From: Lappert, Glenna
To: Holonich, Joseph
Subject: FW: NEI 16-16, Appendix A Questions
Date: Thursday, April 13, 2017 7:20:29 AM

I believe this was meant for you!

From: Ken Scarola [mailto:KenScarola@NuclearAutomation.com]
Sent: Thursday, April 13, 2017 7:18 AM
To: Lappert, Glenna <Glenna.Lappert@nrc.gov>
Subject: [External_Sender] NEI 16-16, Appendix A Questions

These are my questions that the Staff was not able to answer, because the appropriate people had left the room:

1. Dave Beaulieu said that best estimate methods and acceptance criteria cannot be used in 50.59 space to analyze a credible CCF that is significantly less likely than a single failure.
   a) Does the Staff agree that if there are changes to ATWS or SBO mitigation systems, which are beyond design basis CCF events, best estimate methods and acceptance criteria would be applied when determining the answers to the 50.59 questions, as they were for the original ATWS and SBO analyses. If not, why not.
   b) Does the Staff see any difference in applying best estimate methods for these beyond design basis CCF events vs. the additional beyond design basis CCF events that may be caused by the introduction of new digital technology.
   c) Does the Staff understand that for many digital upgrades, P measures are not practical for all CCF sources. Therefore, a CCF is credible, and taking away from the 50.59 evaluation the ability to analyze these CCFs using best estimate methods and acceptance criteria will result in an LAR for far too many digital upgrades.

2. NEI 16-16 identifies likelihood reduction (LR) measures, which appear to equate to what EPRI refers to as 'defensive measures that can get you to Level 1 likelihood'. However, EPRI does not actually define any specific LR measures in Appendix A. Does the Staff expect to see specific LR measures included in Appendix A for NEI 16-16 with the same level of clarity as P and L measures. [I really wanted to ask NEI this question, but the public questions are supposed to be for the Staff, so I worded it in this way. When I wrote NEI 16-16, I clearly intended to expand the EPRI Appendix A (which I also wrote) to include LR measures.]

   Also, EPRI states that defensive measures that can be credited to achieve Level 1 likelihood only apply to a design defect. That limitation is not in NEI 16-16. Is the Staff expecting to see NEI 16-16 describe additional LR measures for other sources of CCF (i.e., single random failures, environmental hazards). [Again, I really wanted to ask NEI this question, but the public questions are supposed to be for the Staff, so I worded it in this way. When I wrote NEI 16-16, I clearly intended to expand the LR measures to have applicability to all CCF sources.]

3. The Staff questioned the lack of clarity in the definition of bounded. Does that mean that the

definition of bounded in NEI 16-16 Section 4.2.2, which distinguishes bounded criteria for design basis and beyond design basis CCFs, is not sufficient. If so, what more is the Staff looking for.

4. NEI defines the intent of L measures as facilitating a bounded plant level condition. Does the Staff agree that L measures can also be used to facilitate reaching a previously analyzed component or system level malfunction (i.e., no new unanalyzed malfunction); thereby, precluding the need for any plant level analysis. [Again, I really wanted to ask NEI this question, but the public questions are supposed to be for the Staff, so I worded it in this way. When I wrote NEI 16-16, I inadvertently left component and system level malfunctions out of the definition of L measures. This needs to be corrected, but I don't think NEI understands this.]

Thank you.

Ken

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