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Subject: Revised Sections 3.3, 3.4 and 4.2 of NEI 12-02 Rev 0
Date: Tuesday, August 21, 2012 5:13:07 PM
Attachments: [Revisions to Sections 3 3 3 4 and 4 2 of NEI 12-02 Revision 0 082112.doc](#)

Lisa –

Following up the August 13 and 20, 2012 public meetings on seismic qualifications requirements for spent fuel pool (SFP) instrumentation channel components, attached please find revisions to sections 3.3 (Mounting), 3.4 (Qualifications) and 4.2 (Procedures) of NEI 12-02, Revision 0, *Industry Guidance for Compliance with NRC Order EA-12-051, "To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation"* (July 2012). These revised sections will be incorporated in NEI 12-02, Revision 1, which will be submitted to the U.S. Nuclear Regulatory Commission (NRC) for endorsement in the final Interim Staff Guidance (JLD-ISG-2012-03).

Section 3.4 (Qualifications) describes a number of options that can be used to demonstrate that the SFP instrumentation channel components retain their function when subjected to design-basis event conditions in the area of use of the instrument channel component. The first listed option,

instrument channel components that use known operating principles, parts supplied by manufacturers with commercial quality programs, such as ISO9001, and commercial design and testing for operation in environments where significant seismic loading is common

is consistent with NRC Order EA-12-051 and the approach being taken to implement the lessons learned from the Fukushima Daiichi accident about dealing with beyond-design-basis events.

NRC's Near-Term Task Force review of insights from the Fukushima Daiichi accident, *Recommendations for Enhancing Reactor Safety in the 21st Century*, July 12, 2011, recommended that the NRC (Recommendation 7.1):

Order licensees to provide sufficient safety-related instrumentation, able to withstand design-basis natural phenomena, to monitor key spent fuel pool parameters (i.e., water level, temperature, and area radiation levels) from the control room.

However, based on complete consideration, including extensive public

interactions, the NRC issued Order EA-12-051, *Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation*, March 12, 2012. With regard to application of the order to operating reactor sites and construction permit (CP) holders (*i.e.*, 10 CFR Part 50), the order *does not* adopt each and every provision of Recommendation 7.1. For example, the order *does not* require that the SFP instrument channel components be safety-related. The only requirement in the order that mentions seismic ground motion is "Mounting," in that:

Installed instrument channel equipment within the spent fuel pool shall be mounted to retain its design configuration during and following the maximum seismic ground motion considered in the design of the spent fuel pool structure.

Order EA-12-051 requires "reliable" SFP level instrumentation. "Reliable" is not only in the title of the order, it is mentioned in a number of provisions of the order, which provides additional guidance as to how "reliable" SFP instrumentation is achieved. In no instance is "reliable" related to seismic ground motion or seismic qualifications. Attachment 2 provides many and varied requirements for reliability of the SFP instrumentation channels. It is important to note that section 2 of Attachment 2 of EA-12-051 also states that SFP instrumentation reliability is maintained through development and implementation of three programmatic requirements: training, procedures, and testing and calibration. Therefore, "reliable" is an overarching attribute of the SFP instrumentation channels required by order.

Provision IV.C.1. of EA-12-051 requires licensees and CP holders to submit to the NRC an "overall integrated plan" describing how compliance with the requirements of Attachment 2 will be achieved. It is evident that reliability is achieved by overall integrated compliance with all the requirements of the order, not by a single seismic qualification for instrument channel components that isn't in the order.

In the industry's view, instrument components qualified to the commercial quality option as described in the attachment and installed on seismic mountings in the pool fully meet the requirements of the NRC Order EA-12-051. As discussed in the August 13 meeting, if utilities qualify instrument channel components to other than the commercial quality option, there may be implications for meeting the schedules required by EA-12-051. We expect utilities will bring any schedule effects to the NRC's attention in either their reports due 60 days following issuance of the final guidance or their Overall Integrated Plans due February 28, 2013.

We look forward to discussing this matter further. Please do not hesitate to contact me if you have any questions.

Best regards,

Steve

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