

March 31, 2014

MEMORANDUM TO: Anthony J. Mendiola, Chief  
Licensing Processes Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

FROM: Joseph J. Holonich, Senior Project Manager /RA/  
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SUBJECT: SUMMARY OF MARCH 5, 2014, MEETING ON NUCLEAR ENERGY  
INSTITUTE (NEI) GUIDANCE DOCUMENT NEI-01-01, "GUIDELINE ON  
LICENSING DIGITAL UPGRADES: EPRI [ELECTRICAL 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 [TITLE 10 OF THE  
*CODE OF FEDERAL REGULATIONS*] 50.59 RULE"

On March 5, 2014, staff from the U.S. Nuclear Regulatory Commission (NRC) met with representatives from the Nuclear Energy Institute (NEI) and industry. The meeting was another in a series of meetings to discuss NEI 01-01, "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" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML020860169). Regulatory Information Summary (RIS) 2002-22, "Use of EPRI/NEI Joint Task Force Report, 'Guideline on Licensing Digital Upgrades: EPRI TR-102348, Revision 1, NEI01-01: a Revision of EPRI TR-102348 to Reflect Changes to the 10 CFR 50.59 Rule'" (ADAMS Accession No. ML023160044), conditionally endorsed NEI 01-01.

Meeting presentations are in the ADAMS Package No. ML14065A013 and a list of attendees at the meeting can be found in ADAMS at Accession No ML14065A010.

In opening the meeting, the NEI representatives stated that the industry is seeing more and more interest in digital instrumentation and control (DI&C). Therefore, there is a need for regulatory certainty. The NEI representatives further stated that there is a difference of interpretations in the DI&C area and agreed with the NRC staff that there is a need to reach a consensus of understanding. This consensus would be documented in the document that EPRI is preparing as well as revision to (or an addition to) the current NEI developed guidance.

Next, the NEI representatives made an introductory presentation on the path forward on NEI 01-01. In the presentation, the NEI representatives discussed the efforts on DI&C and the industry perspective, including the perspective that there were continuing obstacles. It was noted that these obstacles place the industry at a disadvantage in managing aging systems and components. In addition, during this presentation, the industry noted that as current plant technology ages, there is a shift away from the analog domain to DI&C.

The second presentation provided a technical discussion on Items 10 and 11 from the NRC staff letter to Mr. Anthony Pietrangelo of NEI dated November 5, 2013 (Accession No. ML13298A787). It also covered a broader look at common-cause failure (CCF), the industry plan, CCF concepts, and an overview of CCF issues in digital systems.

During the discussion on the plan, the NRC staff asked when the work being conducted by the EPRI would be done. The schedule indicated that EPRI would be done by 2015 so the NRC staff was interested in when NEI would be done revising the guidance. The NEI representatives noted that it needed to get the (near) complete technical guidance in order to assess any remaining gaps to be filled with licensing guidance, so it would be after that point. The NEI representatives also said that the ongoing work could be discussed at the bimonthly meetings.

It was also mentioned that training should be given to industry and NRC staff on the new guidance. The NEI representatives stated that the training on the new guidance should include an NRC staff perspective because it would be beneficial in helping industry and NRC staff gain a common view.

The NRC staff asked why independent standards were being used. In response, the NEI representatives stated that groups have different guidance standards that can contribute to the revision. The NRC cautioned that these standards may have different perspectives among them. Further, the NRC staff stated that NEI needed to look at each perspective and modify them to NRC needs.

Another topic raised during the presentation was how the NRC staff would endorse the revision to NEI 01-01. The NRC staff responded that the proper way for an endorsement was a Regulatory Guide (RG). The process would be for NEI to submit the document to NRC for an endorsement through a RG.

A concern raised by the NRC staff was that there appeared to be a lack of discussion on the underlying regulations in the EPRI technical guidance and that the document should include something on the regulations. In response it was noted that the EPRI document was focused on just technical work. It would just include good engineering and how to prevent a CCF. The NEI 01-01 revision would take up the regulatory perspective.

To help the NRC staff understand the scope of the EPRI work, it was agreed that at the next meeting the title and abstract for the EPRI document would be provided. This was an action item from this meeting.

As part of the dialogue, the industry stated that including an example of how 10 CFR 50.59 could be used with digital components in a future public meeting would be beneficial in the revision to NEI 01-01. The NRC staff noted that there is no regulatory review of the implementation of 10 CFR 50.59. Rather, implementation of 10 CFR 50.59 is the licensee responsibility. The NRC staff can provide some input on specifics that could be considered for the guidance and how it is applied.

The industry reminded the NRC staff of their action from the last meeting that the NRC staff would provide a regulatory interpretation that would allow some digital modifications to be done without a license amendment request (LAR). In response to the NRC staff request for clarification the industry explained that this pertained to an NRC staff recommendation to

conduct the CCF Coping Analysis prior to the CCF Susceptibility Analysis. The intent being that demonstration of adequate coping would reduce the necessary rigor in the CCF Susceptibility Analysis.

Industry voiced concern that initial acceptance of CCF susceptibility would typically result in an unfavorable 10 CFR 50.59 evaluation. In response, the NRC staff took the action to provide a regulatory interpretation that would allow some modifications without an LAR, even when CCF susceptibility is identified and adequate coping is demonstrated. The NRC staff agreed to address this action at the next meeting.

In addition, the NRC staff agreed to investigate how using an example might be done before the revisions to NEI 01-01 were completed. This would be helpful to the industry in knowing if the revision was heading in the right direction. It was suggested that the example could be included as an appendix in the NEI 01-01 revision. However, after some discussion it was agreed that the detailed example would be too much information. Thus, a distillation of the details to the most salient portions would be more appropriate for the appendix.

A point made in the discussion was that an alternative to the guidance would be more actions requiring license amendments. At an earlier meeting, the NRC emphasized that it did not want to create a situation where there was an undue number of license amendments because licensees were unable to use the flexibility provided in 10 CFR 50.59.

Continuing the dialogue on revising NEI 01-01, it was noted that this process of multiple meetings was showing progress. It was also stated that at the time of issuance of NEI 01-01, there was not a lot of experience. Since then, there has been a lot learned with digital modifications that will help improve NEI 01-01. In addition, inspection inconsistency could be alleviated if there were some examples of what would be acceptable under 10 CFR 50.59.

In concluding the meeting, it was agreed that the next meeting would be in May 2014. The NEI representatives committed to provide the NRC staff with some potential dates for the meeting.

Action Items from the meeting were:

- 1) At the next meeting, a title and abstract for the EPRI technical document will be provided.
- 2) The NRC staff will investigate how using an example might be done before the NEI 01-01 revision is issued.
- 3) NEI to provide potential dates for May meeting.

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**ADAMS Accession Nos.: Package (ML14065A013); Summary (ML14070A069);  
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