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NUCLEAR ENERGY INSTITUTE

February 25, 2015

Mr. Scott A. Morris
Director, Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Industry Proposal to Improve NRC Inspection of Licensee Design Bases

Project Number: 689

Dear Mr. Morris:

On behalf of the nuclear energy industry, the Nuclear Energy Institute (NEI)[1] is pleased to provide its perspectives on the staff's initiative to improve the inspection of licensee design bases under IP 71111.21, Component Design Bases Inspections (CDBI).

In early 2014, representatives of U.S. nuclear utilities formed the Regulatory Issues Working Group (RIWG) under the auspices of NEI. The RIWG identified several elements of the Reactor Oversight Process (ROP) that, in the industry's opinion, warrant reconsideration based on changes that occurred since the initial implementation of the ROP in 2000. The CDBI process was identified by the industry for near-term priority review. It is our view that the regulatory burden imposed by the inspection is excessive and, in recent years, the safety benefits are not apparent. In its 2013 reassessment of the ROP, the NRC also identified the need to revisit the CDBI, and the NRC staff's proposed changes to the CDBI were conceptually discussed at a public meeting held on January 22, 2015.

The industry recognizes that safe operation depends on maintaining the integrity of the plant's design and fidelity to its design bases. In addition, the industry recognizes the vital role of rigorous oversight of engineering and design programs by the NRC. With this in mind, the industry believes substantial revision of

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

the CDBI is warranted to improve the effectiveness of the inspection in identifying weaknesses while improving regulatory efficiency and reducing the burden this inspection imposes on licensees. Attached for your consideration is an NEI paper, "Industry Proposal to Improve NRC Inspection of Licensee Design Bases," which presents the industry's assessment of the effectiveness of the NRC's design inspections based on data collected from a survey of licensees. The paper provides a number of concepts and recommendations that the industry believes will substantially improve the process and outcomes for baseline inspections that examine the licensee's ability to maintain the integrity of the design basis for risk-significant systems throughout the operations phase of a nuclear power plant. Included within these concepts are the following recommendations:

1. Revise the purpose and scope of the NRC's engineering and design inspections to provide a greater focus on identifying latent design errors and examining the ability of licensees to maintain the integrity of the design basis over time. Such inspections would shift the emphasis somewhat from design verification to validation of the health of station programs that, if not effectively implemented, could adversely affect design margins. The industry believes this approach would better serve to accomplish the underlying objectives of the baseline inspection program and could do so with an inspection characterized by reduced scope, team size and duration than the current CDBI.

2. Develop a performance-based process to adjust the scope, size and duration of the design inspections described above, based on a transparent assessment of licensee performance and trends in the engineering and design arena. Limit the degree to which the design inspection could be adjusted up above this reduced baseline to the parameters described in the current CDBI inspection procedure.

3. Establish means in the ROP assessment and inspection scheduling processes to give credit, in terms of alternate or reduced inspection, for structured, rigorous initiatives associated with engineering and design basis management such as design basis self-assessments, consistent with the discussion on credit for self-assessments in SECY-05-0118.

4. Establish a means by which potential generic issues arising from NRC engineering and design basis team inspections are more rapidly and transparently raised within the NRC and subsequently raised in dialogue with industry leadership. This will improve the tie between the NRC's generic issue resolution process and these inspections to appropriately address proposed NRC design basis inspection findings which may have generic implications.

We understand from the public meeting held on January 22 that the NRC is considering expansion of the CDBI to systems and components that support security and emergency preparedness. The industry is strongly opposed to this. Regulatory oversight of the performance of this equipment is adequately accomplished via existing performance indicators and baseline inspections. Furthermore, expansion of the

CDBI to the security and emergency cornerstones is contrary to the basis of the ROP as documented in Inspection Manual Chapter (IMC) 0308, "Reactor Oversight Basis Document." Specifically, the technical framework for the security and emergency preparedness cornerstones does not describe design as a key attribute.

The industry is eager to continue discussions with the NRC on ways to improve the effectiveness of the NRC's engineering and design inspections and to specifically explore the recommendations outlined in the attached paper. In this regard, we welcome the opportunity to meet with you and your staff and will contact your office to find a mutually agreeable time.

If you have any questions in this matter, please contact myself or Bruce Montgomery (202-739-8128; bsm@nei.org).

Sincerely,

Christopher E. Earls

Attachment

c: Mr. Mark A. Satorius, EDO, NRC
Mr. William M. Dean, NRR, NRC
Dr. Jennifer L. Uhle, NRR, NRC
Mr. Allen G. Howe, NRR/DIRS, NRC
Mr. Christopher M. Regan, NRR/DIRS/IRIB, NRC
Mr. James A. Isom, NRR/DIRS/IRIB, NRC