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January 22, 2018

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

FROM: Joseph J. Holonich, Senior Project Manager /RA/  
Licensing Processes Branch  
Division of Licensing Projects  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF DECEMBER 13, 2017, MEETING TO DISCUSS STAFF  
COMMENTS ON NEI 16-16 [DRAFT 2]

On December 13, 2017, U.S. Nuclear Regulatory Commission (NRC) staff met with representatives from the Nuclear Energy Institute (NEI). The purpose of the meeting was to discuss staff comments on NEI 16-16 [Draft 2], "Guidance for Addressing Digital Common Cause Failure." All information related to the meeting and discussed in this summary can be found in the Agencywide Documents Access and Management System (ADAMS) package accession number ML17331B029.

The NRC staff opened the meeting by presenting information related to the work on NEI 16-16. In its opening comments, NEI stated that it was pleased with the progress being made on the development and review of NEI 16-16.

During the NEI presentation, there was a detailed discussion of the NEI figure depicting the meaning of "sufficiently low" when determining software common cause failure (CCF) likelihood. In the discussions, NEI explained that NEI 16-16 was intended for use by design engineers. The approach for a design engineer would be to determine if all the applicable preventive measures (P Measures) have been or can be applied for a source of CCF.

If all the P Measures can be and are applied to a source of CCF, then a CCF will not be a concern. If not all of the P measures are applied, then the design engineer would have the option to reduce the likelihood by applying likelihood reduction measures for a CCF in their entirety. NEI stressed that ultimately NEI 16-16 was intended for determining if a system was susceptible to a CCF. Some discussion was held on the definition of CCF and the NRC agreed to review the notes added by NEI to the agreed upon definition.

CONTACT: Joseph J. Holonich, NRR/DLP/PLPB  
301-415-7297

NEI stated that it would remove the use of best-estimate techniques in NEI 16-16 when a CCF is not sufficiently low because NEI subject matter experts in The Code of Federal Regulations, Title 10, Section 50.59, "Changes, tests, and experiments," (10 CFR 50.59) indicated that using best estimates were not appropriate for answering 10 CFR 50.59 questions. In addition, NEI also explained that the intent was to focus NEI 16-16 on providing only technical engineering design guidance and not be coupled to 10 CFR 50.59 licensing criteria.

NEI intends to have NEI 96-07, Appendix D, "Supplemental Guidance for Application of 10 CFR 50.59 to Digital Modifications," to only be licensing focused, and not coupled with technical methods. Later during the presentation, NEI stated that NEI 16-16 provides useful technical basis for addressing 10 CFR 50.59 Questions 5 and 6, but it cannot be used for answering 10 CFR 50.59 Questions 1 and 2.

NEI agreed to take an action to develop industry input on the suggested regulatory basis for NEI 16-16, and NEI will be ready to discuss this with NRC staff in January 2018.

NEI also provided feedback on the staff comments on NEI 16-16. Although this was not discussed in detail in the meeting, NRC staff agreed to review the information provided. A copy of the document is provided in the ADAMS package for the meeting.

NRC staff provided a brief summary and schedule of the Modernization Plan (MP)-1C activities. NEI asked if they would be able to review and provide comments on the Commission Paper. NRC staff explained that the SECY is an internal NRC document that is not released for public comment, unless the Commission decides to do so. NRC staff noted that all public interactions, discussions, and recommendations relevant to NEI 16-16 are informing the Commission Paper.

Following the technical discussions, the path forward was discussed. As a result of those discussions it was agreed that NEI would develop a list of future meetings across all the work activities for the first quarter of Calendar Year 2018. A conference call would be held to discuss the meetings and establish dates the week of January 8, 2018.

In closing, NEI stated that it saw a common understanding being developed between NEI and the NRC Staff.

Actions from the meetings included:

- 1) NRC staff will look at the NEI definition of CCF.
- 2) NEI will provide a suggested regulatory anchor for NEI 16-16.
- 3) NEI will develop a list of meetings for the first quarter of Calendar Year 2018 and a conference call will be held the week of January 8, 2018, to schedule the meetings.
- 4) NRC staff will evaluate the feedback provided by NEI on the NRC staff comments on NEI 16-16.

D. Morey

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<b>OFFICE</b>	DLP/PLPB/PM*	DLP/PLPB/PM	DLP/PLPB/PM
<b>NAME</b>	JHolonich	DMorey	JHolonich
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