



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
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December 22, 2017

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

FROM: Joseph J. Holonich, Sr. Project Manager /*RA Leslie Perkins Acting For*/  
Licensing Processes Branch  
Division of Licensing Projects  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MEETING HELD NOVEMBER 30, 2017, TO DISCUSS  
TOPICS RELATED TO DRAFT NEI 96-07, APPENDIX D,  
"SUPPLEMENTAL GUIDANCE FOR APPLICATION OF 10 CFR 50.59  
TO DIGITAL MODIFICATIONS"

On November 30, 2017, U.S. Nuclear Regulatory Commission (NRC) staff met with representatives from the Nuclear Energy Institute (NEI). The purpose of the meetings was to discuss Section 4.3.6 of draft NEI 96-07, Appendix D, "Supplemental Guidance for Application of 10 CFR 50.59 to Digital Modifications." All information related to the meetings and discussed in this summary can be found in the Agencywide Documents Access and Management System (ADAMS) package accession numbers ML17304A001.

The NRC staff started the meeting by addressing some of the follow-up actions from the previous November 16, 2017, public meeting (ADAMS Package ML17304A002). The NRC staff affirmed that it had provided feedback to NEI to address the actions from the previous public meeting. Also, the NRC staff reported that it was awaiting NEI comments on the human-system interface (HSI) portion of NEI 96-07, Appendix D, Section 4.2.1.2 that the NRC staff had provided at the November 16, 2017, public meeting.

Following this discussion the NRC staff made a presentation which can be found in the referenced ADAMS package for this meeting. The presentation provided the NRC staff perspective on the status of areas where alignment had not yet been achieved. NEI provided a copy of NEI 96-07, Appendix D, Section 4.3.6. This was used to engage in discussions and help achieve alignment.

Based on the information in the NRC staff presentation, NEI expressed a concern that the NRC staff had rolled back in some areas where agreement had been achieved. The NRC staff explained that it did not believe it had rolled back on previous agreements.

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

The discussions on NEI 96-07, Appendix D, Section 4.3.6 led to an agreement that not every digital instrumentation and control (DI&C) system change at plants needs to be done as part of a license amendment. Another area of agreement was the need to define what is meant by different result.

The NRC staff pointed out that Title 10 to the Code of Federal Regulations (10 CFR), Section 50.59, (10 CFR 50.59) "Changes, test and experiments," used the term "final safety analysis report (as updated)" while NEI 96-07, Appendix D, Section 4.3.6 used the terms "safety analysis" and "accident analysis." The NRC staff said that it could be understood that "accident analysis" is a subset of "safety analysis" which is a subset of "final safety analysis report (as updated)." Using more restrictive terms, it could be understood that the evaluation guidance only addressed a subset of "any [malfunction] previously evaluated in the final safety analysis report (as updated)."

Furthermore, the NRC staff indicated that by using partial quotations describing "safety analysis" further restrictions could be implied. NEI stated the intended meaning was the same meaning as in the rule. The NRC staff stated that it would propose any edits to ensure clarity on this matter.

In addition, the NRC staff pointed out that 10 CFR 50.59 used the term "design function" while NEI 96-07, Appendix D, Section 4.3.6 used the terms "functions that are directly or indirectly related to the proposed activity," "design function," "design bases function," "design functions [that] 'support or impact' design bases functions," and "design functions [that] are not involved with design bases functions, but are functions that if not performed would initiate a transient or accident that the plant is required to withstand." The NRC staff then pointed out that all of the terms except the first are subsets of "design functions."

The NRC staff also walked through how each of these categories were addressed in the six steps. This walkthrough identified that there were several ways to exit the steps and reach a conclusion whether the modification created a possibility for a malfunction of an structure, system or component (SSC) important to safety with a different result than any previously evaluated in the final safety analysis report (as updated).

In summary:

- **Step 2:** "If no design functions are identified, then the proposed activity does NOT create the possibility for a malfunction of an SSC important to safety with a different result."
- **Step 4:** "If all design basis functions continue to be performed/satisfied, and there are no other design functions involved, then the proposed activity does NOT create the possibility for a malfunction of an SSC important to safety with a different result."
- **Step 5:** "If there are no safety analyses involved, then there has been no change in the result of a safety analysis and the proposed activity does NOT create the possibility for a malfunction of an SSC important to safety with a different result."
- **Step 6:** "If any of the identified safety analyses have become invalid due to their basic assumptions no longer being valid (e.g., single failure assumption is not maintained), or if the numerical result(s) of any safety analysis would no longer satisfy the acceptance criteria, then the proposed activity DOES create the possibility for a malfunction of an SSC important to safety with a different result."

As part of the response in determining if the safety analyses acceptance criteria continue to be satisfied, include the impact on the severity of the initiating conditions and the impact on the initial conditions assumed in the safety analysis. Specifically, consider any design functions that, if not performed, would initiate a transient or accident that the plant is required to withstand.” (emphasis added in Steps 2 through 6)

The NRC staff noted that Step 2 did point to the appropriate guidance for identifying design bases functions, more specific guidance used the 10 CFR General Design Criteria (GDC) for identification purposes. The NRC staff said that a subset of design bases function can be tied to the GDC. NEI stated that the vast majority of design basis functions are derived from the GDCs.

Actions from the meetings included:

- 1) The NRC staff will provide edits on NEI 96-07, Appendix D, Section 4.3.6;
- 2) NEI will review its positions when the NRC staff recommended edits are received;
- 3) NEI will look at clarifying the use of the 10 CFR GDC; and
- 4) NRC staff will provide recommendations for failure modes and effects analysis.

Docket No. 99902028

D. Morey

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K. Austgen, [kra@nei.org](mailto:kra@nei.org)

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OFFICE	DLP/PLPB/PM*	NRR/DE/EICB*	DLP/PLPB/PM	DLP/PLPB/PM
NAME	JHolonich	MWaters	(JRowley for) DMorey	(LPerkins for) JHolonich
DATE	12/18/17	12/19/17	12/22/17	12/22/17

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