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NUCLEAR ENERGY INSTITUTE

4/20/2015
80 FR 21770

June 4, 2015

Ms. Cindy K. Bladey
Chief, Rules, Announcements, and Directives Branch (RADB)
Office of Administration, Mail Stop: OWFN-12-H08
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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RULES AND DIRECTIVES
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Subject: NEI Comments on Draft Regulatory Issue Summary (RIS) 2015-XX, "Seismic Stability Analysis Methodologies for Spent Fuel Dry Cask Loading Stack-Up Configuration," Docket ID: NRC-2015-0098

Project Number: 689

Dear Ms. Bladey:

On behalf of the nuclear energy industry, the Nuclear Energy Institute (NEI)¹ appreciates the opportunity to provide comments on the draft Regulatory Issue Summary (RIS), "Seismic Stability Analysis Methodologies for Spent Fuel Dry Cask Loading Stack-Up Configuration," that was published in the *Federal Register* on April 20, 2015 (80 FR 21770). The industry commends the NRC for providing guidance in the area of seismic stability methodologies for the dry cask storage stack-up configuration. NEI provided input to the NRC on this issue in a letter dated September 27, 2011 (ML113130421, ML113130424), whereby we identified the need for guidance and provided recommendations on the areas that the guidance should address. While the draft RIS addresses most of the key attributes identified in the letter, some additional clarification and discussion on the following areas are needed:

- 1) The broader issue of the interface between 10 CFR Part 50 and 10 CFR Part 72 needs to be further clarified. The statement on Page 7, "Although an ISFSI licensee who is an addressee of this RIS may also be a holder of a 10 CFR Part 50 operating license or a holder of a 10 CFR Part 52 combined

¹ NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

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license, the discussion in the RIS is directed to activities and matters conducted under the authority granted by the NRC's general license for an ISFSI and NRC-approved cask designs," does not adequately clarify the relationship between the requirements of a Part 72 general licensee and their Part 50 license. How this RIS applies to the stack-up analysis performed inside the Part 50 facility under Part 50 requirements, as compared to a Part 72 facility (i.e., at the ISFSI) needs further clarification.

- 2) The backfit discussion is focused almost entirely on whether the RIS constitutes a backfit in accordance with 10 CFR 72.62. The RIS appears to take the position that the backfit requirements of Part 50 and Part 52 are not applicable because the RIS is directed to activities conducted by the general licensee. However, as described in the previous NEI letter, the stack-up configurations can be governed by 10 CFR Part 50 or 10 CFR Part 72. The majority of dry storage loading operations are performed inside facilities that are governed by 10 CFR Part 50. This issue has led a number of Part 50 licensees to expend significant resources for seismic restraint, despite licensees being in full compliance with the general license Certificate of Compliance and their Part 50 license. There is currently no NRC backfit analysis supporting any of these expenditures.
- 3) The RIS should clearly state that the guidance is for future license applications and not intended to be applied to previously approved licensing bases approved by the NRC (either in Part 50, Part 52 or Part 72). A clear statement such as "This RIS is not applicable to general licensees who have performed their seismic stability analysis in accordance with the 10 CFR Part 72 Certificate of Compliance and associated Final Safety Analysis Report or in accordance with the Part 50 Safety Analysis Report that has been previously reviewed and approved by the NRC" would provide the requested clarity.
- 4) There are a number of statements in the draft RIS that could benefit from additional clarity. These statements are identified in the attachment to this letter.

In summary, while the draft RIS provides an appropriate level of detail and guidance similar to that requested in the previous NEI letter and discussed at public meetings with the NRC, there is still a need to more clearly define the interface between 10 CFR Part 50 and Part 72 with respect to operations that are related to dry cask storage (i.e., loading operations) but conducted within the Part 50 licensed facility.

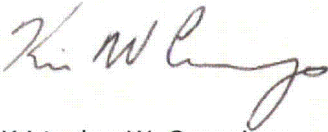
Ms. Cindy K. Bladey

June 4, 2015

Page 3

If you have any questions or require additional information, the industry would look forward to discussing this issue further.

Sincerely,

A handwritten signature in black ink, appearing to read "Kristopher W. Cummings". The signature is fluid and cursive, with the first name "Kristopher" and last name "Cummings" clearly visible.

Kristopher W. Cummings

Attachment

c: Ms. Catherine Haney, NMSS, NRC
Mr. Mark D. Lombard, NMSS/DSFM, NRC
Mr. Anthony H. Hsia, NMSS/DSFM, NRC
Mr. Christian J. Araguas, NMSS/DSFM/CSTB, NRC
Mr. Gordon S. Bjorkman, Jr., NMSS/DSFM, NRC

Specific Comments on Draft Regulatory Issue Summary 2015-xx, "Seismic Stability Analysis Methodologies for Spent Fuel Dry Cask Loading Stack-Up Configuration"

| No. | Location | Comment |
|-----|----------|---|
| 1. | Page 1 | <p>Statement:</p> <p>"All Radiation Control Program Directors and State Liaison Officers"</p> <p>Comment: Why is this is included in the Addressees Section?</p> |
| 2. | Page 3 | <p>Statement:</p> <p>"In generating the earthquake time histories, the phasing of the Fourier components associated with the real seed motions must be maintained to the maximum extent practicable. However, there may be minor distortion of the phase angle spectrum due to baseline correction."</p> <p>Comment: The RIS should provide a quantitative measure of maintaining phase. Otherwise, the interpretation of "minor" remains subjective.</p> |
| 3. | Page 4 | <p>Statement:</p> <p>"The maximum from the mean plus one standard deviation value of the response (maximum rocking angle, maximum sliding displacement, maximum vertical load and shear load) from each discrete simulation should be defined as the "computed" response for the stack-up configuration, where a discrete simulation consists of five earthquake time history analyses using one friction value."</p> <p>Comment:</p> <p>In contrast, SRP 3.7.2 states:</p> <p>"For the multiple time history analysis option, procedures used to account for uncertainties (by variation of parameters) and to develop design responses, including justification for the statistical relationship between input design time histories and output responses. (For example, if the average response spectra generated from the multiple design time histories are used to envelop the design response spectra, then the average responses generated from the multiple analyses are used in design."</p> <p>Therefore, either (i) maximum of the averages of the discrete simulations or (ii) mean plus one standard deviation value of the response from all simulations should be used.</p> |

| No. | Location | Comment |
|-----|----------|--|
| 4. | Page 5 | <p>Statement:</p> <p>"The initial tilt assumed in the calibration should be equal to the maximum permissible angle of tipping, and 50 percent of the maximum permissible angle of tipping."</p> <p>Comment: It may be more appropriate for the calibration to base the initial tilt on the actual expected response angle than the maximum permissible value and 50 percent of it.</p> |