20, AND 21, 2017, MEETING TO  
DISCUSS AND EDIT NEI 96-07, APPENDIX D

On September 19, 20, and 21, 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 number ML17164A004.

NRC staff opened the meeting by stating that it expected the meeting to be three days of working on contemporaneously revising NEI 96-07, Appendix D. Also, the NRC staff indicated that its goal for the meeting was to provide input on revisions and its perspective on whether a revision addressed the NRC staff concern.

In its opening remarks, NEI stated that completing NEI 96-07, Appendix D was essential because plants were waiting to use the guidance. Further, NEI explained that it was looking at the three days of meetings to identify revisions to NEI 96-07, Appendix D. However, NEI noted that it did not expect that the detailed wording would necessarily be agreed upon in the meeting. Rather, NEI said that in some cases it was expecting that there would be a general agreement on a revision but that the actual wording might be written after the meeting.

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The first area of revision discussed was related to human-system interface (HSI). The NRC staff had previously made available to NEI and stakeholders proposed revisions to the HSI area. A copy of the HSI revisions can be found in the referenced ADAMS package.

During the interactions on HSI, a question arose on how to address increasing the complexity of operator actions. In response to the question, NEI stated that the *Code of Federal Regulations, Title 10, Section 50.59, "Changes, tests, and experiment,"* (10 CFR 50.59) does not require that making something more complex be addressed in the determination.

The NRC staff responded that making an operator task more "complex" was shorthand to refer to any HSI modifications that could result in negative impacts on the ability to perform a task. For example, increased complexity could lead to: (1) reduced reliability of operator actions, (2) increased likelihood of misoperation, or errors, and (3) greater difficulty in understanding the situation which may adversely impact response time, etc.

The NRC staff emphasized that the real question was whether it was clear that everything that should have been considered was considered. It was noted that although there are many ways to do a 10 CFR 50.59 analysis, the final goal is to make sure the 10 CFR 50.59 analysis is complete.

NEI agreed that a change that made it more difficult for operators to safely operate the plant would not screen out and therefore would have to be considered in a 10 CFR 50.59 evaluation. NEI also agreed that if an HSI change was associated with a design function, a screening is needed to document if it was adverse.

If the conclusion was that the change was adverse, then it would "screen in" and be evaluated against evaluation criteria for the 10 CFR 50.59 process. NEI explained that if an HSI change makes operations more complex it could increase the probability for an incorrect action. If the probability for an incorrect action is increased, and it had an associated design function, NEI stated that it would be considered adverse.

As a result of the discussions, two NRC staff actions were identified. These were: 1) for the human-factor example 4-11, NRC staff will include the approaches in the table in a comprehensive example; and 2) the NRC staff will provide the references for the "tasks" it had identified.

The NRC staff agreed that the figure in its HSI proposed wording would be removed. A copy of the NRC staff HSI document can be found in the referenced ADAMS package.

On the second and third day, NEI and the NRC staff worked on the comments provided by the NRC staff. The effort focused on identifying wording in the document that both organizations could agree upon and that addressed the NRC staff comments. A copy of the revised NEI 96-07, Appendix D with the changes agreed upon in the meeting can be found in the reference ADAMS package.

A concern raised by NEI during these discussions was with a phrase suggested by the NRC staff that read "...using NRC approved guidance..."

The concern expressed by NEI was that limiting acceptable evaluations to just using NRC-approved guidance was constricting plants to a single way of doing the evaluations. Further, NEI noted that NRC guidance is not mandatory and other approaches to meeting the regulations besides NRC guidance can also be acceptable. Because of that, NEI recommended that the phrase be removed. The NRC staff took an action to look at whether that wording should be recommended or if the phrase could be removed.

On the third day of discussions, the HSI-related examples were revisited by the NEI representatives and NRC staff. It was agreed to maintain a narrative text format for the examples rather than the tabular format proposed by the NRC staff for some HSI examples.

The NRC staff also discussed with NEI the clarified information request (by email on September 20, 2017) on supporting information the NRC staff needed to see in order to support the October 11, 2017, public meeting on the 10 CFR 50.59 Criterion VI topic. In the email, the NRC staff requested more specific information from NEI beyond the original request of a specific definition of "plant level result" acceptance criteria and examples to illustrate the practical application of plant level results concept. A copy of the email can be found in the meeting package.

NRC staff and NEI also agreed that NEI would provide examples based on these items: An example based on the high-pressure coolant injection system as well as using the two examples provided by NEI during the August 2, 2017, public meeting – safety chillers and the emergency diesel generator support system. NEI stated it understood the clarifying request and would provide the information in sufficient time to support the October 11, 2017, public meeting.

Staff and NEI also discussed potential long-term strategies with regard to the upcoming clarification to Regulatory Issue Summary (RIS) 2002-22, "Use Of EPRI [Electric Power Research Institute]/NEI Joint Task Force Report, 'Guideline On Licensing Digital Upgrades: EPRI TR-102348, Revision 1, NEI 01-01: A Revision of EPRI TR-102348 to Reflect Changes to The 10 CFR 50.59 Rule'." A copy of RIS 2002-22 can be found in the ADAMS package for the meeting.

The clarification contains new guidance on performing qualitative assessments to support 10 CFR 50.59 activities. NEI stated that the recommendation would be to incorporate the qualitative assessment guidance into a new, separate NEI document (e.g. NEI-xx) and seek endorsement of that document from the NRC staff. This would support achieving the long-term goal of NEI to retire NEI 01-01 while not losing the beneficial guidance on the qualitative assessment guidance.

Actions from the meeting were:

- 1) The NRC staff will
  - a. revise the comprehensive example in Section 4.2.1.2 of Appendix D to incorporate the HSI review process elements;
  - b. provide the references for the “tasks” it had identified; and
  - c. determine if the words “...using NRC approved guidance...” could be removed.
- 2) NEI will develop and provide staff agreed upon information, including definition and examples, on plant level results to support October 11<sup>th</sup> public meeting.

Docket No. 99902028

D. Morey

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