August 24, 2012

MEMORANDUM TO: Robert J. Pascarelli, Chief
Projects Management Branch
Japan Lessons-Learned Project Directorate
Office of Nuclear Reactor Regulation

FROM: Lisa M. Regner, Senior Project Manager ***/RA/***
Projects Management Branch
Japan Lessons-Learned Project Directorate
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF JULY 25, 2012, CONFERENCE CALL TO DISCUSS THE DRAFT EXCEPTIONS TO THE GUIDANCE FOR COMPLIANCE WITH ORDER EA-12-051, SPENT FUEL POOL INSTRUMENTATION, RELATED TO THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT ACCIDENT

On July 25, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff held a conference call with the Nuclear Energy Institute (NEI) staff to answer questions about the draft interim staff guidance (ISG) for compliance with Order EA-12-051 (the order) issued March 12, 2012 (Agencywide Document Access and Management System (ADAMS) Accession No. ML12054A679). The order was issued based, in part, on the *Near-Term Task Force (NTTF) Recommendations for Enhancing Reactor Safety in the 21st Century* report, issued July 12, 2011 (ADAMS Accession No. ML111861807).

The purpose of this call was to provide NEI with the remaining NRC concerns on NEI 12-02, *Industry Guidance for Compliance with NRC Order EA-12-051, "To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation,"* Revision 0, submitted on July 5, 2012, for staff endorsement (ADAMS Accession No. ML121910388). In accordance with the order, a final ISG document will be issued by the staff by August 31, 2012.

Topics discussed are included in Enclosure 1.

Enclosure:
As stated

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NAME	LRegner	SRohrer	RPascarelli	LRegner
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DRAFT Exceptions to NEI 12-02, Revision 0
Concerning Guidance for Order 51 SFP Instrumentation

Section 2.3, page 11:

The use of word "resolution" is confusing. This term is not typically used by control systems engineers when talking about instrument accuracy. We would like to clarify that resolution is applicable when the licensee has decided to apply discrete instruments only (i.e., point sensors or switches). Accuracy applies to both continuous and discrete instruments.

Section 3.1:

The 2 man-hour allowance for deployment of a portable backup instrument is too large a resource allowance. Deployment should be less than 1 man-hour for consistency with the intent of the order to avoid unnecessary distraction.

Wireless transmitters deployed in the spent fuel pool [SPF] area should have specific performance requirements for power due to potential access restrictions and additional resource requirements to replace power supplies compared to swapping power supplies in the vicinity of the control room. Wireless data transmitters and the associated instrument that are supplied from power sources in the SFP area should reliably function on power independent of the plant electrical distribution system without battery replacement or other staff resource expenditures until the availability of offsite resources is reasonably assured.

Section 3.2:

Strike sentences on page 6:

> However, the intent of this requirement is not to constrain the design … and associated support activities, nor other activities that take place on the SFP deck.

This type of statements are for detailed engineering designs and not suited for an interim staff guidance-level document. A general statement that the instruments are not to impair normal SFP function and design is acceptable.

Section 3.4:

The qualification of any data transmission/power cables located outside of safety-related structures was not incorporated in Revision 0. At a minimum, cables routed outside safety related structures should be protected in buried conduit and be designed to commercial standards for submergence. A plant-specific basis for protection against beyond design-basis flooding affecting the interior of safety-related structures should also be specified.

Seismic testing and/or operational experience should be used for seismic adequacy.

Section 3.5:

Per the Order, the guidance should discuss independence between primary and backup channels, as well as between the two permanently installed instruments. Physical and power supply independence is required between primary and backup channels. To minimize the potential of failure of all instrument channels, diverse technologies should be used where feasible. Note: Physical and mounting arrangement is already discussed in Section 3.2.

Section 3.6:

In the 3rd paragraph of Section 3.6 (page 9), suggest removing the 'three days' guidance and state, "… have sufficient capacity to support instrument channel operation until off-site resources can be deployed by…" This would eliminate inconsistencies between Orders EA-12-049 and EA-12-051.

Appendix 2:

Guidance has changed only partially to a description of needed information from the examples provided in the staff-developed template. Recommend completing the transition to description of needed information.

Under accuracy, the template should call for a specific description of how conflicting and/or ambiguous indication has been avoided through the overall design of the instrument channel.

Appendix A-4:

In the 2nd paragraph of Section A-4-3.3 (page 24), it says that "…quick and accessible connection points to the existing AC or DC power distribution system…" Recommend replacing "the existing AC or DC power distribution system" with something general like "the alternate power source system" because the existing AC or DC power distribution system may not work after the beyond design basis event or different licensees may have different designs.

In the 3rd paragraph of Section A-4-3.4 (page 24), recommend to replace "DP cells" with "instruments" because different licensees may not use DP cells for the level instruments.